AGENDA
GRADUATE COUNCIL MEETING
Thursday, April 18, 2013
9:00 - 11:00 AM
ACADEMIC SENATE CONFERENCE ROOM
ROOM 220 UNIVERSITY OFFICE BUILDING

Action
9:00-9:05  1. Approval of Minutes of March 21, 2013 meeting

Information
9:05 – 9:10
a. Chair of the Graduate Council

Action
9:10 – 9:15
b. CCGA Representative

Action
9:15 – 9:20
c. Graduate Student Council Representative(s)

9:20 – 9:30
d. Dean of the Graduate Division

Action
3. Courses and Programs Subcommittee

9:30 – 9:35
Approval of Courses – the following courses are to be approved:
1. CHEM 216 - Physical Organic Chemistry – CHANGE
2. HIST 202A - Reading Seminar in European History: Early Modern Europe (1400-1789) – CHANGE
3. HIST 202B - Reading Seminar in European History: 1789-Present – CHANGE
4. HIST 211 - Reading Seminar in the Roman Empire – CHANGE
5. HIST 223 - Reading Seminar in Early Medieval History – CHANGE
6. HIST 224 - Research Seminar in Later Medieval History – CHANGE
7. HIST 225A - Research Seminar in Ancient and Medieval History – CHANGE
8. HIST 225B - Research Seminar in Ancient and Medieval History – CHANGE
9. HIST 240 (E-Z) - Reading Seminar in Documentary Source Practices – CHANGE
10. HIST 255A - Research Seminar in Modern Russia – CHANGE
11. HIST 255B - Research Seminar in Modern Russia – CHANGE
12. HIST 256A - Research Seminar in English History – CHANGE
13. HIST 256B - Research Seminar in English History – CHANGE
14. HIST 264 - Research Seminar in Public History – CHANGE
15. HIST 265A - Research Seminar in Public History – CHANGE
16. HIST 265B - Research Seminar in Public History – CHANGE
17. PLPA 234 - Introduction to Mycology – NEW
18. STAT 231B - Statistics for Biological Sciences – CHANGE
19. MGT 212 - Application of Behavioral Economics to Management – NEW
20. MUS 207B - Proseminar in Ethnomusicology: Current Theoretical Directions – CHANGE
21. MUS 293 - Composition Practicum – CHANGE

Include program change below:
22. CHEM 204A - Structure and Mechanism in Organic Chemistry – CHANGE
23. CHEM 204B/MSE 225A - Spectrometry in Organic Structure Analysis – CHANGE
24. CHEM 204C - Advanced Organic Chemistry: Reactions and Mechanism – CHANGE
25. CHEM 204D/MSE 245A - Advanced Organic Reactions – CHANGE
26. CHEM 204E - Organic Synthetic Analysis – CHANGE
27. CHEM 251 - Graduate Seminar in Analytical Chemistry – CHANGE
28. CHEM 252 - Graduate Seminar in Inorganic Chemistry – CHANGE
29. CHEM 253 - Graduate Seminar in Organic Chemistry – CHANGE
30. CHEM 254 - Graduate Seminar in Physical Chemistry – CHANGE
31. EE 259 – Colloquium in Electrical Engineering - CHANGE
9:35 – 9:45  Program Changes and Proposals
1. Chemistry program changes – changes include courses 22 through 30 listed above
2. Creative Writing program change – Professional Development
3. Economics program change – addition of field course/change in field name
4. Plant Biology program changes – Professional Development – C&P recommended using this opportunity to inform program they need to submit professional development plan for their Ph.D. students.
5. Computer Engineering program change – Professional Development – changes include course 31 (EE 259) listed above as well as CS 287 which was approved in February

9:45 – 10:45  Information/Discussion/Action

4. New Business

10:45–10:50

5. Graduate Program Reviews
a. CMDB F&R – approve to send to program for response
b. GGB F&R – approve to send to program for response
c. Chemical & Environmental Engineering – approve program’s response and close out review
d. Creative Writing – approve program’s response and close out review
e. Entomology – approve program’s response and close out review
f. Plant Pathology – review and approve GC response to program’s response to F&R

10:50–11:00

5. Graduate Program Reviews

STATUS OF OPEN GRADUATE PROGRAM REVIEWS

<table>
<thead>
<tr>
<th>Program</th>
<th>Rev Date</th>
<th>PR or Resp. to F&amp;R Resc’d</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr. Writing</td>
<td>10/2009</td>
<td>F&amp;R: 2/13/13</td>
<td>Vote at 4/18/13 GC meeting to close review</td>
</tr>
<tr>
<td>Chem/E Engin.</td>
<td>1/2010</td>
<td>F&amp;R: 3/20/13</td>
<td>Vote at 4/18/13 GC meeting to close review</td>
</tr>
<tr>
<td>Plant Path</td>
<td>2/2011</td>
<td>2nd resp recv’d: 2/15/13</td>
<td>Vote on draft to send program at 4/18/13 GC meeting</td>
</tr>
<tr>
<td>Neuro (I)</td>
<td>5/2011</td>
<td>5 yr plan recv’ed: 4/9/13</td>
<td>Subcommittee B will meet next week to decide if response &amp; 5-year plan is acceptable; will vote to forward to GC for close-out</td>
</tr>
<tr>
<td>Biomed.</td>
<td>3/2012</td>
<td>PR rec: 5/4/12</td>
<td>Waiting for F&amp;R from GC (CN) to send program for response</td>
</tr>
<tr>
<td>English</td>
<td>4/2012</td>
<td>F&amp;R: due 3/28/13</td>
<td>Waiting on response to F&amp;R from program, was due 3/28</td>
</tr>
<tr>
<td>Bioengin. (I)</td>
<td>7/2012</td>
<td>F&amp;R: due: 3/25/13</td>
<td>Waiting on response to F&amp;R from program, was due 3/25</td>
</tr>
<tr>
<td>Entomology</td>
<td>1/2012</td>
<td>F&amp;R: 3/18/13</td>
<td>Vote at 4/18/13 GC meeting to close review</td>
</tr>
<tr>
<td>CMDB (I)</td>
<td>10/2012</td>
<td>F&amp;R: 3/18/13</td>
<td>Vote at 4/18/13 GC meeting on finalized F&amp;R</td>
</tr>
<tr>
<td>Soc (I)</td>
<td>11/2012</td>
<td>F&amp;R: due 5/1/13</td>
<td>Waiting for F&amp;R response from program</td>
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<tr>
<td>GGB</td>
<td>12/2012</td>
<td>PR: 2/1/13</td>
<td>Vote on 4/18/13 GC meeting on finalized F&amp;R</td>
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<tr>
<td>Art History</td>
<td>1/2013</td>
<td>PR: 3/12/13</td>
<td>Waiting on draft F&amp;R from subcommittee (CN, JT, RL), was due 4/2/13</td>
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<tr>
<td>Mech. Engin.</td>
<td>1/2013</td>
<td>PR: due 4/26/13</td>
<td>Waiting for Preliminary Response from program</td>
</tr>
<tr>
<td>Anthropology</td>
<td>2/2013</td>
<td>PR: 3/22/13</td>
<td>Waiting on finalized F&amp;R (LB, CCD) - draft completed by RO</td>
</tr>
<tr>
<td>History</td>
<td>3/2013</td>
<td>PR: due 4/25/13</td>
<td>Waiting for Preliminary Response from program</td>
</tr>
</tbody>
</table>
Present:
Connie Nugent, Chair, Cell Biology & Neuroscience
Lynda Bell, Vice Chair, History
Chris Chase-Dunn, Sociology
Mohsen El Hafsi, SoBA
David A. Johnson, School of Medicine
Rene Lysloff, Music
Rollanda O'Connor, Graduate School of Education
Richard A. Redak, Entomology
James S. Tobias, English
Ertem Tuncel, Electrical Engineering
Jingsong Zhang, Chemistry
Joe Childers, Graduate Dean (ex-officio)

Absent:
Roland K. Kawakami, Physics and Astronomy
John Kim, Comp. Lit. & Foreign Languages
Daniel Schlenk, Environmental Sciences
Mike Vanderwood, Graduate School of Education
Jianzhong Wu, Chemical/Environmental Engineering
Henry Huang, GSA Student
Aaron Jones, GSA Student

Guests:
Linda Scott, Graduate Division
Kevin Esterling, Assoc. Dean, Graduate Division

Approval of Minutes
The minutes from the February 21, 2013 meeting were unanimously approved as written.

Chair’s Announcements
Chair Nugent informed the Graduate Council that the graduate program reviews are now complete, and that we are in the process of catching up on past reviews.

Announcements
Mike Vanderwood (CCGA Representative) – absent from meeting.

Graduate Student(s) – absent from meeting.
Graduate Dean Joe Childers – Graduate Dean Childers reported to the Graduate Council that per CCGA, the policy of allowing double Ph.D.’s is left up to each campus. It was suggested to collect the policies of other UC’s and see if Graduate Council likes any of them.

Dean Childers informed the Graduate Council that the number of applicants has surpassed last year’s number. The Graduate Division is still receiving very high quality applications. Nearly $10 million has been allocated to the Chancellor’s Distinguished Fellowship (CDF) this year. After four years of pressure, upper administration has agreed to implement a plan to return funds to departments who enroll self-supporting students (international or self-supporting). The return will be 50% NRT to programs/departments. This is a great way to create incentives at the program level.

Dean Childers is getting ready to submit Graduate Division’s budget plan for next year. This year the Dean is going to discuss increasing per student averages. Dean Childers would also like for all campus application fees to go to the Graduate Division, and then Graduate Division will allocate these funds to programs based on their applicants. Currently, Graduate Division only gets a portion of campus application fees. The return to programs would be about $40 per student and could be used for anything related to graduate students. This would create another incentive for programs.

Courses and Programs to be approved
Graduate Council voted to approve the following courses:
1. BIEN 271 - Video Bioinformatics: Multi-scale Analysis of Biological Systems – CHANGE
2. BIEN 272 - Special Topics in Biomaterials and Tissue Engineering – CHANGE
3. CS 210 - Scientific Computing – CHANGE
4. CS 230 - Computer Graphics – CHANGE
5. EE 235 - Linear System Theory – CHANGE
6. EE 270 - Introduction to Video Bioinformatics – CHANGE
7. EE 271 - Video Bioinformatics: Multi-scale Analysis of Biological Systems – CHANGE
8. EE 272 - Introduction to Imaging Bioinstrumentation and Analysis – CHANGE
9. EE 273 - Live Imaging and Analysis of Cellular and Molecular Behaviors – CHANGE
10. EE 274 - Introduction to Medical Imaging and Analysis – CHANGE
11. GEN 270 - Introduction to Video Bioinformatics – NEW
12. GEN 271 - Video Bioinformatics: Multi-scale Analysis of Biological Systems – NEW
13. GEN 272 - Introduction to Imaging Bioinstrumentation and Analysis – NEW
14. GEN 273 - Live Imaging and Analysis of Cellular and Molecular Behaviors – NEW
15. GEN 274 - Introduction to Medical Imaging and Analysis – NEW
16. HIST 238A - Research Seminar in Oral History - CHANGE
17. HIST 238B - Research Seminar in Oral History – CHANGE
18. HIST 276A - Research Seminar in Native American History – CHANGE
19. HIST 276B - Research Seminar in Native American History – CHANGE
20. HIST 287A - Research Seminar in Nature, Place, and Space: Environmental and Spatial Approaches to History – CHANGE
21. HIST 287B - Research Seminar in Nature, Place, and Space: Environmental and Spatial Approaches to History – CHANGE
22. MGT 256 - Business Analytics for Management - NEW
23. MSE 280 - Special Topics in Biomaterials and Tissue Engineering – NEW

Include program change below:
24. CS 287 – Colloquium in Computer Science (Professional Development) – CHANGE
Graduate Council voted to approve the following program changes:
1. Computer Science (CS 287 course above) catalog updates with professional development.
2. EEOB (EEOB 210 course above) program change with justification as requested by C&P.
3. Environmental Sciences (ENSC 401 course above) program change with professional development.

Professional Development Requirements
Graduate Council reviewed the document provided by Dean Childers outlining Professional Development requirements and clearing up questions pertaining to the requirements. Graduate Council voted and unanimously approved the new language that requires professional development for Ph.D. and MFA terminal degrees; MA and MS programs should include professional development as a best practice but are not required to do so.

Double Ph.D. policy
Ph.D.’s are expensive; therefore, allowing double Ph.D.’s is a resource issue. Does the second Ph.D. need to be in a different field? Should the student be eligible for central funding? UC Davis is the most liberal with their double Ph.D. policy. Their policy states that Ph.D.’s in the same field are not considered, and Ph.D.’s in closely related fields may be considered but they must be reviewed by the Graduate Council. Graduate Council should develop basic guidelines for programs to follow. Dean Childers suggested putting together two to three Graduate Council members to draft basic guidelines and he will consult with them, along with Linda Scott and Vicki Long from the Graduate Division. It was suggested to continue to approve double Ph.D.’s by exception and have Graduate Council review and decide on each one. However, general guidelines do need to be put in the catalog. Rene Lysloff, Jingsong Zhang, and Ertem Tuncel agreed to work on these guidelines.

Allowing committee members (for oral exams, thesis defense, etc.) to participate via teleconference
Graduate Council discussed committee members participating in oral exams, thesis defense, etc. via teleconference. The Graduate Council agreed that allowing committee members to participate via Skype should be limited for emergencies only, should be exceptional, and must be approved by the Graduate Division in advance. The Chair of the committee must always be present. Only one committee member should be allowed to Skype in, all other members of the committee must be physically present. Lynda Bell agreed to tweak the existing language to include these changes.

Exam appeals policy – Kevin Esterling, Assoc. Dean
Graduate Council discussed the exam appeals policy with Assoc. Dean Esterling. Revisions were suggested and the Graduate Council voted to approve the procedures pending revisions that were discussed. Assoc. Dean Esterling will send another revised version and the Graduate Council will do an email vote to approve the policy.
**Sociology Student Grade Appeal**
Graduate Council discussed the student’s grade appeal and voted (7 in favor and 2 abstentions) to reject the student’s appeal for lack of evidence that personal and arbitrary reasons were used in determining her grade.
## 2012-2013 COURSES & PROGRAMS SUBCOMMITTEE
### MEETING ATTENDANCE

**DATE:** April 11, 2013

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHRISTOPHER CHASE-DUNN, CHAIR</td>
<td>SOCIOLOGY</td>
<td>PRESENT</td>
</tr>
<tr>
<td>MOHSEN EL HAFSI</td>
<td>SOBA</td>
<td>PRESENT</td>
</tr>
<tr>
<td>ROLAND KAWAKAMI</td>
<td>PHYSICS</td>
<td>PRESENT</td>
</tr>
<tr>
<td>JOHN KIM</td>
<td>COMP. LIT. &amp; FOREIGN LANG.</td>
<td>ABSENT</td>
</tr>
<tr>
<td>RENE LYSOFF</td>
<td>MUSIC</td>
<td>PRESENT</td>
</tr>
<tr>
<td>DANIEL SCHLENK</td>
<td>ENVIRONMENTAL SCIENCES</td>
<td>ABSENT</td>
</tr>
<tr>
<td>ERTEM TUNCHEL</td>
<td>ELECTRICAL ENGINEERING</td>
<td>PRESENT</td>
</tr>
<tr>
<td>MIKE VANDERWOOD</td>
<td>GSOE</td>
<td>ABSENT</td>
</tr>
</tbody>
</table>

**GUESTS:**

LINDA SCOTT, GRADUATE DIVISION

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December 21, 2012

TO: Michael McKibben, Associate Dean
College of Natural & Agricultural Sciences

FROM: Cynthia K. Larive, Chair
Department of Chemistry

RE: PROPOSED CHANGES TO CHEMISTRY GRADUATE COURSE OFFERINGS

The Department of Chemistry proposes several changes in our graduate course offerings in the area of synthetic chemistry. The purpose of these changes is to modernize and reorganize these courses into a series CHEM 204A–E. This brings our offerings in the area of organic chemistry into line with the other chemistry subdisciplines, e.g. analytical (CHEM 221A-F) and physical chemistry (CHEM 201A-E). Most notably, any three of the five courses in the CHEM 204 series can be taken to satisfy the core course degree requirement. Some courses have changed in their emphasis to provide a more current and relevant graduate-level organic chemistry curriculum. The new course descriptions are provided below. The current course being replaced by the new offering is indicated in each case by underlined text.

CHEM 204A Structure and Mechanism in Organic Chemistry
Covers structure and bonding in organic compounds, with emphasis on more advanced aspects of the field.
This course replaces the current CHEM 211A.

CHEM 204B Spectrometry in Organic Structure Analysis (cross list with MSE 225)
Utilizes modern spectroscopic techniques such as IR, mass spectrometry, and $^1$H and $^{13}$C NMR to determine the structure of complex organic molecules. Topics include advanced NMR techniques such as 2D NMR, NMR pulse sequences, diffusion NMR and MRI.
This course replaces the current CHEM 216A.

CHEM 204C Advanced Organic Chemistry: Reactions and Mechanism
Explores organic and organometallic reaction mechanisms and their application to modern synthesis.
This course replaces the current CHEM 211B.

CHEM 204D Advanced Organic Reactions (cross list with MSE 245A)
Covers modern organic reactions and reagents and their mechanistic pathways, with emphasis on recent developments and practical organic chemistry.
This course replaces the current CHEM 210.

CHEM 204E Organic Synthetic Analysis
Covers synthetic organic chemistry, with emphasis on modern retrosynthetic analysis.
This course replaces the current CHEM 211C.

There are several courses on the list of courses that have not been taught in 4 or 8 years. We request that CHEM 217 Polymers: Synthesis and Characterization be retained. This course was last taught in 2005W. The department is currently in negotiations with a faculty hire who is a polymer chemist. If we are successful in recruiting this faculty member we anticipate that he would teach this course in the 2012-13 academic year.

We request that CHEM 217 Polymers: Synthesis and Characterization be retained. This course was last taught in 2005W. The department is currently in negotiations with a faculty hire who is a polymer chemist. If we are successful in recruiting this faculty member we anticipate that he would teach this course in the 2012-13 academic year.

We propose the deletion of the following courses:
CHEM 207 Chemical Group Theory. This course was last offered in 2007S. We do not anticipate offering it in the near future.

CHEM 215A Organic Synthesis. This course was last offered in 2000S. The material covered in this course will now be covered by the new series CHEM 204A-E.

CHEM 215B Organic Synthesis. This course was last offered in 2002F. The material covered in this course will now be covered by the new series CHEM 204A-E.

CHEM 222 Technology Venture Development. This course is in a pending status and has never been taught. The department no longer wishes to offer this course.

Four courses in the Advanced Topics in Organic Chemistry Series CHEM 239 (E-Z) are also recommended for deletion:

CHEM 239O Molecular Structure by Diffraction Methods. This course has never been offered. We do not anticipate offering it in the near future.

CHEM 239S Theory and Molecular Modeling. This course was last offered in 2005S. It has been made redundant by CHEM 206A and B.

CHEM 239T Fullerenes, Nanotubes, and Carbon-based Materials. This course has never been offered. We do not anticipate offering it in the near future.

CHEM 239X Modern Applications of Transition Metals in Organic Synthesis. This course has never been offered. We do not anticipate offering it in the near future.
# Program of Study

The departmental committee on graduate study determines a program of study on the basis of the students’ performance on the orientation examinations and a consideration of their subdisciplines. For students with a normal B.S. level preparation the typical course pattern for each subdiscipline is as follows:

<table>
<thead>
<tr>
<th>Subdiscipline</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical</td>
<td>CHEM 221A, CHEM 221B, CHEM 221C, CHEM 221D, CHEM 221E plus two other courses</td>
</tr>
<tr>
<td>Inorganic</td>
<td>CHEM 231A, CHEM 231B, CHEM 231C plus two other courses</td>
</tr>
<tr>
<td>Organic</td>
<td>CHEM 211A, CHEM 211B, CHEM 211C plus two other courses</td>
</tr>
<tr>
<td>Physical</td>
<td>CHEM 201A CHEM 201B, CHEM 201C, CHEM 201D, CHEM 201E plus two other courses</td>
</tr>
</tbody>
</table>

### Proposed Program of Study

The departmental committee on graduate study determines a program of study on the basis of the students’ performance on the orientation examinations and a consideration of their subdisciplines. For students with a normal B.S. level preparation the typical course pattern for each subdiscipline is as follows:

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<td>CHEM 201A CHEM 201B, CHEM 201C, CHEM 201D, CHEM 201E plus two other courses</td>
</tr>
</tbody>
</table>

### Professional Development Training

1. All students must take CHEM 301 (Oral Presentations) during the first year of residence.
2. Each quarter, all students in residence must enroll in:
   - CHEM 250 (Graduate Seminar in Chemistry) and one from the following list (which is in the student's subdiscipline):
   - CHEM 251 (Graduate Seminar in Analytical Chemistry)
   - CHEM 252 (Graduate Seminar in Inorganic Chemistry)
   - CHEM 253 (Graduate Seminar in Organic Chemistry)
   - CHEM 254 (Graduate Seminar in Physical Chemistry)
3. All students must take 1 quarter of CHEM 401 (Professional Development in Chemistry)

**Justification:** To modernize and reorganize these courses into CHEM 204A – CHEM 204E with changes in emphasis to provide a more current and relevant graduate level organic chemistry curriculum. Most notably, any three of the five courses may be taken as “core” courses for degree requirements. Additionally, we will now address Professional Development as required.

**Faculty Approval Date:** 2/16/2012

**Department Chair/Program Director:** Cynthia K. Larive
Doctoral Degree
The Department of Chemistry offers the PhD degree in Chemistry.

The requirements are orientation examinations in analytical, inorganic, organic, and physical chemistry; general university requirements; and departmental requirements.

Program of Study
The departmental committee on graduate study determines a program of study on the basis of the students’ performance on the orientation examinations and a consideration of their subdisciplines. For students with a normal B.S. level preparation the typical course pattern for each subdiscipline is as follows:

1. Analytical (a minimum of three courses selected from CHEM 221A, CHEM 221B, CHEM 221C, CHEM 221D, CHEM 221E plus two other courses)
2. Inorganic (CHEM 231A, CHEM 231B, CHEM 231C plus two other courses)
3. Organic (CHEM 211A, CHEM 211B, CHEM 211C plus two other courses)
4. Physical (a minimum of three courses selected from CHEM 201A CHEM 201B, CHEM 201C, CHEM 201D, CHEM 201E plus two other courses)

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3. All students must take 1 quarter of CHEM 401 (Professional Development in Chemistry)

Second Year Research Evaluation
Students seeking advancement to candidacy for the Ph.D. degree must undergo a Second-Year Research Evaluation.

Doctoral Degree
The Department of Chemistry offers the PhD degree in Chemistry.

The requirements are orientation examinations in analytical, inorganic, organic, and physical chemistry; general university requirements; and departmental requirements.

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   CHEM 254 (Graduate Seminar in Physical Chemistry)
3. All students must take 1 quarter of CHEM 401 (Professional Development in Chemistry)

Second Year Research Evaluation
Students seeking advancement to candidacy for the Ph.D. degree must undergo a Second-Year Research Evaluation.
Evaluation (SYRE). The SYRE must take place by the end of the student's fourth academic quarter of residency and is administered by a four-member committee of the Chemistry faculty, one of whom is the student's dissertation advisor. The Chair of the SYRE Committee will be someone other than the dissertation advisor. Typically, these same four faculty members would also serve on the oral qualifying examination committee, with the Chair of the SYRE Committee continuing on as Chair of the oral qualifying examination committee.

The SYRE consists of both a written and oral component and the student is assessed on both components. The written SYRE document should provide an introduction to the dissertation research, an outline of the goals and objectives, a description of the progress to date, and a delineation of the path forward. The SYRE document is limited to five single-spaced pages (12-point type), excluding references. The oral component of the SYRE will be a presentation of the written document. After presentation of the SYRE document, the student will be queried by committee to assess the student’s general knowledge of the material. A student will receive a single grade of Pass, Qualified Pass, or Fail. A Pass signifies that the student has made satisfactory progress in research and is on track to pass the oral qualifying examination. A Qualified Pass signifies that a student's progress in research is reasonable, but that improvement is needed, and should be demonstrated at the time of the oral qualifying examination. A Fail signifies that a student has to date, not made satisfactory progress in research. A student who fails the SYRE would not be required to undergo Chemistry 164 / Programs and Courses a second evaluation; however, such students would be placed on notice that they are not on track to pass the oral qualifying examination unless major steps are taken to correct serious deficiencies in research performance.

Foreign Language Requirement A reading knowledge of German, French, or Russian is recommended but not required.

Oral Qualifying Examination This examination consists in part of defending an original proposition and is designed to test the extent of the candidates’ development and their breadth of knowledge in chemistry and related fields.

Teaching Requirement Normally requires three quarters of service as a teaching assistant, or equivalent.

Normative Time to Degree 15 quarters
Graduate Classes offered in the Department of Chemistry
U.C. Riverside

For information about which classes are being taught during the academic year, see the UCR schedule of classes on the web, http://classes.ucr.edu/

CHEM 201A. Advanced Physical Chemistry: Quantum Mechanics (3) Lecture, 3 hours. Covers concepts in quantum mechanics including wavepackets, uncertainty, single particles in multiple dimensions, and approximate methods for solving the Schrodinger equation.

CHEM 201B. Advanced Physical Chemistry: Quantum Mechanics and Spectroscopy (3) Lecture, 3 hours. Covers concepts in quantum mechanics with particular applications to spectroscopy.

CHEM 201C. Advanced Physical Chemistry: Elementary Statistical Mechanics (3) Lecture, 3 hours. Covers concepts in elementary statistical mechanics including ensembles, interpretations of thermodynamic functions, and quantum statistics.

CHEM 201D. Advanced Physical Chemistry: Thermodynamics (3) Lecture, 3 hours. Covers concepts in thermodynamics including fundamental equations, potentials, Maxwell relations, and stability criteria.

CHEM 201E. Advanced Physical Chemistry: Kinetics (3) Lecture, 3 hours. Covers concepts in kinetics including reaction mechanisms and the molecular interpretation of reaction dynamics.

CHEM 202. Advanced Instrument Design (2) Lecture, 1 hour; laboratory, 3 hours. Focuses on the technical aspects of design and manufacture of instrumentation for physical chemistry and related fields. Introduces design and simulation software and provides hands-on experience in the realization of advanced instrumentation development projects. Students who complete a project and take the final examination receive a letter grade; other students receive a Satisfactory (S) or No Credit (NC) grade.

CHEM 203. Nanoscience and Nanotechnology (3) Lecture, 3 hours. Gives a condensed, interdisciplinary overview of selected fields of nanoscience and emerging nanotechnological applications. Special focus is on applications relevant for the campus research community that are not based on electronic applications of silicon.

CHEM 204A. Structure and Mechanism in Organic Chemistry (3) Lecture, 3 hours. Covers structure and bonding in organic compounds, with emphasis on more advanced aspects of the field.

CHEM 204B. Spectrometry in Organic Structure Analysis (3) Lecture, 3 hours. Utilizes modern spectroscopic techniques such as IR, mass spectrometry, and $^1$H and $^{13}$C NMR to determine the structure of complex organic molecules. Topics include advanced NMR techniques such as 2D NMR, NMR pulse sequences, diffusion NMR, and MRI.

CHEM 204C. Advanced Organic Chemistry: Reactions and Mechanism (3) Lecture, 3 hours. Explores organic and organometallic reaction mechanisms and their application to modern synthesis.
CHEM 204D. Advanced Organic Reactions (3) Lecture, 3 hours. Covers modern organic reactions and reagents and their mechanistic pathways, with emphasis on recent developments and practical organic chemistry.

CHEM 204E. Organic Synthetic Analysis (3) Lecture, 3 hours. Covers synthetic organic chemistry, with emphasis on modern retrosynthetic analysis.

CHEM 206A. Introduction to Computational Quantum Chemistry (3) Lecture, 3 hours. Introduces computational techniques in quantum chemistry. Includes Hartree-Fock theory, Density Functional Theory, and electron correlation methods. Emphasizes practical applications in a research setting.

CHEM 206B. Modeling Chemical and Biochemical Molecules (3) Lecture, 3 hours. Introduces students to the principles, concepts, and techniques for modeling chemical and biological systems. Covers the various methods and techniques for molecular simulations, energy calculations, obtaining initial data, accessing data reliably, visualization and analysis of molecules, and screening and designing chemicals for proteins.

CHEM 207. Chemical Group Theory (3) Lecture, 3 hours. The principles of group theory and molecular symmetry. Applications in several areas of chemistry.

CHEM 208. Interdisciplinary Overview of Current Issues in Semiconductor Processing (3) Lecture, 3 hours. An interdisciplinary overview of present-day semiconductor processing. Introduces topics such as properties of semiconductors, cleanroom environment, epitaxy, ion implantation, etching, lithography, device architecture, testing, and fault detection. May offer field trips. Cross-listed with PHYS 202.

CHEM 209 (E-Z). Advanced Topics in Physical Chemistry (2-3) lecture, 2 hours (2 units) or 3 hours (3 units). Selected advanced topics from modern physical chemistry.


CHEM 221A. Advanced Analytical Chemistry: Separation Science (3) Lecture, 3 hours. Provides an overview of modern analytical separations including theory, instrumentation, and applications.

CHEM 221B. Advanced Analytical Chemistry: Optical Spectroscopy (3) Lecture, 3 hours. Provides an overview of modern analytical optical spectroscopic techniques including theory, instrumentation, and applications.

CHEM 221C. Advanced Analytical Chemistry: Chemical Instrumentation (3) Lecture, 3 hours. Provides an overview of modern electronics, including analog and digital electronics, as it pertains to the development of modern chemical instrumentation.

CHEM 221D. Advanced Analytical Chemistry: Electrochemistry (3) Lecture, 3 hours. Provides an overview of modern electrochemistry including basic theory, applications, and instrumentation of potentiometry and amperometry.

CHEM 221E. Advanced Analytical Chemistry: Mass Spectroscopy (3) Lecture, 3 hours. Provides an overview of modern mass spectroscopy including basic theory, instrumentation, and applications.
Focus is on biological applications.

**CHEM 223. Nature of the Chemical Bond (3)** Lecture, 3 hours. Explores all aspects of chemical bonding including molecular orbital theory, valence bond theory, and noncovalent bonding, with coverage of key concepts from all subdivisions of chemistry.

**CHEM 229 (E-Z). Advanced Topics in Analytical Chemistry (2 or 3)** Lecture, 2-3 hours. Selected advanced topics from modern analytical chemistry. Course content will vary.

**CHEM 231A. Structure and Bonding in Inorganic Chemistry (3)** Lecture, 3 hours. Covers advanced synthesis, structure, and bonding in inorganic, coordination, and organometallic chemistry.

**CHEM 231B. Reactivity and Mechanism in Inorganic and Organometallic Chemistry (3)** Lecture, 3 hours. Covers advanced synthesis, reactivity, and mechanism in inorganic, coordination, and organometallic chemistry.

**CHEM 231C. Solid State and Materials in Inorganic Chemistry (3)** Lecture, 3 hours. Covers the advanced synthesis, structure, bonding, and properties of inorganic materials.

**CHEM 239 (E-Z). Advanced Topics in Inorganic Chemistry (2-3)** lecture, 2 hours (2 units) or 3 hours (3 units). Covers selected advanced topics in modern inorganic chemistry. The contents of the segments vary.

**CHEM 242. Combinatorial Chemistry and Chemical Genomics (3)** Lecture, 3 hours. Explores topics in chemical genomics. Part I involves combinatorial principles, library methods, solid-phase and split-pool synthesis, deconvolution, library design and informatics, and parallel synthesis. Part II involves screening and selection systems, forward and reverse chemical genetic approaches, phenocopies and epistasis, preparation and use of molecular arrays, and target identification. May be taken Satisfactory (S) or No Credit (NC) with consent of instructor and graduate advisor.

**CHEM 245. Chemistry and Physics of Aerosols (3)** Lecture, 3 hours. Fundamentals of chemical and physical processes controlling behavior and properties of airborne particles. Topics include particle mechanics; electrical, optical, and thermodynamic properties; nucleation; surface and aqueous phase chemistry; gas particle partitioning; sampling; size and chemical analysis; atmospheric aerosols; and environmental effects. Cross-listed with ENTX 245 and SWSC 245.

**CHEM 246. Fate and Transport of Chemicals in the Environment (4)** Lecture, 4 hours. 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 physico-chemical 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 ENSC 200 and ENTX 200.
Coversheet for Request for Approval
To Modify Graduate Program Degree Requirements

<table>
<thead>
<tr>
<th>Program</th>
<th>Creative Writing and Writing for the Performing Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department/Academic Unit/School</td>
<td>Department of Creative Writing and Department of Theatre</td>
</tr>
<tr>
<td>Date</td>
<td>03/28/13</td>
</tr>
<tr>
<td>Proposed Effective Date</td>
<td>Fall 2013</td>
</tr>
</tbody>
</table>

Faculty Contact: Robin Russin
Prepared by: Bryan Bradford

Email: robin.russin@ucr.edu
Email: bryan.bradford@ucr.edu
Phone: 2-2707
Phone: 2-5568

Proposed Modification(s) (please check all that apply)

- [] Admission requirements
- [] Course requirements
- [] Unit requirements
- [] Examination requirements
- [] Professional Development Plan
- [] Time-to-degree
- [] Other (please describe):

1. Proposal must include a cover letter from the Dean, Associate Dean, Chair, Director or Program Advisor as appropriate, taking care to briefly describe the proposed modifications and justification for the request.

2. Attached proposal must include the proposed modifications as formatted in the example below.
The existing requirements must be on the left column, and the proposed revisions on the right.
Proposed additions must be underlined and deletions must be striken.

<table>
<thead>
<tr>
<th>Existing</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insert existing program requirements on this side of the table</td>
<td>Insert proposed requirements on this side of the table. Underline the additions and strike the deletions.</td>
</tr>
</tbody>
</table>

Justification: The Justification should include examples such as impact on time to degree, expected impact on employment prospects, expected impact on recruitment. Please address whether current students will be permitted to switch to take advantage of the revisions. If so what will the approval process be?

Faculty Approval Date: Indicate the date of the faculty vote

| Department Chair / Program Director: | Please type name(s) as appropriate |
| Signature: | Please include signature(s) as appropriate |
| Date: | Date signed |

Checklist of Required Attachments/Appendices (please check to verify inclusion):

- [x] Dean/Associate Dean/Chair or Program Advisor Cover Letter
- [x] Proposal in proper table format – signed and dated as appropriate
- [ ] Revised and Dated Program Summary
- [ ] Revised Catalogue Copy
- [ ] Revised Website Copy
March 28, 2013

Dear Members of the Graduate Council,

Enclosed please find proposed modifications to the M.F.A. program in Creative Writing and Writing for the Performing Arts (CWPA), to be instituted as of the 2013-14 academic year.

In keeping with Graduate Council’s directive to add a professional development course to the program curriculum requirements, CWPA proposes that CWPA 201 – The Writer’s Life be added as a required course. CWPA 201 fulfills the professional development initiative by instructing students in strategies for success within the writing industry. In addition to receiving instruction from the working writers on our faculty, students will also be advised by invited professionals from the publishing, film, and theatre industries. CWPA 201 will be offered each fall, and all of our incoming students will be required to take the class in their first quarter in the program. For all practical purposes, this requirement was implemented as of Fall 2012, when our incoming students were directed by their advisors to take the course.

The addition of this requirement will not extend the students’ time to graduation. In order to offset the addition of CWPA 201, we have removed one of the four electives in workshop, seminars, and thesis units. The number of total required units for graduation will remain at fifty-six.

Thank you for your consideration of this proposal.

Sincerely,

Robin Russin
Associate Professor and Director
MFA for Creative Writing and Writing for the Performing Arts
### Existing:

**Main Campus Traditional Program**
Consists of workshops in chosen genres, culminating in a final project (the master’s thesis) that showcases the writer’s cultivated talents, in the form of a poetry collection, novel, memoir, screenplay, or full-length play. The M.F.A. requires students to major in one genre but encourages them to explore the other genres as well, allowing for creative movement within disciplines. Structure and focus in screenwriting and playwriting can also be applied to fiction and nonfiction, and lyricism and metaphor in poetry can also enhance description and dialogue in the other genres, for example. Students also engage in course work in varied areas of directing and acting, in film history and literature, in literary criticism and translation, with supplemental courses selected from departments such as Comparative Literature and Foreign Languages, English, Hispanic Studies, and Media and Cultural Studies. Students can gain practical aspects of filmmaking from courses in Studio Art and Theatre.

Course Requirements
Minimum requirements consist of 56 units of course work (12 courses) and 8 units of master’s thesis project. The core curriculum includes the following:
1. Four workshop courses in chosen genre (16 units total).
2. Two graduate seminars from Creative Writing and Writing for the Performing Arts (8 units).
3. Two graduate seminars from any department(s) outside of Theatre and Creative Writing. Seminar subject matter should be relevant to student’s thesis project. Requirement can be met with

### Proposed:

**Main Campus Traditional Program**
Consists of workshops in chosen genres, culminating in a final project (the master’s thesis) that showcases the writer’s cultivated talents, in the form of a poetry collection, novel, memoir, screenplay, or full-length play. The M.F.A. requires students to major in one genre but encourages them to explore the other genres as well, allowing for creative movement within disciplines. Structure and focus in screenwriting and playwriting can also be applied to fiction and nonfiction, and lyricism and metaphor in poetry can also enhance description and dialogue in the other genres, for example. Students also engage in course work in varied areas of directing and acting, in film history and literature, in literary criticism and translation, with supplemental courses selected from departments such as Comparative Literature and Foreign Languages, English, Hispanic Studies, and Media and Cultural Studies. Students can gain practical aspects of filmmaking from courses in Studio Art and Theatre.

Course Requirements
Minimum requirements consist of 56 units of course work (12 courses) and 8 units of master’s thesis project. The core curriculum includes the following:
1. Four workshop courses in chosen genre (16 units total).
2. CWPA 201 (4 units)
3. Two graduate seminars from Creative Writing and Writing for the Performing Arts (8 units).
4. Two graduate seminars from any department(s) outside of Theatre and Creative Writing. Seminar subject matter should be relevant to student’s thesis project.
upper-division courses, with instructor and graduate advisor approval, as an appropriate 292 course (8 units).

4. Electives in workshop, graduate seminar or thesis, with the following limitations: Students may take a maximum of six workshops (24 units) within their chosen genre, and a maximum of 16 thesis units within the normative time to degree (six terms). Students are encouraged to take seminars or cross-genre workshops, as available; elective thesis units beyond the 8 required units must be approved by the student’s thesis advisor and graduate advisor (46 units).

5. Thesis (8 units) In the areas of playwriting and screenwriting, the final written project is a full-length play of two or three acts (90-130 pages) or screenplay or teleplay (approximately 130 pages). In the areas of poetry, fiction, and nonfiction, the final written project is a poetry collection, novel, short story collection, or essay collection. Each student is paired with one or two faculty members who serve as thesis advisor(s). Two faculty readers, in addition to the advisor(s), evaluate the thesis work. The length of the final project breaks down as follows: Poetry 50 – 100 pages, Fiction 100 – 150 pages, Creative Non-fiction 100 – 150 pages, screenplay, teleplay or play 90 – 130 pages.

Normative Time to Degree Main campus: 6 quarters;

project. Requirement can be met with upper-division courses, with instructor and graduate advisor approval, as an appropriate 292 course (8 units).

5. Three electives in workshop, graduate seminar or thesis, with the following limitations: Students may take a maximum of six workshops (24 units) within their chosen genre, and a maximum of 16 thesis units within the normative time to degree (six terms). Students are encouraged to take seminars or cross-genre workshops, as available; elective thesis units beyond the 8 required units must be approved by the student’s thesis advisor and graduate advisor (12 units).

6. Thesis (8 units) In the areas of playwriting and screenwriting, the final written project is a full-length play of two or three acts (90-130 pages) or screenplay or teleplay (approximately 130 pages). In the areas of poetry, fiction, and nonfiction, the final written project is a poetry collection, novel, short story collection, or essay collection. Each student is paired with one or two faculty members who serve as thesis advisor(s). Two faculty readers, in addition to the advisor(s), evaluate the thesis work. The length of the final project breaks down as follows: Poetry 50 – 100 pages, Fiction 100 – 150 pages, Creative Non-fiction 100 – 150 pages, screenplay, teleplay or play 90 – 130 pages.

Normative Time to Degree Main campus: 6 quarters;

Justification: The proposed modifications to Creative Writing and Writing for the Performing Arts are done to meet the professional development requirement instituted by the Graduate Council. CWPA proposes to add CWPA 201 – The Writer’s Life as a required course for all CWPA students. CWPA 201 offers instruction in the practical aspects of achieving success as working writer. Students are introduced to visiting professionals in publishing, film, and theatre who offer their insight and advice on how to succeed in their given fields. Students gain knowledge of the different job opportunities available to them as working writers, and it will improve their ability to find and maintain employment.

In order to accommodate the inclusion of CWPA 201 as a required course, we have eliminated one of the four electives in workshop, seminars, and thesis units. We feel that having three electives in these areas will offer students the flexibility to pursue their academic interests. The required number of units to graduate will remain unchanged at fifty-six (56).
CWPA 201 is an approved 4-unit course, and for all practical purposes, the proposed requirement to take CWPA 201 was instituted in Fall 2012 when all incoming students were directed by their advisors to take the class that quarter. We plan to offer CWPA 201 each fall, so continuing students who have not taken the class will have the opportunity to do so.
Faculty Approval Date: 10/23/2012

<table>
<thead>
<tr>
<th>Program Director:</th>
<th>Robin Russin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signature:</td>
<td></td>
</tr>
<tr>
<td>Date:</td>
<td>2/26/2013</td>
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Coversheet for Request for Approval
To Modify Graduate Program Degree Requirements

<table>
<thead>
<tr>
<th>Program</th>
<th>Economics</th>
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</thead>
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<tr>
<td>Department/Academic Unit/School</td>
<td>Economics / CHASS</td>
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<tr>
<td>Date</td>
<td>4/1/13</td>
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<tr>
<td>Proposed Effective Date</td>
<td>Fall 2013</td>
</tr>
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</table>

| Faculty Contact: | Marcelle Chauvet | Email: marcelle.chauvet@ucr.edu | Phone: 951-827-1587 |
| Prepared by:    | Marcelle Chauvet | Email: | Phone: |

**Proposed Modification(s) (please check all that apply)**

- Admission requirements
- Unit requirements
- Professional Development Plan
- Other (please describe): Addition of field course/change in field name
- Course requirements
- Examination requirements
- Time-to-degree

1. Proposal must include a cover letter from the Dean, Associate Dean, Chair, Director or Program Advisor as appropriate, taking care to briefly describe the proposed modifications and justification for the request.

2. Attached proposal must include the proposed modifications as formatted in the example below. The existing requirements must be on the left column, and the proposed revisions on the right. Proposed additions must be underlined and deletions must be stricken.

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| Department Chair / Program Director: | Please type name(s) as appropriate |
| Signature:                           | Please include signature(s) as appropriate |
| Date:                                | Date signed |

**Checklist of Required Attachments/Appendices (please check to verify inclusion):**

- Dean/Associate Dean/Chair or Program Advisor Cover Letter
- Proposal in proper table format – signed and dated as appropriate
- Revised and Dated Program Summary
- Revised Catalogue Copy
- Revised Website Copy
<table>
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<tr>
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<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>7. International Trade Theory</strong>&lt;br&gt;Students must complete the following:&lt;br&gt; ECON 234 (International Trade Theory)&lt;br&gt; ECON 235 (Topics in International Trade Theory)</td>
<td><strong>7. International Trade Theory/International Finance</strong>&lt;br&gt;Students must complete the following:&lt;br&gt; ECON 234 (International Trade Theory)&lt;br&gt; ECON 235 (Topics in International Trade Theory)&lt;br&gt; ECON 236/POSC 215 (Political Economy of International Finance)</td>
</tr>
</tbody>
</table>

**Justification:** the Economics Department approved cross-listing the course POSC215E with the course ECON236 (Political Economy of International Finance). The Department also approved that this course be offered in the International Trade Theory field, which will be named International Trade Theory/International Finance. These areas are closely connected. These changes will meet the demand of our graduate students who are interested in not only having a minor in International Finance and/or International trade but also would like to major in it, which requires taking three courses.
Date: April 4, 2013
To: Connie Nugent, Chair
   Graduate Council
From: Linda L. Walling, Professor
       Graduate Advisor, Graduate Program in Plant Biology
          Mikeal Roose, Chair Department of Botany and Plant Sciences
          Director, Graduate Program in Plant Biology
Re: Proposed Requirement Change to the Plant Biology Graduate Program – MS degree

Current Catalog

Courses available for fulfilling the requirement for the M.S. degree:

Section I — Upper-division undergraduate courses:


Section II — Graduate and upper-division undergraduate courses in related departments or programs: applicable courses are determined by the educational advisory committee and require approval of the graduate advisor.

Section III —

Botany track BCH 205/BPSC 205/CMDB 205/GEN 205/MCBL 205/PLPA 205, BCH 231/BPSC 231, BPSC 201 (E-Z) (for a maximum of 2 units), BPSC 210, BPSC 230, BPSC 232, BPSC 234, BPSC 237, BPSC 239, BPSC 240 (only if taken in addition to the required seminar units; see seminar requirement), BPSC 243, BPSC 245, BPSC 247

Plant Science track BCH 205/BPSC 205/CMDB 205/GEN 205/MCBL 205/PLPA 205, BCH 231/BPSC 231, BPSC 201 (E-Z) (for a maximum of 2 units), BPSC 221, BPSC 222, BPSC 232, BPSC 234, BPSC 237, BPSC 239, BPSC 240 (only if taken in addition to the required seminar units; see seminar requirement)

Proposed Catalog

Courses available for fulfilling the requirement for the M.S. degree:

Section I — Upper-division undergraduate courses:


Section II — Graduate and upper-division undergraduate courses in related departments or programs and professional development courses (ie., BPSC 200A-B). Applicable courses are approved by the Graduate Educational Advisory Committee. A minimum of 6 units of course work is required. No more than 4 units may be from professional development classes.

Section III —

Botany track BCH 205/BPSC 205/CMDB 205/GEN 205/MCBL 205/PLPA 205, BCH 231/BPSC 231, BPSC 201 (E-Z) (for a maximum of 2 units), BPSC 210, BPSC 230, BPSC 232, BPSC 234, BPSC 237, BPSC 239, BPSC 240 (only if taken in addition to the required seminar units; see seminar requirement), BPSC 243, BPSC 245, BPSC 247

Plant Science track BCH 205/BPSC 205/CMDB 205/GEN 205/MCBL 205/PLPA 205, BCH 231/BPSC 231, BPSC 201 (E-Z) (for a maximum of 2 units), BPSC 221, BPSC 222, BPSC 232, BPSC 234, BPSC 237, BPSC 239, BPSC 240 (only if taken in addition to the required seminar units; see seminar requirement)
**Justification**
Graduate Council requires graduate programs to provide professional development training to Ph.D. graduate students for credit. This is a graduation requirement for all students entering Fall 2012. The Plant Biology Program has been offering its professional development class BPSC 200A-B for four years and it is listed in the catalogue. Because the Plant Biology MS students also participate in BPSC 200A-B and they carry a heavy course load, the Program wishes for the professional development classes be added as an option for Section II. With this addition, a student must still take at least one Graduate or upper-division undergraduate courses in related departments or programs. BPSC 200A and B are partly professional development and partly academic development.

**Faculty vote:** In favor (unanimous)
CLASS TIMES AND LOCATION

“Lecture”: T 11:10 - 12:00 pm Batchelor Hall 1104
“Practicum”: Th 2:10 - 5:00 pm Batchelor Hall 1104

COMMITTEE-IN-CHARGE

Dr. Linda Walling (Instructor in charge) 3107A Genomics
x2-4687  Linda.Walling@ucr.edu
Office hours: Walk-in or by appointment

Dr. Thomas Eulgem 3234A Genomics
x2-7740  thomas.eulgem@ucr.edu
Office hours: Walk-in or by appointment

Dr. Darrel Jenerette 2303 Batchelor Hall
x2-7133  darrel.jenerette@ucr.edu
Office hours: Walk-in or by appointment

Dr. Louis Santiago 3113 Batchelor Hall
x2-4951  louis.santiago@ucr.edu
Office hours: Walk-in or by appointment

GOALS FOR BPSC 200A

- Work as an interdisciplinary team
- Create an Interdisciplinary Team proposal
- Present a Team Seminar in BPSC 250
- Work beyond your “Zone of comfort”
- Learn one contemporary, “hot” interdisciplinary topic deeply
- Build community in Your Ph.D. Cohort
- Professional Development
- Develop leadership

RESOURCES:

BPSC 200A website:

- Check [http://www.ilearn.ucr.edu/](http://www.ilearn.ucr.edu/) for announcements
- Syllabus
- Lecture Schedule
- Reading Materials
- Lecture Materials

Helpful resources:

- Alley, Michael  The Craft of Scientific Presentations
- Day, Robert A. & Barbara Gastel  How to Write and Publish a Scientific Paper
OVERVIEW:

One of the goals of BPSC 200A is to encourage Plant Biology graduate students to use a multidisciplinary tool box to address contemporary issues in plant biology. The BPSC 200A activities will allow diverse teams of Plant Biology students to identify an area of common interest. As a team, students will pursue a “hot” interdisciplinary topic deeply by digging into the literature and identifying three big questions within this research area. It is hoped that by developing an interdisciplinary project, students will work beyond their comfort zone, articulate the broad impacts of the research area and understand the value of the different perspectives that can be brought to a single research topic. Students will learn effective written and oral communication skills to enable the capstone oral presentation in the BPSC 250 seminar. This project and its activities will help build a sense of scientific appreciation and community within your cohort that is hoped to transcend your Ph.D. experience.

POTENTIAL MULTIDISCIPLINARY TOPICS:

The BPSC 200A instructors have identified six potential multidisciplinary topics to initiate team discussions. We have also identified one or two research articles/reviews that will provide an inroad to these areas of investigation. These articles are posted at the BPSC 200A iLearn site.

- Biofuels
- Water extremes and climate change
- Flowering- Ecology to Mechanisms
- Making non-legume crops nitrogen sufficient
- Manipulation of photosynthetic pathways for water use efficiency
- Genomics Tools for Conservation Biology
- Other ideas?

GRADING OF THE PROJECT

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
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</thead>
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<tr>
<td>Create a title</td>
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</tr>
<tr>
<td>Outline of the proposal</td>
<td>15</td>
</tr>
<tr>
<td>Abstract</td>
<td>15</td>
</tr>
<tr>
<td>Oral presentation (trial run)</td>
<td>20</td>
</tr>
<tr>
<td>Oral presentation (BPSC 250)</td>
<td>20</td>
</tr>
</tbody>
</table>

TOTAL = 70 points (Course is valued at 100 pts)
## INTERDISCIPLINARY TEAMS

<table>
<thead>
<tr>
<th>Group #</th>
<th>Student Name</th>
<th>Project Mentors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>John Chater (PhD, Merhaut)</td>
<td>TBA</td>
</tr>
<tr>
<td></td>
<td>Lauren Dedow (PhD, Bailey-Serres, rotating)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Arianne Schulz (MS, Close)</td>
<td></td>
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<tr>
<td></td>
<td>Irma Ortiz (PhD, Walling)</td>
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<tr>
<td>2</td>
<td>Yi-Yun Chao (MS, Lovatt)</td>
<td>TBA</td>
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<tr>
<td></td>
<td>Amanda Swanson (PhD, Allen)</td>
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<td></td>
<td>John Helander (PhD, Cutler)</td>
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<td></td>
<td>Christopher Hohn (PhD, Waines/Lukaszewski)</td>
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<td>3</td>
<td>Cara Fertitta (PhD; Jenerette)</td>
<td>TBA</td>
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<td>Rizaldy Garcia (MS, Cutler)</td>
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<td>Yu Yu (PhD, Chen)</td>
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<td>Dylan McFarland (PhD; Springer)</td>
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<td>4</td>
<td>Andrew Semotiuk (PhD, Ezcurra)</td>
<td>TBA</td>
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<tr>
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<td>TianRan Jia (PhD, Chen/Yang)</td>
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<td></td>
<td>Travis Lee (PhD, Bailey-Serres)</td>
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<tr>
<td></td>
<td>Natalie Williams (MS, Eulgem)</td>
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PROJECT DEVELOPMENT: TIMETABLE

With each step of the proposal development, you will be provided with guidelines to achieve the next set of goals. Below is an overview of the timetable for project development and the associated assignments and activities.

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>In-class Activities</th>
<th>Outside Class Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sept 27</td>
<td>- Introduction to the topics and meet your teammates.</td>
<td>• Members of the team should be investigating a subset of topics for the “big questions” that can be addressed with an interdisciplinary perspective.</td>
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<tr>
<td></td>
<td>Thursday</td>
<td>- Meet as a team.</td>
<td>• Be prepared for a team in-class discussion of the topics with your teammates.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Develop a strategy to narrow the topics for investigation.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Choose a subset of topics (two or three) for the team to do a preliminary investigation.</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Oct 4</td>
<td>- Team discussion of topics.</td>
<td>• Team develops the proposal.</td>
</tr>
<tr>
<td></td>
<td>Thursday</td>
<td>- Prioritize the top two areas</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Team will present the top two choices and why they were prioritized.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Topics will be assigned to Teams.</td>
<td></td>
</tr>
<tr>
<td>2 &amp; 3</td>
<td></td>
<td></td>
<td>• Team develops the proposal.</td>
</tr>
<tr>
<td>4</td>
<td>Oct 25</td>
<td>- Team provides and presents a written outline of the project to faculty project mentors.</td>
<td>• Project outline is developed.</td>
</tr>
<tr>
<td>6</td>
<td>Nov 3</td>
<td>- Students present their proposal outline to their peers.</td>
<td>• Team revises the proposal and continues to develop proposal.</td>
</tr>
<tr>
<td>7</td>
<td>Nov 13</td>
<td>- Scientific abstracts of the project are due.</td>
<td>• Team revises the proposal.</td>
</tr>
<tr>
<td></td>
<td>Tuesday</td>
<td>- In class discussion of lessons learned in Abstract construction.</td>
<td>• Each member of the team must develop a scientific abstract for the project.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Work on team project presentation</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Nov 15</td>
<td>- Peer review of abstract is due.</td>
<td>• Peer review of abstract</td>
</tr>
<tr>
<td></td>
<td>Thursday</td>
<td>- In class discussion of lessons learned in Abstract review.</td>
<td>• Team revises the proposal and works on the 15-min oral presentation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Work on team project presentations.</td>
<td>• Work on team project presentation</td>
</tr>
<tr>
<td>9</td>
<td>Nov 27</td>
<td>- Team 1 and Team 2 in class presentations and faculty review.</td>
<td>• Work on team project presentation</td>
</tr>
<tr>
<td>9</td>
<td>Nov 29</td>
<td>- Team 3 and Team 4 in class presentations</td>
<td>• Work on team project presentation</td>
</tr>
<tr>
<td>10</td>
<td>Dec 4</td>
<td>- Consult with faculty for project improvements</td>
<td>• Work on team project presentation</td>
</tr>
<tr>
<td>10</td>
<td>Dec 5 WEDNESDAY</td>
<td>- Team Seminar Presentations</td>
<td>• Celebrate Thanksgiving!</td>
</tr>
</tbody>
</table>

Teamwork F12 FINAL.doc 3
TOPICS

Professional development

- How to choose a research topic
- Guidelines for poster and seminar presentations
- Guidelines for success in graduate school
- Qualifying Exams
- CVs and web profiles
- Ethics

Team-work: interdisciplinary research project

- Identification of a research area ready for interdisciplinary research
- Articulate three “big” questions in the field
- Articulate broader impacts of the research area of choice
- Developing a project outline
- Writing Scientific and Lay Abstracts
- Oral presentation on interdisciplinary topic

SYLLABUS

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Tuesday</th>
<th>Date</th>
<th>Thursday</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>27-Sept</td>
<td>Introduction (Walling) Guidance Committee and Course Programs; Academic Career Milestones; Interdisciplinary Project</td>
<td>27-Sept</td>
<td>Introduction (Walling) Guidance Committee and Course Programs; Academic Career Milestones; Interdisciplinary Project</td>
</tr>
<tr>
<td>1</td>
<td>2 Oct</td>
<td>On being a successful graduate student (Jenerette)</td>
<td>4 Oct</td>
<td>Puzzling Results &amp; Interdisciplinary Projects (Jenerette). Discussion/Selection of Project Topics</td>
</tr>
<tr>
<td>2</td>
<td>9 Oct</td>
<td>Introduction- How to Choose A Research Topic (Santiago)</td>
<td>11 Oct</td>
<td>How to prepare and present a seminar or poster (5 vs 15 vs 50 min) (Santiago)</td>
</tr>
<tr>
<td>3</td>
<td>16 Oct</td>
<td>CVs and Web profiles. Assignment: Write your own CV &amp; web profile (Eulgem)</td>
<td>18 Oct</td>
<td>How to Choose a Title (Walling) Seminar Evaluation Form</td>
</tr>
<tr>
<td>4</td>
<td>23 Oct</td>
<td>Critique of CVs and Discussion (Walling)</td>
<td>25 Oct</td>
<td>Meeting with project mentors to discuss project outline (All instructors)</td>
</tr>
<tr>
<td>5</td>
<td>30 Oct</td>
<td>Qualifying Exams (Eulgem)</td>
<td>1 Nov</td>
<td>Scientific Abstract vs Lay Abstract. Abstract Exercise (Walling)</td>
</tr>
<tr>
<td>6</td>
<td>6 Nov</td>
<td>RCR I – Plagiarism (Walling)</td>
<td>8 Nov</td>
<td>Discussion of projects with peers</td>
</tr>
<tr>
<td>7</td>
<td>13 Nov</td>
<td>RCR II- Lab Notebooks/Misconduct in Research (Jenerette) Abstracts due (Distribute abstracts for review)</td>
<td>15 Nov</td>
<td>RCR III – Plagiarism (Walling) Abstract evaluation due Work on presentations</td>
</tr>
<tr>
<td>8</td>
<td>20 Nov</td>
<td>Work on presentations</td>
<td>22 Nov</td>
<td>THANKSIMGING</td>
</tr>
<tr>
<td>9</td>
<td>27 Nov</td>
<td>In-class Seminar with feedback (Team 2 and 4)</td>
<td>29 Nov</td>
<td>In-class Seminar with feedback due (Team 1 and 3)</td>
</tr>
<tr>
<td>10</td>
<td>Tuesday</td>
<td>Work on final presentations</td>
<td></td>
<td>Recap of BPSC 200A What to expect Winter and Spring (Walling)</td>
</tr>
<tr>
<td>10</td>
<td>Tuesday Dec 4</td>
<td>Seminar Presentation BPSC 250 (90 min)</td>
<td>6 Dec</td>
<td>Recap of BPSC 200A What to expect Winter and Spring (Walling)</td>
</tr>
</tbody>
</table>
GRADING CRITERIA:
BPSC 200A is a Satisfactory/No Credit course. A grade of more than 74% is “satisfactory”

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation in lecture sessions</td>
<td>20%</td>
</tr>
<tr>
<td>CV assignment (prepare and review)</td>
<td>10%</td>
</tr>
<tr>
<td>Title of projects</td>
<td>5%</td>
</tr>
<tr>
<td>Outline of proposal and participation</td>
<td>15%</td>
</tr>
<tr>
<td>Abstract assignment (prepare and review)</td>
<td>15%</td>
</tr>
<tr>
<td>Contribution to Team Research Project Trial run</td>
<td>20%</td>
</tr>
<tr>
<td>Contribution to Team Research Project Presentation</td>
<td>15%</td>
</tr>
</tbody>
</table>

**TOTAL 100%**
INSTRUCTORS: Norm Ellstrand, Exequiel Ezcurra, Natasha Raikhel, Linda Walling (instructor-in-charge)

LECTURE: Wednesday 1:10-4:00 in 1104 Batchelor

PRACTICUM: Friday 2:10-3:00 in 1104 Batchelor

The goals of the BPSC 200B are to continue your training in professional development topics, with major emphasis on two critically important activities. **Project 1**: How to submit a manuscript, review a manuscript, and respond to reviews of your manuscript. **Project 2**: Develop a grant proposal relevant to your own research topic.

**SCHEDULE OF LECTURES AND ASSIGNMENTS**

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Wednesday (practicum)</th>
<th>Date</th>
<th>Friday (lecture)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3 Apr</td>
<td>Introduction to the class – the assignments- (Walling)</td>
<td>5 Apr</td>
<td>Program Milestones (Walling)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>How to choose a journal (Ellstrand)</td>
<td></td>
<td>Class Recap Date; Annual Review – Guidance/Dissertation Meetings; BGS/A, Outreach, NSF Grant, TAonline; (Walling)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Distribution of Project 1: Manuscript submission and review</em> (Walling)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>10 Apr</td>
<td>Peer Review (Raikhel)</td>
<td>12 Apr</td>
<td>Grant Proposal Assignment (Walling)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>How to write a cover letter: Student discussion of journal guidelines for cover letters and reviews.</td>
<td></td>
<td><em>Distribution of Project 2: Research Proposal</em></td>
</tr>
<tr>
<td>3</td>
<td>17 Apr</td>
<td>The nuts and bolts of a good figure (Walling, Ezcurra)</td>
<td>19 Apr</td>
<td>How to create a budget for a grant (Walling)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Assignment 1: Distribute cover letter to reviewers</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>24 Apr</td>
<td>Life History of an Academic Search (Part 1) (Ellstrand)</td>
<td>26 Apr</td>
<td>Life History of an Academic Search (Part 2) (Ellstrand, Ezcurra)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Assignment 2: Manuscript reviews due</em></td>
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<td></td>
<td></td>
<td><em>Assignment 3: Cover letter comments due</em></td>
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<tr>
<td>5</td>
<td>1 May</td>
<td>Entering Mentoring and interactive exercise (Walling, Raikhel)</td>
<td>3 May</td>
<td>In-class feedback on budget and budget justification (Walling, Raikhel).</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Assignment 4: Rebuttal letter to reviews due</em></td>
<td></td>
<td><em>Assignment 5: Budget and Budget justification due</em></td>
</tr>
<tr>
<td>6</td>
<td>8 May</td>
<td>Student discussion of goals and experimental approach (discipline based) (Walling)</td>
<td>10 May</td>
<td>Ethics II (Walling, Ezcurra)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Assignment 6: Introduction and Objectives due</em></td>
<td></td>
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<tr>
<td>7</td>
<td>15 May</td>
<td>Academic Positions: Dr. Ben Aronson (Redlands Univ), Dr. Amybeth Cohen, (Cal State Fullerton), Dr. Virginia White (RCC) (Walling)</td>
<td>17 May</td>
<td>Career Alternatives (Ellstrand)</td>
</tr>
<tr>
<td>8</td>
<td>22 May</td>
<td>Free time (Ellstrand, Ezcurra are available for consultation)</td>
<td>24 May</td>
<td>Free time (Ellstrand, Ezcurra are available for consultation)</td>
</tr>
</tbody>
</table>
SYLLABUS BPSC 200B
SPRING 2013

9  29 May  Presentations of Proposals (5 students) (Walling, Raikhel, Ellstrand, Ezcurra)  31 May  Presentations of Proposals (2 students) (Walling, Raikhel, Ellstrand, Ezcurra)
10  5 June  Presentations of Proposals (4 students) (Walling, Raikhel, Ellstrand, Ezcurra)  7 June  Presentations of Proposals (2 students) (Walling, Raikhel, Ellstrand, Ezcurra)
Exam week  ????  Class recap (Walling)  Project 2: Proposal due

GRADING FOR 200B

- On time submission of all assignments is critical
- All assignments are graded by two faculty and in many cases you will also receive peer review.

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>ASSIGNMENT OR ACTIVITY</th>
<th>POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project 1: Manuscripts</td>
<td>Assignment 1: Cover letter</td>
<td>5 pts</td>
</tr>
<tr>
<td></td>
<td>Assignment 2: Manuscript review</td>
<td>18 pts</td>
</tr>
<tr>
<td></td>
<td>Assignment 3: Cover letter comments</td>
<td>2 pts</td>
</tr>
<tr>
<td></td>
<td>Assignment 4: Response to the review</td>
<td>15 pts</td>
</tr>
<tr>
<td>Project 2: Grant Proposal</td>
<td>Assignment 5: Grant and budget draft</td>
<td>5 pts</td>
</tr>
<tr>
<td></td>
<td>Assignment 6: Introduction and Objectives draft</td>
<td>5 pts</td>
</tr>
<tr>
<td></td>
<td>Student Presentation</td>
<td>15 pts</td>
</tr>
<tr>
<td></td>
<td>Proposal</td>
<td>25 pts</td>
</tr>
<tr>
<td></td>
<td>Participation in class</td>
<td>10 pts</td>
</tr>
</tbody>
</table>
Peer review of manuscripts is an integral part of your scientific career. You will be submitting your own work for publication and you need to critically evaluate manuscripts in your discipline. At a later stage in your career, you will be asked to review manuscripts and grants. Understanding the mechanics of this process you enable your success. In this assignment, you will gain experience with the following aspects of peer review:

1. Understanding the journal’s guidelines for manuscript submission (Discussion).
2. Writing a cover letter (Assignment 1)
3. Reviewing a manuscript and providing an informative review (Assignment 2)
4. Providing comments on the cover letter (Assignment 3)
5. Writing a response to the review (Assignment 4).

Exercises in the BPSC 200B lecture/discussion will help prepare you for this project. More detailed guidelines for the Assignments will be provided to assist you.

<table>
<thead>
<tr>
<th>Due Dates</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 1st</td>
<td>Project 1 is distributed. Manuscripts are distributed to submitter and reviewer.</td>
</tr>
<tr>
<td>April 10th</td>
<td>Be ready to discuss cover letter and review guidelines for your journal of choice.</td>
</tr>
<tr>
<td>(in class)</td>
<td></td>
</tr>
<tr>
<td>April 17th</td>
<td>Assess the general quality of the figures and tables in the manuscript you are an “author” on or that you are reviewing.</td>
</tr>
<tr>
<td>(in class)</td>
<td></td>
</tr>
<tr>
<td>April 17th</td>
<td>Cover letter is due (Assignment 1).</td>
</tr>
<tr>
<td>April 24th</td>
<td>Manuscript reviews are due (Assignment 2).</td>
</tr>
<tr>
<td></td>
<td>Comments on the cover letter are due (Assignment 3).</td>
</tr>
<tr>
<td>May 1st</td>
<td>Response to the review is due (Assignment 4).</td>
</tr>
</tbody>
</table>

**Assignment 1: Submit a manuscript for review. The Cover Letter**

**The Manuscript**

Your major professor has selected a manuscript from the literature that is relevant to your PhD dissertation. You are to pretend this is “your” manuscript that is being submitted for the first time for review.

**Select a journal for submission**

You will **NOT** submit this paper to the journal it is already published in. You will be submitting to a different journal that is well matched to the topic of the research and the quality of the data that is being presented. You must seriously consider the nature of the readership for this journal.

**Discussion April 10th:** We will discuss how you selected your journal and the cover letter requirements
Draft a cover letter for the manuscript (Assignment 1).

Read the manuscript carefully. Draft your cover letter for manuscript submission according to journal guidelines. Refer to the “Guidelines for Authors” on the website of your selected journal. It is a good idea to study several types of cover letters. Some examples are at: http://scienceforall.org/2010/06/16/5-cover-letter-samples-for-your-scientific-manuscript/

Guidelines for PLOS Biology are at: http://www.plosbiology.org/static/guidelines.action

On April 10th, a cover letter discussion will lead by students.

The cover letter for your manuscript submission is due on April 17, 2013.

- One hard copy should be provided in class (for instructor comments).
- The letter (word document not a pdf) should be emailed to Linda.walling@ucr.edu (for distribution to your anonymous peer reviewer).

Name the document as follows: Author-Your last name-Cover.docx
Example: Liu-Walling-Cover.docx

Discussion (April 17th): Figure and table quality

As you read “your” manuscript and the manuscript that you are reviewing, look at the tables and figures carefully. Form your opinion about what makes an excellent figure, table and legends.

Be ready on April 17, 2013 to discuss figure and table quality in class. We will have an interactive exercise using this knowledge.

Assignment 2: Peer review of a manuscript

There are detailed instructions for the peer review of the manuscript at the iLearn site. Read them carefully. Questions about this Assignment can be asked at the beginning of any class.

A peer will review “your” manuscript and provide comments on your cover letter. Recommendations for publication will be made. The review will provide recommendations for revisions or additional experimentation. The review will provide suggestions on how to improve the manuscript.

On April 17, 2013, you will receive the cover letter for the manuscript that you will be reviewing.

Your review of the cover letter is due in class on April 24, 2013.

- Bring one hard-copy of the manuscript review to class (for instructor review).
- Email your review (word document, not a pdf) to Linda.walling@ucr.edu.

Name the document as follows: Author-Your last name-Review.docx
Example: Liu-Ellstrand-review.docx
Assignment 3: Peer review of a cover letter

There are detailed instructions for the peer review of the cover letter at the iLearn site. Read them carefully. Questions about this Assignment can be asked at the beginning of any class.

A peer will review “your” cover letter and provide comments on the strengths of the letter and suggestions on how to improve the letter.

You will receive the manuscript that you will be reviewing on by April 1, 2013 (in advance of its cover letter).

On April 17, 2013, you will receive the cover letter for the manuscript that you will be reviewing.

Your review of the manuscript is due in class on April 24, 2013.

- Bring one hard-copy of the cover letter comments to class (for instructor review).
- Email your cover letter comments (word document; not a pdf) to Linda.walling@ucr.edu.
  
  Name the document as follows: Author-Your last name-cover comments.docx
  
  Example: Liu-Elstrand-cover comments.docx

Assignment 4: Write a response to the peer-reviews

You will write a response to the review so your manuscript can be published in a timely manner. Detailed guidelines for Assignment 4 are posted at the iLearn site. Read them carefully. Questions about this Assignment can be asked at the beginning of any class.

Your response to the review is due on May 1, 2013.

- Bring one hard-copy to class (for instructor review).
- Email the response to the review (word document, not a pdf) to Linda.walling@ucr.edu (for distribution to your anonymous peer reviewer).
  
  Name the document as follows: Author-Your last name-Response.docx
  
  Example: Liu-Walling-Response.docx

Grading of the Project (total 40 pts):

One faculty member will be assigned as Editor-in-Chief for the submitted manuscript. This faculty member will provide comments on the:

- Cover letter (5 pts)
- Review (18 pts)
- Comments on cover letter (2 pts)
- Response to the review (15 pts)
Your task is to write a narrative peer review on the submitted paper. Your comments will be used by the submitter to improve the submission.

The following steps provide guidelines for review of manuscripts.

**Preparing for the review**

**Step 1: Visit the journal’s website.**
- Examine the Scope and Instructions for the Authors for the journal to which the manuscript has been submitted.

**Step 2: Carefully read the manuscript.**

While reading the manuscript consider the following questions:
- Does the *Title* succinctly describe the work?
- Does the *Abstract* briefly and concisely summarize the major findings?
- Does the *Introduction* provide appropriate background material for the work? Is the state of the field clear? Are hypotheses clearly presented?
- Does the *Materials and Methods* section provide sufficient detail to allow the work to be duplicated by another scientist? [Sometimes these details are provided in a separate online section. If so, the *Materials and Methods* within the printed version of the manuscript should still provide basic details about the genetic material, experimental design, statistical analyses, etc.]
- Does the text of the *Results* section reflect the data provided in figures and tables? [It is important to consider if the text overstates or accurately relays the findings]
- Is the *Results* section logically structured? Are the section headings useful?
- Are the figures visually clear and sufficiently labeled?
- Do the figure legends provide sufficient detail? Do the figures legends begin with a clear statement of the experiment?
- If appropriate, are the statistical methods used to analyze data described?
- Does the *Discussion* section put the findings into context with available literature? Are the section headings useful?
- Is there a clear conclusion or prospectus for future research given? [This does not need to be labeled as a Conclusions section].
- If there is a model presented, is it well supported by the data?
- Has the literature been cited appropriate? Typically there are 30 to 40 references, most of which are from the past five years. The citations should mostly be from the primary literature [i.e. not textbooks, abstracts]. If reviews are cited that is okay, but the most relevant primary literature needs to be cited, rather than reviews.
- Are there any obvious typos or mistakes? Are their grammatical errors?
Step 3: Think about the details.

There are lots of details in manuscripts that are often overlooked including:

- providing the genus and species at the first mention of a plant
- spelling out abbreviations at first mention
- indicating when literature is cited the specific organism in the study
- authors solely referencing their own papers and do not consider the field as a whole.

Writing the Review

Step 1: Write a summary paragraph.

This should be about six sentences. This should be a summary of your unbiased appraisal of the work. It should include a brief statement of the major contributions of the manuscript. It should include mention of the strengths and weaknesses of the manuscript. If you are in favor of publishing the manuscript, this summary usually ends with a strong positive and persuasive statement, indicating why the work should be published. If the manuscript is submitted to a high impact journal such as *Nature* or even *Plant Cell*, this needs to be a very enthusiastic comment.

Step 2: Provide specific comments.

The goal of these professional comments is to provide the author(s) with constructive criticism that will increase the quality and impact of the submission. It may be helpful to first provide *major criticisms*. These would be things that might require additional analysis or experimentation. In a separate section you can indicate *minor criticisms*. Remember, the outcome of this review should be that the manuscript can be made more clear and concise. **Number** your comments and **indicate** the page, column (right or left) and line number of each comment (this will allow the authors to respond to each comment). Specifically identify:

- Problems in experimental design or interpretation
- Problems with figures or tables
- Problems with statistical analysis (i.e. lack of analysis; problems with analysis)
- Any errors in fact
- Problems in clarity
- Omission of citations
- Duplication of earlier work (i.e. some part of a figure or portion of the text already published)

Your specific comments should be clear and concrete. Ideally, there should be a specific action that the authors can take to respond to each comment (i.e. a textual change, a specific modification of a figure; an additional statistical analysis or the addition of a specific experiment).

**Remember**: If criticisms of the manuscript are going to be provided, the tone of the review should be collegial. One must learn to convey “bad news” in a diplomatic manner.

**Remember**: Provide praise for those elements of the paper that are really good.

Step 3: Provide a recommendation on acceptance/rejection to the Editor

**DUE: April 24, 2013 in class.**

Send one hardcopy and send the review (word doc, not a pdf) to linda.walling@ucr.edu. Name the file: (Author)-(your last name)-review.doc.
Please note: Cover letters are usually only read by the Editor of a journal. The cover letters do not go to reviewers.

Assignment 3: Comments on the cover letter.

Provide comments on the quality of the cover letter. This should be a clearly labeled subsection of the manuscript review (perhaps the last section). In your comments consider the following points.

(1) What are the strengths and weakness of the cover letter?
(2) Is the letter written in an appropriate tone? It should be enthusiastic and but not overbearing.
   a. If you were an editor, would you be excited about reading the manuscript?
(3) Does the letter have all elements required by the journal?
(4) Does the letter cover some or all of the elements mentioned in the lecture on peer-review?
(5) Are the paragraphs organized in an appropriate manner?
(6) For some of our students, English is not their first language. Helpful changes to sentence structure, grammar or word choice is appreciated. But perfect English is not the point of this exercise.

If you have specific comments that you would like to annotate on the letter please do so. This can be done with track changes (word document) or comment bubbles if you got your letter as a pdf. Alternatively, make hand written comments.

Due Date: April 24, 2013 in class.

- Bring one hard copy to class and the cover letter with your comments on it (if you decided to do this).
- Provide your written comments to linda.walling@ucr.edu as a word document (not a pdf).
- Name the document as follows:

Author-(your name)-Cover comments.doc
(The author should be the author author on the published paper.)
THE ASSIGNMENT:

Your task is to write a response to the peer review received on your submitted paper. Your response should communicate to the editor the changes that you have made in the manuscript to satisfy the comments of the reviewer.

GENERAL CONSIDERATIONS

The Response to the Review usually has three parts, which include:

1. An introductory short paragraph indicating that you are responding to the review of your manuscript. Be sure to indicate the manuscript title and the Journal's editorial # for the manuscript.
2. Your response to all of the general and specific comments made by the reviewers. (See below).
3. A short summary statement to wrap it up.

ORGANIZING THE RESPONSE

To begin the process:

1. Cut and paste the Review into a word document. Make the font of the reviewer “Blue”. Your responses should all be “Black” font.
2. Below each of the Reviewer’s comments, write RESPONSE. This way, it should be clear what is the reviewer’s comments and what is your response.

CRAFTING THE RESPONSE

Carefully read the review. For each of the criticisms, you will need to say that you will make changes in the manuscript or indicate in a logical and compelling manner why the changes that were recommended should not be made.

1. Identify the specific corrections, for example the reviewer should have provided a numerical list of specific comments, providing the line(s) and paragraph where minor corrections should be made.

2. Indicate below each of the numerical comments, what changes you have made in your revision.

   - For example, if the reviewer has requested additions to the Materials and Methods, you need to state where the changes have been made (page, column, and line number).
• If you are asked to provide additional details, you need to write those details in
your response document (typically this would be done in the text of the revised
manuscript and highlighted for the editor). This might require identifying a suitable
protocol and in your own words, providing a description of the method that might
have been used.

• Similarly, you may be asked to make improvements to the Introduction or
Discussion. If so, cut and paste the text of the manuscript into your word
document and make changes, indicating those changes in blue font (we as
editors what to be able to easily recognize what you have changed).

• If the reviewer asks you to change a figure, you need to describe the changes
that were made below that request (you do not need to draw the revised figure).

• For, example, if you were asked to run a statistical test. You may have to provide
the revised figure legend that now indicates the test was run; possibly you may
need to add to the Materials and Methods information about the statistical
software package that was used to run the test.

• If you are asked to cite additional literature, you should provide the citations in the
same format used for the paper and indicate where the citation will be inserted
(page, column and line).

• If there are simple typos or grammatical errors to fix, indicate the changes below
each of the reviewer’s specific comments.

If the reviewer has made general comments that require modifications, such as additional
experimentation, analyses, or re-interpretation of results, you will have to creatively make those
changes. You do not need to make new figures, but you may need to provide a creative
response to how you dealt with each of the general comments.

If you disagree with a reviewer’s comment, you can professionally and respectfully indicate why
the change was not made. These rebuttals need to be persuasive but do not need to be long.
GUIDELINES FOR BPSC 200B PROPOSALS

The Goal: During the Spring quarter, you will write a draft of your dissertation project using a modified NSF Graduate Fellowship Format. This proposal can serve as the foundation of a NSF GRFP for November 2012 and/or be used as the foundation of your Qualifying Exam proposal.

Below are guidelines for the BPSC 200B proposal. We also provide comments regarding proposal construction for grants submitted for external review. In addition, we suggest that you read the four documents about writing manuscripts. The general principles transcend science disciplines and whether you are writing a grant proposal or a manuscript.

GENERAL CONSIDERATIONS

(1) Length
Proposals should be of a length requested by the funding agency. This is a good indication of the level of detail that they want. If they request 15 pages, and you only supply 10, it suggests that you are not able to discuss the topic to the level of detail that they are looking for and it will not get funded. For the BPSC 200B proposal, please limit your proposal to 8 pages (single-spaced, with a 1” margin) including figures and tables. For the BPSC 200B proposal, the Summary and literature cited do not count toward the page limit.

(2) Font Size
Use Times or Times Roman size 12 pt or Arial 11 pt. Squeezing in more detail with a font size of 8 will not help you and has a high probability of annoying the reviewer. Figure legends may be Times or Times New Roman font size 10 to 12 or Arial 9-11 pt.

(3) Tone
In a proposal, you need to write convincingly so that your proposal will be funded by the granting agency, or so that your committee will be persuaded that it is a viable thesis project. It needs to be interesting. Do not go on for pages on some irrelevant detail that you happen to know about – keep it relevant and focused.

ORGANIZATION OF THE PROPOSAL

<table>
<thead>
<tr>
<th>Proposal Section</th>
<th>Length</th>
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</thead>
<tbody>
<tr>
<td>Summary</td>
<td>1 page</td>
</tr>
<tr>
<td>Intro-Preliminary Results- Experimental Plan-Timetable</td>
<td>8 pages</td>
</tr>
<tr>
<td>Literature Cited</td>
<td>No page limit</td>
</tr>
</tbody>
</table>

(1) Format
Organize your proposal following a simple format. If the call for proposals requests a particular format, these sections can often be adapted to such a request. Use subheadings to organize the sections and **bold** key sentences so that reviewers can quickly refer to them during the review.
(2) Project Summary
This section should contain a sentence or two of introduction, your hypotheses, expected results/outcomes, and significance. Minimize methods in the summary statement. This section is often apart from the page limit of your project description and is used for reviewers to quickly get an idea of what you are proposing. It is the most often read part of the proposal; in fact many reviewers will only read this part. In many panels, not all reviewers read all proposals, there are simply too many, so people are assigned to proposals in groups; the rest read the summary. Your project summary should be approximately 600 words. Your summary should address the scientific impact and broader impacts of your research program.

(3) Introduction
This section introduces the reviewer to the area in which you are proposing to work. This section should provide an inroad into the literature and set the context for your hypotheses. It should rely on the literature and be appropriately referenced.

Ideally, the first paragraph should be a broad statement of the problem with the last sentence of the first paragraph being an overall question that you are asking with this research. The rest of the introduction should outline some of the hypotheses that could explain your question/observation/research issue, as well as how they have been addressed previously in the literature. The introduction section should finish with a strong sentence that summarizes your project and prepares the reviewer for the following sections.

(4) Preliminary Results
Depending on how long you have been in your home lab, you might or might not have preliminary results that will influence your proposal. If you have such data, a section is appropriate. If you have not made sufficient progress on this front, do not include a Preliminary Results section. You should be briefly describing the experiment, results and conclusions.

(5) Rationale for the Proposed Research - Hypotheses
Your hypotheses are the heart of the proposal, and if they are not carefully crafted, your proposal will never get funded or approved by your committee. Most researchers break up their grant proposals into three aims/goals/objectives – whatever you call them, they are essentially hypotheses. Hypotheses are a suggested explanation for an observation, or a reasoned proposal suggesting a possible correlation between multiple phenomena. They often contain a ‘because’ statement because they try to explain something. Having alternative non-mutually exclusive hypotheses for observed results is nearly essential in all fields. Hypotheses are often evaluated by predictions. For example, if hypothesis X is true, we should observe A, B, and C. Thus it is actually the predictions that are tested in support for or against the hypothesis. It is common to provide some rationale and significance for each hypothesis, which helps the reviewer reason through your logic with you.

This section (or the Introduction) may also describe your study site, species and/or system. What species will be studied and why is this appropriate? If this is an ecological or agricultural study, where is the study site and what is its climate? Soil type? Vegetation type? Disturbance history? If this is an agricultural study, what are the varieties you will use? For a laboratory study, indicate the plant materials and other resources such as databases, mutant collections etc. that you will use. This differs from the methods in that you are not discussing what
measurements or experiments you will perform. This section provides a strong rationale for your species of choice.

Readers should be highly motivated by this section of the grant. Your readers should be curious about the experimental approaches (the next section) that will be used to test your hypotheses.

**6) Research Plan (a four-year plan)**

The research plan is usually organized in sections that are based on your hypotheses/objectives. Some investigators use declarative statements or pose experimental questions as the section titles. See the examples of successful student proposals online. For each section, there may be one or multiple experiments (these could be subsections).

Each section/subsection should include a short statement of the objective/hypothesis being tested (What are you trying to do?), as well as a description the methods (How will you do it?), anticipated results (What do you expect to find?), potential pitfalls and alternative plans (What happens if your experimental strategy fails? What alternative experiments will be performed?). Some considerations for these topics are below.

**Methods**

For the BPSC 200B proposal, some researchers provide a set of methods after each objective/hypothesis, whereas some include all methods together after all of the hypotheses. Either way, it helps to state, for example: “this method will be used to test hypothesis 1-1.” When crafting your methods section, include enough detail that another scientist could replicate your work, just as you would in a scientific paper or report.

**Anticipated results and potential pitfalls**

For each hypothesis or objective, state the expected results and how these will be interpreted in relation to the hypothesis being tested. Also indicate potential pitfalls in your research plan and briefly describe how you might address these with alternative strategies.

**7) Integration – Future Perspectives**

This section is not used by all PIs. But if used it follows the Experimental/Research Plan and describes how you will put all of your results together into a final product, conclusion, outcome, or recommendation. This section also reminds the reader of the overall significance of the project and ties the project together.

**8) Broader Impacts**

NSF now asks for this section on all grants. Here, you describe how your research results can be communicated broadly to society, beyond the normal communication venues of scientists, namely publications and conference presentations. Examples include a project web page, bringing K-12 students to your study site, managing a booth on your project at the county fair – be creative! We talked about Broader Impacts in BPSC 200A.
(9) Time Table

Your proposal should be a research plan for four years. Include a small table (or other graphical timeline) that lists the major objectives and the time period (years or six month increments) when the objective will be accomplished.

(10) Literature Cited

Your proposal must be adequately referenced. The Introduction and Experimental Plan are particularly critical sections that require support from the literature. Your research must be placed in the context of the field. Do not rely solely on references from your major professor’s laboratory. That being said, if methods are established in your lab, use these as references; this provides the reviewer confidence that your experimental goals can be achieved.

GRADING OF THE PROPOSAL

<table>
<thead>
<tr>
<th>Proposal Section</th>
<th>Points</th>
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<tbody>
<tr>
<td>Title</td>
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<tr>
<td>Summary</td>
<td>5</td>
</tr>
<tr>
<td>Introduction and Preliminary Results</td>
<td>5</td>
</tr>
<tr>
<td>Rationale and Hypotheses</td>
<td>2.5</td>
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<tr>
<td>Experimental Plan</td>
<td>7.5</td>
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<tr>
<td>Future Integration</td>
<td>1</td>
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<tr>
<td>Broader Impacts</td>
<td>2</td>
</tr>
<tr>
<td>Use of tables/figures</td>
<td>1</td>
</tr>
<tr>
<td>Timetable</td>
<td>1</td>
</tr>
<tr>
<td>Budget</td>
<td>1</td>
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<tr>
<td>Literature Cited</td>
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</tr>
<tr>
<td>Grammar/spelling</td>
<td>1</td>
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<tr>
<td>Effective formatting</td>
<td>1</td>
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<td>Total</td>
<td>30</td>
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</table>
M.S. GUIDANCE COMMITTEE APPROVAL FORM

It is recommended that the Guidance Committee meet to establish a student's course program during the Fall quarter so opportunities for alternate year classes are captured. This form is to be completed no later than the end of the eighth week of the second quarter.

Note: To avoid conflicts of interest or the appearance of conflicts of interest, when domestic partners or spouses are a majority of the faculty on a Thesis or Comprehensive Exam Committee, another faculty member will be added to the Committee.

(Please type or print)

Name _______________________________________  Date __________________

I would like to request the following members be appointed to my Guidance Committee. They have all agreed to serve on this committee.

________________________, _________________________________Major Professor
Print name     Signature

________________________, _________________________________
Print name     Signature

________________________, _________________________________
Print name     Signature

Approved: _________________________________

Graduate Advisor Signature
While consistency is sought for all of our students, the EAC recognizes that the best graduate education will be achieved when a course program is tailored to meet the needs of a particular student. Therefore, when the EAC reviews a course program, it is important that the needs and plans of the particular student be known. For this reason, the Educational Advisory Committee will not consider a course program unless the Guidance Committee submits with the course program the following information:

1. Complete and careful review of the entrance requirements for the M.S. Confirm that the student has met the Department course requirements. In the case where the student has not met the full quarters required, please provide an explanation of any unusual circumstances regarding the deficiencies, and an indication of how the student will make-up the coursework. The EAC believes that an equivalent amount of training to that which students receive at UCR is valuable. However, since other Universities' classes do not always correspond with ours, if the Guidance Committee feels the courses have met the spirit of the requirement, please provide a brief summary of the topics covered in the courses.

2. A short statement of the immediate educational and career goals of the student:

3. In the case of a M.S. (Plan II) student, a statement of the student's major area of specialization and minor area(s) to be covered on the Comprehensive Examination:
M.S. PROGRAM – PLANT BIOLOGY

Name of Student _____________________________________________________________
Date Entered Program _______________________________________________________

Botany track □ Plant Science track □ Plan I (Thesis) □ Plan II (Comp. Exam) □

This is to certify that the above-named student has completed all departmental entrance requirements in the following specified manner:

<table>
<thead>
<tr>
<th>UCR REQUIREMENTS</th>
<th>UNITS</th>
<th>EQUIVALENT CLASS</th>
<th>YEAR</th>
<th>INSTITUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biochem 100 (Elementary) or 110A</td>
<td>5</td>
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<tr>
<td>Biol 5A (General)</td>
<td>4</td>
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<td>5B (General)</td>
<td>4</td>
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<td>5C (General)</td>
<td>4</td>
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<td>Biol 102 (Genetics)</td>
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<td>Chem 1A (General)</td>
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<td>1B (General)</td>
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<tr>
<td>Math 9A (Calculus)</td>
<td>4</td>
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<tr>
<td>Two courses in Physics and/or Statistics:</td>
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<td>Physics 2A (General)</td>
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<td>2B (General)</td>
<td>4</td>
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<td>Stat 100A or STAT 110</td>
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<td>BPSC 104</td>
<td>4</td>
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<tr>
<td>One core Plant Biology course: BIOL 107A, BPSC 132, BPSC 135, BPSC 138, BPSC 143, BPSC 146</td>
<td>3-5</td>
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</tbody>
</table>

For Plan I: PROPOSED THESIS TITLE: __________________________________________
BPSC 250 SEMINAR PRESENTATION: ________________________________
Quarter/Year

For Plan II: MAJOR AREA _________________________________________
MINOR AREA 1 _________________________________________
MINOR AREA 2 ________________________________(optional)
WRITTEN EXAM DATE ____________________________
ORAL EXAM DATE ____________________________
BPSC 240 (at least two):  

<table>
<thead>
<tr>
<th>Quarter/Year</th>
<th>Quarter/Year</th>
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<tbody>
<tr>
<td>(1)</td>
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</table>

**Section I** - Three courses from the following list are required. Students who have taken courses comparable to these during their baccalaureate training may have a portion or all of this section waived.

- ANTH/BPSC 170
- BCH/BIOL/BPSC 153
- BCH 183
- BIOL/BPSC 104
- BIOL/ENTM 112
- BIOL/MCBL/PLPA 120
- BIOL/BPSC 132
- BIOL/PLPA 134
- BIOL/BPSC 138
- BIOL/BPSC 143
- BPSC 148
- BPSC 150
- BIOL/BPSC 155
- BIOL/BPSC 165
- BPSC 133
- BPSC/ENSC/SWSC 134
- BPSC 135
- BPSC 146
- BPSC 158
- BPSC 166

<table>
<thead>
<tr>
<th>Course</th>
<th>Grade</th>
<th>Units</th>
<th>Qtr/Year</th>
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**Section II** – Graduate and upper-division undergraduate courses in related departments or programs and professional development courses (i.e., BPSC 200A-B). Applicable courses are approved by the Graduate Educational Advisory Committee. A minimum of 6 units of course work is required. No more than 4 units may be from professional development classes. Only one course cross-listed with other departments may be used. Students cannot use a cross-listed course already used in Section I above or used in Section III below.

<table>
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<th>Course</th>
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**Section III** - **Thesis Plan** - At least 6 units from the following list.  

**Comprehensive Exam Plan** - At least 12 units from the following list.

- BCH/BPSC/CMDB/GEN/PLPA 205  
- BCH/BPSC 231  
- BPSC 201E-Z (2 unit max)
- BPSC 220  
- BPSC 221  
- BPSC 222
- BPSC 223  
- BPSC 232  
- BPSC 233
- BPSC 234  
- BPSC 237  
- BPSC 239
- BPSC 243  
- BPSC 245  
- BPSC 247
- BPSC 240 **(only if taken in addition to required seminar units)**  
- BPSC 280

<table>
<thead>
<tr>
<th>Course</th>
<th>Grade</th>
<th>Units</th>
<th>Qtr/Year</th>
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</table>
Section IV Comprehensive Exam Plan Only – At least 6 units from BPSC 290 and BPSC 297 for a research project or literature review, which should be described in a report to be submitted for evaluation by the comprehensive examination committee.

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<tr>
<th>Course</th>
<th>Grade</th>
<th>Units</th>
<th>Qtr</th>
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Date Research Project Submitted (mm/dd/yy): ________________

Section V. Thesis Plan Only - no more than 12 units of 299 may apply toward the degree.

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<tr>
<th>Course</th>
<th>Grade</th>
<th>Units</th>
<th>Qtr</th>
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<tbody>
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<td>BPSC 299</td>
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<td>BPSC 299</td>
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Additional Units – please list any additional units needed to meet the 36 unit requirement for the degree. BPSC 291 does not apply.

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<th>Course</th>
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</table>
COURSES REQUIRED BY GUIDANCE COMMITTEE

Name of Student

**Note:** Graduate students should be enrolled in 12 units of graduate-level classes each quarter.

<table>
<thead>
<tr>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
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</thead>
<tbody>
<tr>
<td>COURSE #</td>
<td>COURSE TITLE</td>
<td>UNITS</td>
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<td>BPSC 250</td>
<td>Seminar</td>
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<tr>
<td>Fall Quarter</td>
<td>Winter Quarter</td>
<td>Spring Quarter</td>
</tr>
<tr>
<td>COURSE #</td>
<td>COURSE TITLE</td>
<td>UNITS</td>
</tr>
<tr>
<td>BPSC 250</td>
<td>Seminar</td>
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Major Professor  Date  Guidance Committee Member  Date  Guidance Committee Member  Date

MS course program forms revised 6-24-12
### COURSES REQUIRED BY GUIDANCE COMMITTEE

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
<th>COURSE #</th>
<th>COURSE TITLE</th>
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<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
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<tbody>
<tr>
<td>BPSC 250</td>
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<td>BPSC 250</td>
<td>Seminar</td>
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<td>BPSC 250</td>
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*MS course program forms revised 6-24-12*
Name of Student

OTHER COURSES TAKEN THAT APPLY TO DEGREE

Instructions: List all other classes that you have taken at your former institution(s) that contribute to your knowledge in Plant Biology.

<table>
<thead>
<tr>
<th>COURSE</th>
<th>Units</th>
<th>Grade</th>
<th>Date</th>
<th>Institution</th>
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</thead>
<tbody>
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This coursework was verified by Guidance Committee:

____________________________________________
Signature of Guidance Committee Chair
BOURNS COLLEGE OF ENGINEERING
COMPUTER SCIENCE AND ENGINEERING DEPARTMENT
RIVERSIDE, CALIFORNIA 92521

February 5, 2013

TO: Dr. Connie Nugent
Chair, Graduate Council

FR: Dr. Walid Najjar
Computer Engineering

RE: Requested Catalog Updates for 2013-14

Dear Dr. Nugent:
The attached requested catalog changes were voted on and approved by the Computer Engineering faculty.

The revised text adds a statement regarding the Professional Development Requirement to satisfy the new campus/Graduate Division requirement; it is satisfied via the colloquium in Computer Science or Electrical Engineering.

Thank you.
Coversheet for Request for Approval
To Modify Graduate Program Degree Requirements

Program: Computer Engineering
Department/Academic Unit/School: BSEF
Date: 1/30/13
Proposed Effective Date: Fall 2013

Faculty Contact: Wael Naijar
Prepared by: Amy Rich
Email: naijar@eas.uc.edu
Email: amy@eas.uc.edu
Phone: x4409
Phone: x2983

Proposed Modification(s) (please check all that apply)

☐ Admission requirements
☐ Unit requirements
☒ Professional Development Plan
☐ Other (please describe): Grammar/Errors
☐ Course requirements
☐ Examination requirements
☐ Time-to-degree

1. Proposal must include a cover letter from the Dean, Associate Dean, Chair, Director or Program Advisor as appropriate, taking care to briefly describe the proposed modifications and justification for the request.

2. Attached proposal must include the proposed modifications as formatted in the example below. The existing requirements must be on the left column, and the proposed revisions on the right. Proposed additions must be underlined and deletions must be stricken.

<table>
<thead>
<tr>
<th>Existing</th>
<th>Proposed</th>
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<tbody>
<tr>
<td>Insert existing program requirements on this side of the table</td>
<td>Insert proposed requirements on this side of the table. Underline the additions and strike the deletions.</td>
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</table>

Justification: The Justification should include examples such as impact on time to degree, expected impact on employment prospects, expected impact on recruitment. Please address whether current students will be permitted to switch to take advantage of the revisions. If so what will the approval process be?

Faculty Approval Date: Indicate the date of the faculty vote

Department Chair / Program Director: Please type name(s) as appropriate
Signature: Please include signature(s) as appropriate
Date: Date signed

Checklist of Required Attachments/Appendices (please check to verify inclusion):

☐ Dean/Associate Dean/Chair or Program Advisor Cover Letter
☐ Proposal in proper table format – signed and dated as appropriate
☐ Revised and Dated Program Summary
☐ Revised Catalogue Copy
☐ Revised Website Copy N/A
PROPOSED CHANGE TO COMPUTER ENGINEERING GRADUATE REQUIREMENTS

PRESENT:
Graduate Program
The Department of Computer Engineering offers the B.S. + M.S. program in Computer Science and the M.S. degree in Computer Engineering. Specific requirements for each degree are described below.

Master’s Degree
M.S. in Computer Engineering The college offers an M.S. program in Computer Engineering.
Admission All applicants to this program must have completed a Bachelor’s degree or its approved equivalent from an accredited institution and to have attained undergraduate record that satisfies the standards established by the Graduate Division and University Graduate Council. Applicants should have at least an undergraduate major in Computer Engineering, Computer Science, Electrical Engineering or a closely related field. Applicants who fail to meet this criterion may sometimes be admitted with course deficiencies. However, no more than three deficiencies will be allowed. A student who is deficient in a competency area may be asked to complete the corresponding UCR course with a letter grade of at least B+, or to pass a challenge examination based on that course’s final exam with a grade of at least B+. All such remedial work should be completed with the first year of graduate study, and in all cases the deficiency(s) must be corrected BEFORE a student can enroll in any graduate course from the same specialty area. All applicants must submit scores from the Graduate Record Exam, General Test (GRE). The GRE subject test in Computer Science or Electrical Engineering is recommended but not required. Applicants whose first language is not English are required to submit acceptable scores from the TEST of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) unless they have a degree from an institution where English is the exclusive language of instruction. Additionally each applicant must submit three letters of recommendation, at least two of which must be academic references. All other application requirements are specified in the graduate application.

PROPOSED:
Graduate Program
The Computer Engineering Program offers the B.S. + M.S. program and the M.S. degree in Computer Engineering. Specific requirements for each degree are described below.

Master’s Degree
M.S. in Computer Engineering The college offers an M.S. program in Computer Engineering (*no hyphen*).
Admission All applicants to this program must have completed a Bachelor’s degree or its approved equivalent from an accredited institution and to have attained undergraduate record that satisfies the standards established by the Graduate Division and University Graduate Council. Applicants should have at least an undergraduate major in Computer Engineering, Computer Science, Electrical Engineering or a closely related field. Applicants who fail to meet this criterion may sometimes be admitted with course deficiencies. However, no more than three deficiencies will be allowed. A student who is deficient in a competency area may be asked to complete the corresponding UCR course with a letter grade of at least B+, or to pass a challenge examination based on that course’s final exam with a grade of at least B+. All such remedial work should be completed with the first year of graduate study, and in all cases the deficiency(s) must be corrected BEFORE a student can enroll in any graduate course from the same specialty area. All applicants must submit scores from the Graduate Record Exam, General Test (GRE). The GRE subject test in Computer Science or Electrical Engineering is recommended but not required. Applicants whose first language is not English are required to submit acceptable scores from the TEST of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) unless they have a degree from an institution where English is the exclusive language of instruction. Additionally each applicant must submit three letters of recommendation, at least two of which must be academic references. All other application requirements are specified in the graduate application. (*Missing period*)
Prerequisite Material: Competence in the areas defined by the following UCR courses is essential to graduate study in computer engineering:
EE 100A, EE 100B, EE 110A, EE 110B, CS 153, CS 161, CS 161L, CS 120A/EE 120A, CS 120B/EE 120B
A student who is deficient in any of these competency areas may be asked to complete the corresponding UCR course with a letter grade of at least B+, or to pass a challenge examination based on that course’s final exam with a grade of at least B+. All such remedial work should be completed within the first year of graduate study, and in all cases the deficiency must be corrected BEFORE a student can enroll in any graduate course from the same specialty area.

Course Requirements: Students must be in residence for one year and complete a minimum of 36 quarters units of graduate and upper division undergraduate courses in or related to the major subject area. Students who have completed similar courses elsewhere may petition for waiver of a required course or for substitution of an alternative course.
For students interested in interdisciplinary research, individual study programs can be approved.

1. Core Requirement (12 units). Three courses from the list of core courses below, with no grade lower than B-:
   CS 201 or CS 202, CS 203A, CS 220, EE 213, EE 221

2. Technical Electives (12 units). Three courses from the list of technical elective courses below:
   CS 203B, CS 204, CS 213, CS 218, CS 223, CS 239, CS 240, CS 246, CS 255, CS 257, EE 202, EE 203, EE 210, EE 211, EE 215, EE 222, EE 226, EE 229, EE 235, EE 241, EE 243.

3. Colloquium (3 units). Satisfactory completion of three quarters of CS 287 (Colloquium in Computer Science) or EE 259 (Colloquium in Electrical Engineering) in three distinct quarters.

4. Capstone Experience: All students must complete a capstone experience that synthesizes and integrates the knowledge and skills obtained throughout the master’s program, according to one of the following options. It is the responsibility of the student to find a faculty member willing to supervise the master’s project or thesis, to form the faculty examining committee, and to schedule the oral examination.
a. Thesis Option (Plan I). A minimum of 36 quarter units of graduate and upper division undergraduate courses in or related to the major subject area are required. At least 24 of the 36 units must be in graduate courses taken at this University; of these 6 to 12 must be graduate research units (CS 290, CS 297, CS 299, EE 290, EE 297, EE 299). Students must submit a master’s thesis in accordance with the general requirements of the university. The thesis is original research work, and it should demonstrate the student’s ability to study a research area, identify an open problem and make a research contribution. The thesis must be presented to and approved by a committee of at least three faculty members.

b. Project Option (Plan II). A minimum of 36 quarter units of graduate and upper division undergraduate courses in or related to the major subject area are required; of these at least 18 units must be in graduate courses taken at this University, of which none may be in graduate research (CS 299 or EE 299) for the thesis or dissertation. In addition, a student pursuing this option must include 4 to 8 units of graduate research (CS 290, CS 297, CS 299, EE 290, EE 297, EE 299). Students must complete a research project under the guidance of a faculty member. This project will require a written report and will be presented to a committee of at least two faculty members.

Combined B.S. + M.S. Five-Year Program
The college offers a combined five-year B.S. + M.S. program, designed to allow successful UCR Computer-Engineering B.S. graduates to complete the Master of Science degree in Computer Science in one year, by allowing up to 12 credits of coursework taken as a UCR undergraduate to be counted towards the 32- unit elective requirements of the M.S. (The courses that can be double-counted are those that are eligible to be counted as technical electives in the B.S. requirements.) A student may apply at the start of their senior year by submitting an application to the Computer-Science M.S. program, provided that at the end of junior year, the student was a UCR Computer Engineering B.S. student with cumulative GPA at least 3.4 and had completed the following courses with no grade less than a B- and average grade at least 3.2: CS 100, 120A, 120B, 161. The application to the M.S. program must include at least two recommendation letters from UCR Academic Senate faculty members (at least one, and preferably both, CSE faculty).
Submission of GRE scores with the application is recommended but not required. Matriculation into the combined program occurs in the Fall term following senior year, provided: (a) the M.S. application is accepted, (b) throughout senior year, the student is a Computer-Engineering B.S. major with cumulative GPA 3.4 or higher, (c) by the end of senior year, the student completes the Computer-Engineering B.S. degree requirements. Incoming students who are applying to the Computer-Engineering B.S. program may simultaneously apply for preliminary admission into the combined program provided their high school GPA is at least 3.6, their SAT-I combined score is at least 1950, they satisfy the Entry-Level Writing requirement before matriculation, and they have sufficient math preparation to enroll in calculus upon arrival. Preliminary admission status is maintained as long as the student is a Computer-Engineering or Computer-Science B.S. student in good standing with a cumulative GPA of at least 3.4. Preliminarily admitted students still need to apply for full admission in their senior year as described above.

JUSTIFICATION:
Computer Science and Computer Engineering are not hyphenated. There are also some punctuation corrections. The text revisions include adding the Professional Development Requirement to satisfy the new campus/Graduate Division requirement; it is satisfied via the colloquium. This has been approved by CS and EE in their respective graduate programs and now needs to be changed in CEN.

APPROVALS:
Computer Engineering faculty: 1/29/13
April 3, 2013

To: Ward Beyermann, Chair
Committee on Educational Policy

Jan Blacher, Chair
Committee on Planning & Budget

Sarjeet Gill, Chair
Committee on Academic Personnel

Irving Hendrick, Chair
Committee on Faculty Welfare

Connie Nugent, Chair
Graduate Council

From: Jose Wudka, Chair
Riverside Division

Section IV, Salary Administration (APM – 600 Series)

I am forwarding proposed revisions to multiple sections of the APM 600 series that are intended to create consistency and facilitate application to UC Path. Vice Provost Carlson’s letter announcing the review is attached as a pdf file. It includes a link to the section of the Academic Personnel Manual web site where policies under review are posted. Academic Personnel is using a new format in which each of the 15 different policy sections is a separate pdf file. In order to read the files on screen, you will need to right click on the document and then select “Open File.” For those who prefer, I have also attached a single pdf file, containing the entire review packet.

This systemwide review follows a limited Management Review in which UCAP and UCFW reviewed an earlier draft and suggested revisions.

Enclosure
February 25, 2013

COUNCIL OF VICE CHANCELLORS
LABORATORY DIRECTOR ALIVISATOS
ACADEMIC COUNCIL CHAIR POWELL
ANR VICE PRESIDENT ALLEN-DIAZ


Dear Colleagues:

Enclosed for Systemwide Review are proposed revisions to APM Section IV, Salary Administration. Proposed revisions are responsive to campus requests to update the APM - 600 series in accordance with current policy implementation, to correct outdated delegations of authority and to make technical corrections that have been identified since the policies were last reviewed, in some instances decades ago. Additionally, we are taking the opportunity to reformat the policies to be congruent with the overall APM style and format. A Summary of the APM - 600 Series Proposed Revisions is attached to this letter as a guide regarding changes proposed for each policy within APM Section IV.

Proposed revisions are prompted in part by the UCPath initiative. In addition to replacing the payroll system, a key component of the UCPath initiative is building a systemwide Shared Service Center designed to ensure systemwide consistency in business process quality and implementation. Shared Service Center personnel will rely on the APM - 600 series to perform these transactions. It is essential that procedural information contained within the policies be up-to-date, clear and consistent from policy to policy within the Series.

Additionally, the proposed revisions incorporate comments received during Management Consultation, many of which were technical and stylistic, intended to clarify language for consistency of interpretation.

Systemwide Review is a public review distributed to the Chancellors and Executive Vice Chancellors requesting that they inform the general University community, affected employees and unions about policy proposals. Systemwide Review also includes a mandatory, three-month full Senate review.

Employees should be afforded the opportunity to review and comment on the draft new policy, available online at: http://www.ucop.edu/academic_personnel/academic_personnel-policy/policies-under-review/index.html. Attached is a Model Communication which may be used to inform non-exclusively represented employees affected by these proposals.
February 25, 2013

Page 2

This letter and enclosures anticipate that you will begin Systemwide Review of the proposed draft and submit comments no later than May 28, 2013. Please send comments on the proposed policy to ADV-VPCARLSON-SA@ucop.edu. Questions may be directed to Janet Lockwood at Janet.Lockwood@ucop.edu or (510) 987-9499.

Sincerely,

[Signature]

Susan Carlson
Vice Provost
Academic Personnel

Enclosures: Proposed Revised APM Section IV, Salary Administration (APM - 600 Series)
Summary of APM - 600 Series Proposed Revisions
Model Communication

cc: President Yudof
Chancellors
Provost Dorr
Executive Vice President Brostrom
Senior Vice President Vacca
Vice President Beckwith
Vice President Duckett
Vice Provosts – Academic Personnel
Academic Personnel Directors
Executive Director Fox
Executive Director Rodrigues
Executive Director Tanaka
Executive Director Winnacker
Deputy General Counsel Birnbaum
Senior Counsel Van Houten
Systemwide Policy Director Capell
Director Chester
Manager Lockwood
Human Resources Policy Analyst Bello
Senior Administrative Analyst Rupert
The University invites comments on Proposed Revised Academic Personnel Manual (APM) Section IV, Salary Administration (APM - 600 Series) as described below:

The proposal is responsive to campus requests to update the series in accordance with current policy implementation, to correct outdated delegations of authority and to update procedural information in conformance with the UCPATH initiative.

The proposal is located on the UCOP Academic Personnel website, “Policies under review”, under the “Systemwide Review” tab at [http://www.ucop.edu/academic-personnel/academic-personnel-policy/policies-under-review/index.html](http://www.ucop.edu/academic-personnel/academic-personnel-policy/policies-under-review/index.html). It also may be viewed at (e.g., the campus Academic Personnel Office).

The first document in the online pdf (the APM 600 Series Table of Contents) is in strike-out format. It has been included in this format to reflect where policies may have been merged into other policies, as well as to reflect policy name changes/updates where necessary. The second document in the online pdf is an at-a-glance table which provides a summary of all APM - 600 series proposed policy revisions. The revised policies follow these documents in numerical order.

If you have any questions or if you wish to comment, please contact ______________ at ____________________, no later than _________________ 2013.
### SUMMARY OF PROPOSED REVISIONS TO APM - 600 SERIES

<table>
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<tr>
<th>APM Section</th>
<th>Title</th>
<th>Summary of Proposed Changes</th>
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| 290         | Regents' Professors and Regents' Lecturers | 1) Cut and paste APM - 640 into new Section APM - 290-18 and rename from "Salary" to "Stipends"  
2) Delete reference to a general fund allocation from UCOP; with funding streams initiative, UCOP no longer distributes general fund allocations  
3) Delete references to a specific salary scale for Regents' Professors and Regents' Lecturers; no such salary scales exist |
| 510         | Intercampus Transfer | 1) Clarify that policy covers only Senate faculty titles  
2) Clarify procedures for home campus and recruiting campus  
3) Move "Guidelines" section covering procedures to new section APM - 510-80 to conform to APM style format  
4) Increase startup cost from $500K to $900K for faculty in the laboratory sciences and HSCP and from $250K to $500K for other faculty; cost has not been adjusted since 1997 |
| 600         | General | 1) Cut and paste APM - 660, 665, 667, and 690 into body of APM - 600  
2) Update authority levels in accordance with delegations of authority (Regents to President; President to Provost; President to Chancellors)  
3) Add off-scale increases to APM - 600-8 as a type of salary increase  
4) Update fiscal-year additional comp payments from 1/11th to 1/12th to standardize payments across all 10 campuses and account for vacation accrual; grandfather those appointed prior to July 1, 2013  
4) Clarify salary conversion rates for faculty moving from academic-year to fiscal-year and fiscal-year to academic-year |
| 610         | Salary Increases/General Scale | 1) Cut and paste APM - 615, Merit Increases into new section APM - 610-9, with minor edits  
2) Add paragraph for calculating service for semester campuses (currently, includes paragraph for quarter campuses only)  
3) Update authority levels in accordance with delegations of authority (Regents to President; President to Provost) |
<p>| 615         | Salary Increases/Merit | 1) Cut and paste into APM - 610 |</p>
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| 620         | Off-Scale Salaries for Appointments and Advancement                  | 1) Add Academic Coordinators, Specialists, and Lecturers with SOE and PSOE to list of eligible titles, i.e., all academic appointees with the exception of students and appointees subject to a collective bargaining agreement  
2) Remove limitations section (for example, requiring that off-scales must be $100 less than the published salary for the equivalent step in the next rank, etc.)  
3) Review types of scale adjustments  
4) Update authority levels                                                                                                                                 |
| 632         | Stipends/Assignment of FTE for Split Appointments with Stipends      | 1) Merge with APM - 633 but rephrase to update 1960 procedure to conform to UCPATH                                                                                                                                               |
| 633         | Stipends/Academic Appointees                                         | 1) Incorporate APM - 632 but rephrase to update 1960 procedure to conform to UCPATH  
2) Edit title to reflect that policy pertains to administrative stipends  
3) Reformat to conform to current APM style                                                                                                                                |
| 640         | Regents' Professors and Regents' Lecturers, Compensation              | 1) Cut and paste into APM - 290                                                                                                                                                                                            |
| 650         | Technical Assistance Projects                                        | 1) Define and distinguish between foreign service and in-residence (within the US) service; clarify rate of pay and pay components  
2) Update State Department reference for definition of hardship  
3) Allow appointments to be made for an unspecified term or to an extend beyond one year  
4) Update policy references to conform to 600 series revisions                                                                                                                                |
| 660         | Additional Compensation/General                                      | 1) Cut and paste into APM - 600                                                                                                                                                                                            |
| 661         | Additional Compensation/Summer Session Teaching                      | 1) Current policy addresses only academic-year appointees teaching in summer session; add language enabling fiscal-year appointees to teach in summer session. Fiscal-year faculty must relinquish vacation days equal to one day for every six podium hours. Fiscal-year non-faculty appointees must either relinquish vacation, use OPA days, or request a temporary percentage reduction in current appointment.  
2) Allow campus flexibility to determine formula for calculating summer session pay so that pay may be based on a flat rate or as a percentage of the annual rate  
3) State that 3/9 is the maximum compensation amount that may be earned  
4) State that additional compensation is based on salary rate in effect June 30th of the calendar year in which Summer Session begins                                                                                                                                |

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| 662         | Additional Compensation/Additional Teaching    | 1) Cut and paste Appendices B-1 and B-2 into body of APM - 662  
2) Update fiscal-year additional comp payments from 1/11th to 1/12th to standardize payments across all 10 campuses and account for vacation accrual; grandfather those appointed prior to July 1, 2013  
3) Clarify rules for calculating time to be reported under APM - 025 requirements  
4) State that for fully online courses, hours will be determined by course units; campuses will ensure online courses provide unit workloads equivalent to the same or similar in-person course formats according to Senate Regulation 760. Each unit for an online course will be assumed equivalent to one podium hour per week. A three-unit lecture/discussion/laboratory course would count for three hours each week, or the equivalent of one day every two weeks. |
| 663         | Additional Compensation/University Extension Correspondence Courses | 1) Edit title to delete "Correspondence Courses" as policy applies to all UNEX teaching  
2) Cut and paste Appendices A-1, A-2, A-3, B-2, B-3 and B-4 from APM 662 (UNEX-related) into body of APM - 663 |
| 664         | Additional Compensation/Services as Faculty Consultant | 1) Clarify scope of policy: applies only to faculty as defined in APM - 110-4(15) consulting for UC or LBNL  
2) Clarify that the daily rate is calculated on total salary (salary plus off-scale for academic-year faculty and total negotiated salary for HSCP faculty)  
3) Update authority levels from OP to Chancellors |
| 665         | Additional Compensation/Reading Manuscripts     | 1) Cut and paste into APM - 600-14-b section on Additional Compensation |
| 666         | Additional Compensation/Lecturers and Similar Services | 1) Edit title to read "Honoraria"  
2) Define honoraria as "...for the purpose of this policy as payment by the University, to a University employee, for occasional lectures and similar public appearances beyond normal responsibilities to the University."  
3) Clarify that allowable expenses are defined in BFB G-28  
4) Clarify process for notifying the faculty member’s home campus when providing honoraria on another UC campus or at one of the Labs  
5) Reformat for consistency with APM format |
<p>| 667         | Additional Compensation/Extramurally Funded Research | 1) Adds statement in new section APM - 667-16 that agency salary caps must be observed and state funds may not be used to pay any cap gaps |</p>
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| 680         | Salary Conversion for Transfer of Academic Appointees to Laboratory | 1) Edit title to reflect that policy provides guidelines to determine salary for faculty with any type of appointment at LBNL, not just permanent transfers  
2) Clarify academic-year to fiscal-year salary conversion formula (multiply AY salary by 1.16 per terms of 1987 Cal Moore letter)  
3) Remove references to Lawrence Livermore and Los Alamos  
4) Clarify difference between a temporary appointment to Lawrence Berkeley and permanent transfer from Berkeley to the Lab |
| 690         | Academic Salary Scales | 1) Cut and paste into APM 600 |
## IV. SALARY ADMINISTRATION

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<td>Compensation of Divisional, Associate and Assistant Deans, and Directors of Organized Research Units</td>
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<td>Additional Compensation/Extramurally Funded Research</td>
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UNIVERSITY OF CALIFORNIA
ACADEMIC PERSONNEL MANUAL

IV. SALARY ADMINISTRATION

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<td>Health Sciences Compensation Plan and Guidelines on Occasional Outside Professional Activities by Health Sciences Compensation Plan Participants</td>
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<tr>
<td>APM 680</td>
<td>Salary Calculations for Faculty with Appointments at Lawrence Berkeley National Laboratory Conversion for Transfer of Academic Appointees to Laboratories</td>
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<tr>
<td>APM 690</td>
<td>Academic Salary Scales</td>
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290-0  Policy

a.  In order to bring to the University distinguished individuals, ordinarily from non-academic fields, who through their contact with students and faculty may add to and enrich university life, The Regents of the University of California have established the titles Regents’ Professor and Regents’ Lecturer.

b.  Appointment of a Regents’ Professor is preferred to the appointment of a Regents’ Lecturer whenever possible.

c.  Nominations shall be coordinated by the Chancellors whenever possible in order to avoid conflicts and to make possible service on more than one campus when agreeable to the prospective appointee and to the Chancellor.

290-1  Terms of Appointment

To achieve the special purposes of Regents’ Professor and Regents’ Lecturer appointments as indicated in APM - 290-0, the following terms govern these appointments:

a.  A Regents’ Professor

  (1)  should reside in the vicinity of the campus during the appointment and be available for seminars, colloquia and informal consultation with students and faculty members;

  (2)  should be available for lectures, seminars and conferences on campuses other than the one to which appointed for approximately two weeks of each quarter or semester;
(3) may participate in instruction in courses given for credit, at the discretion of the individual instructor; and

(4) may be assigned a course to teach at the discretion of the department chairperson and with the concurrence of the appropriate bodies of the Academic Senate.

b. A Regents’ Lecturer

(1) should reside in the vicinity of the campus during the appointment and be available for seminars, colloquia and informal consultation with students and faculty members; and

(2) may address class sessions of a course given for credit at the invitation of the instructor, but does not normally participate in instruction.

290-4 Definitions

a. Regents’ Professor

A Regents’ Professor serves for a semester/quarter or an academic year at the University of California upon the invitation of the President of the University and with the approval of the Board of Regents. The Regents’ Professor’s achievements in agriculture, banking, commerce, engineering, industry, labor, law, medicine or any other non-academic field in the arts, sciences or professions are equivalent to those on which appointments to regular University professorships are based.
b. **Regents’ Lecturer**

A Regents’ Lecturer serves for a relatively short period of time at the University of California upon the invitation of the Chancellor. The Regents’ Lecturer’s achievements in agriculture, banking, commerce, engineering, industry, labor, law, medicine or any other non-academic field in the arts, sciences or professions are equivalent to those on which appointments to regular University lectureships are based.

290-6 **Responsibility**

Responsibility for acting on appointments is assigned as follows:

a. The Chancellor is responsible for appointing a special committee of faculty members to undertake the solicitation of names and initial screening of potential Regents’ Professors and Regents’ Lecturers.

b. The President is responsible, at appropriate intervals, for asking members of the Board of Regents to suggest names to be transmitted to the Chancellors for the committee’s consideration.

c. The faculty committee, appointed by the Chancellor, undertakes the solicitation of names and initial screening, and is responsible for submitting lists of recommended individuals to the Chancellor.

d. The Chancellor is responsible for submitting recommendations for Regents’ Professors to the President.
e. The President is responsible for submitting to The Regents recommendations for Regents’ Professors.

f. The President is responsible for implementing intercampus exchange of Regents’ Professors.

290-8 Types of Appointment

a. The term of appointment shall begin and end within the period from the first day of classes in the fall semester/quarter and the last day of classes in the spring semester/quarter of the current year.

b. Regents’ Professors shall be appointed for a semester/quarter or an academic year.

c. Regents’ Lecturers shall be appointed for a period of less than a semester/quarter or an academic year, but preferably for not less than two weeks.

290-10 Criteria

Criteria for appointment are:

a. Regents’ Professors: Achievements in agriculture, banking, commerce, engineering, industry, labor, law, medicine or any other non-academic field in the arts, sciences or professions, equivalent to those on which appointments to regular University professorships are based.
b. **Regents’ Lecturers:** Achievements in the fields listed in APM - 290-10-a, equivalent to those on which appointments to regular University lectureships are based.

290-16 **Limitations**

No commitment on an appointment as Regents’ Professor is to be made until The Regents have approved the appointment.

290-18 **Compensation**

a. **Regents’ Professorships**

   Compensation for Regents’ Professorships is subject to approval by The Regents.

b. **Regents’ Lectureships**

   Compensation for Regents’ Lectureships can be negotiated and approved by the Chancellor.

290-24 **Authority**

Authority to appoint Regents’ Professors and Regents’ Lecturers is delegated as follows:

a. **Regents’ Professors**

   Appointments are approved by The Regents on recommendation of the President.
b. **Regents’ Lecturers**

Chancellors are authorized to appoint Regents’ Lecturers.
510-0  **Policy**

This policy provides guidance to all permanent intercampus transfers of academic appointees who hold Senate faculty titles on the home campus and who are recruited into Senate faculty titles at the recruiting campus.

510-2  **Purpose**

It is the obligation of those involved in the consideration of an intercampus transfer to pay due regard to the welfare of the University as a whole as well as to the wishes of the appointee and to the effect of the transfer on the two campuses directly concerned.

510-16  **Restrictions**

a.  **Transfer of Research**

If, in conjunction with an intercampus transfer covered by the policy in this section, a transferee who is a principal investigator or co-investigator under an extramurally funded contract or grant wishes to transfer the contract or grant or any part of the equipment funded thereby to the recruiting campus, the matter must be discussed at the earliest possible opportunity with the contract and grant administrator on the recruiting campus. Such transfer of contract or grant equipment may be accomplished only after approval by both Chancellors concerned and in accordance with University rules for contract and grant administration and the rules of the granting agency.
b. Administrative Appointments

This policy applies only to Senate faculty appointments and does not address primary appointments to administrative positions such as Dean, regardless of any underlying Senate faculty appointment.

c. Timing

No offer of appointment that includes intercampus transfer shall be made after April 1 for service during the immediate following academic year unless a later offer date is mutually agreed to by both Chancellors involved.

d. Effect of Sabbatical Leave on Transfer Date

An intercampus transfer of an appointee may become effective immediately following the appointee’s sabbatical leave, i.e., the return to service requirement in APM - 740, Leaves of Absence/Sabbatical Leaves may be met by returning to service at another UC campus.

510-18 Rank, Step and Salary

a. When a Senate faculty member on one campus is to be transferred to another campus, the transferee’s rank and salary as recommended to be effective on transfer shall be subject to academic and administrative review on the recruiting campus. The Chancellor of the recruiting campus shall make the final decision on the rank and salary of the transferee. For additional details on such procedures, see APM - 220-80 and 220-85.

b. Transfers made with advancement to a salary that exceeds the Indexed Compensation Level threshold shall be submitted to the Provost and Executive Vice President—Academic Affairs for approval.
c. The recruiting campus may offer advancement and/or a salary increase of no more than one step, or the equivalent of one step, above the transferee’s current salary. If the transferee’s current salary is an off-scale salary, the recruiting campus may offer the next higher step along with the same off-scale dollar amount.

d. An offer which includes a promotion is permitted if the advancement and salary increase conform to the requirements set forth in this policy.

e. If a stipend is offered in addition to salary, it must be offered for *bona fide* administrative duties.

f. In response to the offer, the home campus may counter-offer a rank, step and/or salary equivalent to that of the recruiting campus.

g. If, at any time during the recruitment, the home campus is reviewing the faculty member for a salary increase and/or advancement to become effective at a later date, the recruiting campus may not offer more than one step above the current salary until the review is complete.

h. If the home campus review results in a salary increase and/or advancement, the recruiting campus may offer a salary, rank and step equivalent to the increase even if the increase is more than one step above the salary at the time of the initial recruitment effort.

i. If the faculty member being recruited by another UC campus also is being recruited by an outside institution, then either the home and/or recruiting UC campus may make a counter-offer higher than that described in order to compete with the outside offer.
510-19 **Start-Up Costs**

Approval by the Provost and Executive Vice President—Academic Affairs must be sought if the package of start-up costs and other inducements (excluding housing assistance such as a MOP loan) exceed $900,000 for faculty in the laboratory sciences and Health Sciences Compensation Plan and $500,000 for other faculty.

The package shall include all expenditures such as laboratory renovations, research equipment and summer salary for a faculty member.

510-24 **Authority**

a. Final approval of an intercampus transfer shall be made by the Chancellor of the campus to which the appointee is transferring.

b. At any point in a proposed intercampus recruitment, either Chancellor may request mediation or intervention by the Provost and Executive Vice President—Academic Affairs.

c. If there is a question regarding the application of these guidelines, the Provost and Executive Vice President—Academic Affairs will provide an interpretation of the policy.

510-80 **Procedures**

**Notification**

a. Prior to the initiation of negotiation for an intercampus transfer, the Chancellors of the two campuses involved shall be informed of the proposed transfer. In the case of a person holding a title under the
b. As soon as the candidate is identified for appointment by the department, the Chancellor of the recruiting campus will notify the home campus Chancellor of the intention to make an offer. The Chancellor of the recruiting campus will provide information about the details of the offer in writing as soon as such information is available.

The information provided to the home campus Chancellor must include any and all recruiting inducements financial or otherwise and regardless of fund source, including the proposed total negotiated salary, stipends or summer ninths, recruitment allowance, appointment to endowed chairs, reduced teaching responsibilities, start-up funds, space remodeling and other recruitment incentives.

If in the course of negotiations with the transferee the recruiting campus significantly increases the recruitment incentives previously reported, the recruiting campus Chancellor will inform the home campus Chancellor of such increases.

c. At least ten working days before making the formal offer of appointment to the intended transferee, which offer shall be in writing, the Chancellor of the recruiting campus shall indicate such intention to the Chancellor of the home campus. If the transferee holds a title under the jurisdiction of the Vice President—Agriculture and Natural Resources, the latter also shall be informed.
The ten working day notification period may be waived if agreed to by both Chancellors involved.
600-0 Policy

Compensation of academic appointees is under the jurisdiction of the Chancellor except for those salaries which exceed the Indexed Compensation Level (ICL) requiring approval of the Provost and Executive Vice President – Academic Affairs.

600-4 Definitions

a. Above-Scale Salary

Above-scale salary refers to a full-time salary rate for an academic appointee who, by way of formal review, has advanced or is appointed to above-scale status within a specific title series. The salary shall always exceed the maximum salary designated for the title series in the published salary scales.

b. Academic Salary Scales

A salary scale is a published listing of salary rates or salary range established for a given academic title or title series. The scales may be divided into steps or ranks, or into steps within the ranks. A salary range is a published listing of the minimum to maximum salary for a particular title.

Responsibility for issuing academic salary scales rests with the President or the President’s designee after consultation with the Academic Council and the Chancellors.

The salary scales may be viewed online at http://www.ucop.edu/acadpersonnel/.
c. **Academic Year Appointment**

An academic year appointment is also known as a nine-month appointment (on a quarter campus) or a ten-month appointment (on a semester campus) and refers to the period in which an academic appointee renders services, i.e., the academic year, from the beginning of the fall term through the end of the spring term, including periods of intersession. Appointees to certain titles may also be appointed to, and render service for, a portion of an academic year, i.e., one semester, one quarter, or two quarters. Academic year appointees do not render service during the summer period but may receive their annual salary in twelve equal installments throughout the calendar year.

d. **Additional Compensation**

Additional compensation is any compensation other than an administrative stipend paid to an appointee by the University in excess of the appointee’s full-time salary. Additional compensation is allowed only in specific circumstances outlined in APM - 600-14. Appointees working less than full-time may accept additional University employment up to 100 percent time. However, concurrent jobs are not considered additional compensation. The term additional compensation is not used in this Manual to refer to compensation for employment by any employer other than the University.

e. **Faculty**

A member of the faculty of the University is an academic appointee in a School, College, Division, Department or Program of instruction and research who has independent responsibility for conducting approved regular University courses for campus credit. Students in a UC degree program who teach independently within their discipline are not considered faculty. A list of faculty titles may be found in
f. **Fiscal Year Appointment**

A fiscal year appointment refers to the period in which the individual renders service, i.e., throughout the fiscal year, July 1 through June 30 (12 months) as opposed to the academic year (nine or ten months).

g. **Off-Scale Salary**

The salary for an appointee at a certain rank and step is designated as off-scale if the salary is higher than the published salary at the designated rank and step for the relevant title series (APM – 620).

h. **Step**

Most academic titles have established levels of salary within each title or rank. Each level is referred to as a step (e.g., Assistant Professor, Step II).

600-8 **Types of Salary Increases**

There are four basic ways in which an academic appointee may receive an increase in salary. These are:

a. General scale increase (see APM - 610);

b. Merit increase (see APM - 610);

c. Promotion (see section relating to the appropriate title or title series in Section II of the APM, Appointment and Promotion);

d. Off-scale increase (see APM - 620).

In addition, Health Sciences Compensation Plan faculty may received an increase in salary as the result of a renegotiation of the “Y” component per APM - 670-18-c-1.
For all academic appointees, merit increases and promotions, unless otherwise approved by the Chancellor, are effective July 1, payable according to APM - 610.

Salary increases for full-time faculty administrators are governed by APM - 240, Deans and APM - 246, Faculty Administrators (100% Time).

600-14 Additional Compensation

Members of the faculty and certain academic appointees are at times, as described in specific policies, called on to serve the University in activities not directly related to their recognized University duties. Such services may be as a professional consultant, in administration or teaching outside the member’s regular Department, School or College. When paid as additional compensation, such services shall not interfere with recognized University duties. In some cases, it may be appropriate to take a leave of absence without salary from the regular appointment for the duration of the additional service. Additional compensation for specific activities are covered in APM Sections - 633, - 660, - 661, - 662, - 663, - 664 and - 667. In addition, honoraria for lectures and similar services such as public appearances may be permitted in accordance with APM - 666.

a. For academic appointees covered by a Memorandum of Understanding (MOU), eligibility for additional compensation is determined by the terms of the MOU.

b. Academic year appointees may receive additional compensation of up to one-third of the annual salary for conducting research, teaching, or service during the summer. Guidelines for payment are contained in APM - 600, Appendix 1.

c. Fiscal year appointees to the Professor, Astronomer or Agronomist in the Agricultural Experiment Station (A.E.S.) series may receive additional compensation
of up to one-twelfth\textsuperscript{1} of the annual salary for teaching, research, or service performed during vacation. A corresponding number of accrued vacation days must be deducted.

d. All academic appointees may receive additional compensation for reading and judging manuscripts. When reading and judging manuscripts for the University Press, additional compensation is paid in accordance with guidelines issued by the Office of the President. There are no established fees for reading manuscripts. Fees are subject to negotiation for each manuscript read.

e. Limitations

i. No member of the faculty on a full-time appointment shall receive additional compensation from University sources for services directly related to the appointee’s recognized duties during the academic year, from the beginning of the fall semester/quarter service period, as established in the University calendar, through the end of the spring semester/quarter service period (or during the vacation period for a fiscal year appointee), except that honoraria for lectures and similar services may be permitted (see APM - 666).

ii. No additional compensation may be earned during intersession periods, except as provided in APM - 600, APM - 664, and APM - 666.

iii. For additional employment performed during the period between the end of the spring semester/quarter and the beginning of the fall semester/quarter, and the vacation period in the case of a fiscal year appointee, those appointed prior to July 1, 2013 to the Professor, Astronomer or Agronomist series are eligible for payments of up to one-eleventh of the annual salary of a fiscal year appointee.

\textsuperscript{1} This is effective for appointments made July 1, 2013 or later. Those appointed prior to July 1, 2013 to the Professor, Astronomer or Agronomist series are eligible for payments of up to one-eleventh of the annual salary of a fiscal year appointee.
year appointee, no member of the faculty on full-time appointment shall receive compensation at a rate higher than the appointee’s regular annual salary; and no contract between the University and an organization or individual shall include provision for a higher rate.

iv. Appointees may not receive additional compensation for research service performed in the intersession period between two consecutive quarters/semesters of teaching.

v. Research appointees should be advised that time reports submitted for monthly pay purposes must ultimately agree with the effort required at the end of the quarter/semester.

600-18 Rates of Pay

a. The academic salary scales issued by the Office of the President give rates of pay at each step within each rank and the normal period of service at each salary step.

b. Conversion Rates

An academic year salary is converted to a fiscal year salary by increasing the academic year salary by 16 percent, i.e., by multiplying the academic year salary by 1.16. A fiscal year salary is converted to an academic year salary by decreasing the fiscal year salary by 14 percent, i.e., by multiplying the fiscal year salary by 0.86. This calculation includes a standard differential of three cumulative five percent increments and takes into account work during intersession periods during which all faculty are expected to work plus vacation days available to fiscal year appointees. Annual salary rates are then rounded to the nearest $100 if the on-scale rates for the corresponding title series are given in $100 increments.
600-19 **Deductions**

Salary and additional compensation payments are subject to deductions as may be required by law or University regulations.

600-20 **Salary Payments**

a. Salary payments are issued through the University.

b. Salaries of academic year and fiscal year appointees are normally paid in twelve equal monthly installments, regardless of fund source.

c. Salaries of academic year appointees who are appointed for less than a full academic year are normally paid in three equal monthly installments per quarter of service, or six equal installments per semester of service.

d. Salary payments to appointees in student titles on academic year appointments are made in nine (quarter system) or ten (semester system) equal monthly installments on the first of each month following the month of service.

e. Salary payments to academic appointees in student titles paid on an hourly basis are normally paid on a bi-weekly pay schedule.

f. In unusual circumstances, the Chancellor may approve an exception to these circumstances.

600-21 **Computation of Pay for Academic Appointees Giving Less Than a Full Quarter or Semester Period of Service**

a. Computation of pay for academic appointees who serve for less than one full quarter/semester or whose service will be irregular or unpredictable is described in APM - 600, Appendix 2.
b. Academic-year appointees who receive their annual salary in twelve equal monthly installments over the period July 1 through June 30 are prepaid to some extent. When such an appointee leaves University service before the end of a quarter/semester, the total amount actually owed for services from the beginning of the quarter/semester to the time of departure may differ from the total of the salary installments received by the appointee to date. The amount actually due for services to the date of termination shall be compared with the total amount of pay already received. If the amount of pay already received exceeds the amount owed, the appointee shall refund the difference to the University. If the amount owed exceeds the amount received, the University shall pay the difference to the appointee.

600-24 Authority

a. Academic salary scales are issued by the Office of the President. For authority to grant merit increases, see APM - 610. For authority to appoint and promote, see the appropriate section in APM Section II, Appointment and Promotion.

b. Authority to approve above-scale salary rates up to and including the Indexed Compensation Level rests with the Chancellor.

c. Authority to approve salaries beyond the Indexed Compensation Level rests with the Provost and Executive Vice President—Academic Affairs.

600-80 Procedures

a. Schedule of Payments

(1) Academic Year Appointments
(a) Appointees under the quarter calendar will be paid in accordance with the schedule listed in APM - 600, Appendix 3.

(b) Appointees under the semester calendar will be paid in accordance with the schedule listed in APM - 600, Appendix 4.

(2) Fiscal Year Appointments

Pay periods for fiscal year appointments under the quarter or semester calendar will be identical to service periods.

(3) Joint Appointments (Teaching and Research) (See APM - 600, Appendix 5)

(a) An academic year appointee who holds a title in the Professor series, equivalent rank, or In-Residence series, and who also holds a title in the Professional Research series, will be paid on the academic year salary scale for both the faculty and research appointments.

(b) An academic year appointee holding a title in other than the Professor series, equivalent rank or In-Residence series will be paid at the fiscal year rate for research services regardless of the portion of the year devoted to teaching.

(c) A fiscal year appointee who is appointed to teach on a temporary basis will be paid at the fiscal year rate for research and the academic year rate for the faculty appointment. If the two appointments will result in employment greater than 100 percent time during the teaching appointment service period, the research appointment will be temporarily reduced to yield a 100 percent time appointment during the service period.

b. For computation of Full-Time Equivalent (FTE) percentages for academic appointments, see Appendix 8.
List of Appendices

Appendix 1  Guidelines for Payment of Additional Compensation to Academic Year Appointees During the Summer
Appendix 2  Computation of Pay for Academic Appointees Giving Less Than a Full Period of Service
Appendix 3  Schedule of Salary Payments for Academic Year Appointments on the Quarter Calendar
Appendix 4  Schedule of Salary Payments for Academic Year Appointments on the Semester Calendar
Appendix 5  Schedule of Salary Payments for Joint Appointments – Academic Year
Appendix 6  Pay Periods for Academic Year Appointees Paid on a 12-Month Basis – Quarter System
Appendix 7  Pay Periods for Academic Year Appointees Paid on a 12-Month Basis – Semester System
Appendix 8  Computation of Full-Time Equivalent (FTE) Percentages for Academic Appointments
Appendix 9  Guidelines on By Agreement Appointments for Academic Appointees
Guidelines for Payment of Additional Compensation to Academic Year Appointees During the Summer

Eligible academic year appointees are allowed to earn a maximum of one-third of the nine-month annual salary rate as additional compensation for services during the summer period. The full summer service period for pay entitlement is 57 service days. It begins after the spring quarter/semester and ends prior to the fall quarter/semester and will be preceded, followed, or both by intersession periods during which an appointee is expected to perform duties as necessary to fulfill commitments to the University and to sponsoring agencies. No additional compensation is allowed during the periods which are not included within the designated summer service period. Regular University pay entitlement is not affected if service is not performed during the summer period.

Each summer service day in duty status for pay entitlement is weighted as follows:

<table>
<thead>
<tr>
<th>Full summer period:</th>
<th>For 3/9 of annual rate:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>57 days, each at 1/57;</td>
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<tr>
<td>2/3 summer period:</td>
<td>For 2/9 of annual rate:</td>
</tr>
<tr>
<td></td>
<td>38 days, each at 1/38;</td>
</tr>
<tr>
<td>1/3 summer period:</td>
<td>For 1/9 of annual rate:</td>
</tr>
<tr>
<td></td>
<td>19 days, each at 1/19.</td>
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</table>

Since academic year appointees are normally paid on a monthly basis and not a daily basis, monthly summer salary payments may be made at a set rate of 1/9 of the annual salary per month,
with the percentages distributed across the summer pay periods as appropriate according to the established service dates, with the total compensation not to exceed \( \frac{3}{9} \) (one-third) of the annual salary rate.

If payments for the summer service are scheduled for or are made in equal monthly installments of \( \frac{1}{9} \) each month and service is terminated prior to the end of the designated service period, pay entitlement must be calculated using a daily rate based on a 57-day summer service period with appropriate adjustments made to salary owed based on amounts already paid.

If effort is reported as 100% at a full \( \frac{1}{9} \) installment for such a month, it is to be understood that only 19 service days in duty status for pay entitlement are, for payroll purposes, those of the compensable service period. The “excess” calendar days in that month are to be considered part of the intersession period.

When a daily rate is used rather than a monthly rate, and during the months of July and/or August each business day available for service is used, the monthly installment for those months may exceed \( \frac{1}{9} \) of the annual rate. This is allowable so long as the total compensation for the summer period does not exceed one-third of the annual rate and the total service period does not exceed 57 days.

If length of service will be indeterminate or irregular, a daily rate based on the 57-day summer service period should be applied. All summer salary rates shall be calculated based on the salary rate in effect as of June 30th of that year.
Computation of Pay for Academic Appointees

Giving Less Than a Full Quarter or Semester of Service

I. Definitions

Working Day: For purposes of computing pay, working days consist of all Mondays, Tuesdays, Wednesdays, Thursdays and Fridays, including holidays occurring on any of those days, which fall between the beginning and ending dates of the service period of an academic appointment.

Day of Absence: Any working day for which payment must be deducted because of absence.

Monthly Rate: The rate of monthly salary payments as shown on the appropriate campus approval document.

Quarterly Rate: The annual salary of an academic year appointee divided by three or the annual salary rate of a fiscal year appointee divided by four.

Semester Rate: The annual salary of an academic or fiscal year appointee divided by two.

Daily Rate: The quarterly/semester rate divided by the number of “working days” in the academic quarter/semester under consideration.
Daily Time

Factor: A percentage of the “working days” in a given calendar month.

II. Procedures – Academic Year Appointees

Payment Computation

1. Calculate amount of Daily Rate
   
   Quarterly/Semester Rate
   
   “Number of Working Days” in Quarter/Semester = Daily Rate

2. Calculate payment for quarter of partial service
   
   Daily Rate x Appointment x Days Worked = Adjusted Quarter/Semester Payment

3. To calculate the amount to be deducted for an absence, count the number of days of absence and apply the same method and formula.

III. Procedures – Fiscal Year Appointees

For all fiscal year appointees, use Table 1 to calculate the amount of pay owed for a partial month of service.

A. Payment Computation

1. Locate in the first column the number of days the appointee worked during the month. Reading horizontally along the row, select the appropriate time factor according to whether there are 20, 21, 22 or 23 working days in the calendar month under consideration. Use the following formula to calculate the amount of payment for that month:
Appointment Percent x Daily Time Factor x Monthly Pay Rate = Adjusted Monthly Payment

2. To calculate the amount to be deducted for an absence, count the number of days of absence and apply the same method and formula.
**Daily Time Factors for Days Worked (or Absent)**

**for Fiscal Year Appointees**

(Not to be used for summer compensation payments)

<table>
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<th>Number of Days Worked</th>
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<td>.8500</td>
<td>.9000</td>
<td>.9500</td>
<td>1.0000</td>
</tr>
<tr>
<td></td>
<td>.8095</td>
<td>.8571</td>
<td>.9048</td>
<td>.9524</td>
</tr>
<tr>
<td></td>
<td>.7727</td>
<td>.8182</td>
<td>.8636</td>
<td>.9091</td>
</tr>
<tr>
<td></td>
<td>.7391</td>
<td>.7826</td>
<td>.8261</td>
<td>.8696</td>
</tr>
</tbody>
</table>

Subtract the factor shown from 1.0000 to determine the percent of time to be used in computing the amount of the monthly installment to be paid.
## Schedule of Salary Payments for Academic Year Appointments on the Quarter Calendar

<table>
<thead>
<tr>
<th>Service Period</th>
<th>Total Payment</th>
<th>Monthly Rate</th>
<th>Pay Period</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appointees to faculty titles who serve three full quarters (9/12)</strong></td>
<td>Fall quarter begin date through spring quarter end date</td>
<td>Full annual rate (at appropriate percent time)</td>
<td>Annual rate/12</td>
</tr>
<tr>
<td><strong>Appointees to monthly student titles who serve three full quarters (9/9)</strong></td>
<td>Fall quarter begin date through spring quarter end date</td>
<td>Full annual rate (at appropriate percent time)</td>
<td>Annual rate/9</td>
</tr>
<tr>
<td><strong>Appointees to all titles who serve two consecutive quarters in an academic year (9/9)</strong></td>
<td>Fall quarter begin date through winter quarter end date</td>
<td>Annual rate/9 x 6</td>
<td>Annual rate/ 9</td>
</tr>
<tr>
<td>Winter quarter</td>
<td>Annual rate/9 x 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appointees to all titles who serve one quarter in an academic year (9/9)</td>
<td>begin date through spring quarter end date</td>
<td>begin date through fall quarter end date</td>
<td>begin date through winter quarter end date</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Fall Quarter</td>
<td>Annual rate/ 9 x 3</td>
<td>Annual rate/ 9</td>
<td>October 1 through December 31</td>
</tr>
<tr>
<td>Winter quarter</td>
<td>Annual rate/ 9 x 3</td>
<td>Annual rate/ 9</td>
<td>January 1 through March 31</td>
</tr>
<tr>
<td>Spring quarter</td>
<td>Annual rate/ 9 x 3</td>
<td>Annual rate/ 9</td>
<td>April 1 through June 30</td>
</tr>
</tbody>
</table>
To apply a pay change (e.g., leave of absence) to a single quarter for a faculty appointee who normally serves all three quarters per academic year, use the following pay periods:

- **Fall quarter**: July 1 through October 31
- **Winter quarter**: November 1 through February 28
- **Spring quarter**: March 1 through June 30

See APM – 600, Appendix I for the payment schedule for summer additional compensation for academic-year appointees.
## Schedule of Salary Payments for Academic Year Appointments on the Semester Calendar

<table>
<thead>
<tr>
<th>Service Period</th>
<th>Total Payment</th>
<th>Monthly Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td>Appointees who serve full two semesters:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A. All ranks of faculty</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 semesters</td>
<td>Full Annual Rate</td>
</tr>
<tr>
<td></td>
<td>B. Appointees to student titles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 semesters</td>
<td>Full Annual Rate</td>
</tr>
<tr>
<td>II.</td>
<td>Faculty and appointees to student titles who serve one semester:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 semester</td>
<td>Annual Rate/2</td>
</tr>
</tbody>
</table>
### Schedule of Salary Payments for Joint Appointments – Academic Year

<table>
<thead>
<tr>
<th>Appointment</th>
<th>Service Period</th>
<th>Salary Scale</th>
<th>Payment Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor series equivalent rank, or In Residence series and Professional Research series:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professor series</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty portion</td>
<td>9 months</td>
<td>academic year</td>
<td>12 months</td>
</tr>
<tr>
<td>Professional Research</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Series portion</td>
<td>9 months</td>
<td>academic year</td>
<td>12 months</td>
</tr>
<tr>
<td>Non-ladder rank faculty appointees with research appointment at any proportion of service:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty portion</td>
<td>9 months</td>
<td>academic year</td>
<td>12 months</td>
</tr>
<tr>
<td>Research portion</td>
<td>12 months</td>
<td>fiscal year</td>
<td>12 months</td>
</tr>
</tbody>
</table>
Pay Periods for Academic Year Appointees Paid on a 12-Month Basis – Quarter System

<table>
<thead>
<tr>
<th>Pay Period</th>
<th>Service Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>July</td>
<td>Fall Quarter</td>
</tr>
<tr>
<td>August</td>
<td></td>
</tr>
<tr>
<td>September</td>
<td></td>
</tr>
<tr>
<td>October</td>
<td></td>
</tr>
<tr>
<td>November</td>
<td>Winter Quarter</td>
</tr>
<tr>
<td>December</td>
<td></td>
</tr>
<tr>
<td>January</td>
<td></td>
</tr>
<tr>
<td>February</td>
<td></td>
</tr>
<tr>
<td>March</td>
<td>Spring Quarter</td>
</tr>
<tr>
<td>April</td>
<td></td>
</tr>
<tr>
<td>May</td>
<td></td>
</tr>
<tr>
<td>June</td>
<td></td>
</tr>
</tbody>
</table>
Pay Periods for Academic Year Appointees Paid on a 12-Month Basis – Semester System

<table>
<thead>
<tr>
<th>Pay Period</th>
<th>Service Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>July</td>
<td>Fall Semester</td>
</tr>
<tr>
<td>August</td>
<td></td>
</tr>
<tr>
<td>September</td>
<td></td>
</tr>
<tr>
<td>October</td>
<td></td>
</tr>
<tr>
<td>November</td>
<td></td>
</tr>
<tr>
<td>December</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>January</td>
<td>Spring Semester</td>
</tr>
<tr>
<td>February</td>
<td></td>
</tr>
<tr>
<td>March</td>
<td></td>
</tr>
<tr>
<td>April</td>
<td></td>
</tr>
<tr>
<td>May</td>
<td></td>
</tr>
<tr>
<td>June</td>
<td></td>
</tr>
</tbody>
</table>
Computation of Full-Time Equivalent (FTE)

Percentages for Academic Appointments

These tables are included to assist in the computation of Full-Time Equivalent (FTE) percentages for academic appointees. 1.00 FTE equals the full-time services of one appointee for one year.

**ACADEMIC YEAR**

For academic year appointments, two semesters of full-time service are equivalent to one year; likewise three quarters of full-time service are equivalent to one year. Included in this category are those appointees who hold titles in the Professor series for the equivalent of at least one full quarter or semester and who also hold a title in the Professional Research series.

- 1 semester = ½ of a year = 0.50 FTE
- 2 semesters = 1 full year = 1.00 FTE
- 1 quarter = 1/3 of a year = 0.33 FTE
- 2 quarters = 2/3 of a year = 0.67 FTE
- 3 quarters = 1 full year = 1.00 FTE

---

**FISCAL YEAR**

For fiscal year appointments two semesters of full-time service plus the summer period are equivalent to one year; likewise three quarters of full-time service plus the summer period are equivalent to one year. Included in this category are those appointees who hold titles in the Professor series, on a fiscal basis, for the equivalent of at least one full quarter or semester and
who also hold a title in the Professional Research series. For fiscal year appointments with research titles, the FTE is computed on a monthly basis as follows:

<table>
<thead>
<tr>
<th>Period</th>
<th>Fraction of a Year</th>
<th>FTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 month</td>
<td>1/12</td>
<td>0.08</td>
</tr>
<tr>
<td>2 months</td>
<td>2/12</td>
<td>0.17</td>
</tr>
<tr>
<td>3 months</td>
<td>3/12</td>
<td>0.25</td>
</tr>
<tr>
<td>4 months</td>
<td>4/12</td>
<td>0.33</td>
</tr>
<tr>
<td>5 months</td>
<td>5/12</td>
<td>0.42</td>
</tr>
<tr>
<td>6 months</td>
<td>6/12</td>
<td>0.50</td>
</tr>
<tr>
<td>7 months</td>
<td>7/12</td>
<td>0.58</td>
</tr>
<tr>
<td>8 months</td>
<td>8/12</td>
<td>0.67</td>
</tr>
<tr>
<td>9 months</td>
<td>9/12</td>
<td>0.75</td>
</tr>
<tr>
<td>10 months</td>
<td>10/12</td>
<td>0.83</td>
</tr>
<tr>
<td>11 months</td>
<td>11/12</td>
<td>0.92</td>
</tr>
<tr>
<td>12 months</td>
<td>1 full year</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Using this chart:

<table>
<thead>
<tr>
<th>Period</th>
<th>Fraction of a Year</th>
<th>FTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 quarter</td>
<td>3 months</td>
<td>0.25</td>
</tr>
<tr>
<td>1 semester</td>
<td>4 ½ months</td>
<td>0.37</td>
</tr>
<tr>
<td>2 semesters</td>
<td>9 months</td>
<td>0.75</td>
</tr>
<tr>
<td>Summer period</td>
<td>3 months</td>
<td>0.25</td>
</tr>
</tbody>
</table>
Computation for Part-Time Service

Part-time service is expressed as a percentage of full-time. To determine the amount of FTE required for a part-time appointment, multiply this percentage by the appropriate factor selected from one of the above tables.

Examples:

Academic year appointee to serve 33%
for 2 quarters

\[ .33 \times .67 = 0.22 \text{ FTE} \]

Fiscal year appointee to serve 50%
for 3 quarters

\[ .50 \times .75 = 0.38 \text{ FTE} \]

Fiscal year appointee to serve 25%
for 10 months

\[ .25 \times .83 = 0.21 \text{ FTE} \]

Academic year appointee to serve 33%
for 1 semester

\[ .33 \times .50 = 0.17 \text{ FTE} \]

Fiscal year appointee to serve 50%
for 1 semester

\[ .50 \times .50 = 0.25 \text{ FTE} \]
Guidelines on By Agreement Appointments for Academic Appointees

Generally, all academic appointees shall hold regular appointments with a monthly or hourly rate and percentage of time specified with corresponding benefits eligibility. However, payment of a set, negotiated amount (a “by agreement appointment”) is appropriate in the following situations:

1. For teaching equivalent to a guest lecturer, e.g., intercampus services as a faculty lecturer or consultant, when the duration of such service is less than one full quarter or semester;

2. For substitute teachers appointed at the University Elementary School at UCLA.

3. For teaching in University Extension, the Berkeley Lawrence Hall of Science or other University service and continuing education and educational outreach programs, except for ongoing programs such as English as a Second Language (ESL);

4. For performance-based instruction such as in music, dance, art, theater, film and television, for an individual or small group, which is not conducive to a percentage appointment;

5. For Military/Air Science Tactics Assistants (title code 2600);

6. For retirees in post-retirement appointments (recalls) as long as the appointment does not exceed a total of 43 percent time per month inclusive of all recall agreements. The maximum salary rate for recall appointments is the individual’s base salary rate (including any off-scale) for the academic position held at the time of retirement, range adjusted forward.

7. Administrative stipends in accordance with APM - 633;

8. For other part-time visiting, adjunct, or other appointments if the Chancellor approves.
Individuals who hold positions on a by agreement basis and who are subsequently appointed on an ongoing basis or whose assignments have been expanded or regularized should be appointed to a regular appointment with a percentage of time specified and receive a regular salary and corresponding benefits.
610-0 **Policy**

This policy provides guidance for the ways in which an academic appointee may receive an increase in salary. These are by way of: a general scale increase, a merit increase, a promotion increase or an off-scale increase. Provisions for general scale increases and merit increases follow below. Promotion increases are described in Section II of the APM, Appointment and Promotion, within the appropriate title or title series policy. Off-scale increases are described in APM - 620, Off-Scale Salaries for Appointment and Advancement.

610-8 **General Scale Increases**

General scale increases in academic salaries are provided according to the following policies:

a. It is the responsibility of the President or the President’s designee to establish the academic salary scales. The President shall inform The Regents of any general scale increase required to maintain the University’s relative salary position and the additional sum required for increased contributions to the University of California Retirement System that are necessitated by the proposed general scale increase.

b. The percentage of general scale increase for each rank and salary level is determined by the President or the President’s designee.

c. General scale increases are typically not made retroactive.

d. Health Sciences Compensation Plan faculty may receive an increase in salary as the result of a renegotiation of the “Y” component per APM - 670-18-c-1.
Merit Increases

Merit increases for academic appointees are based on academic attainment, experience, and performance; they are not automatic. Merit increases may be made only within the limits of available funds.

a. Responsibility

Responsibility for recommending merit increases for academic appointees rests with the Department Chair or comparable administrative authority. The Chancellor is responsible for establishing procedures, in accordance with policy, for the initiation, review and approval of merit increases for appointees in each academic title or title series.

b. Effective Date

The effective date for merit increases is July 1 of each year except that:

i. Chancellors are authorized to approve merit increases to be effective at any date during the year; and

ii. The University’s annual fiscal operating budget year begins July 1. The University’s budget is adopted after the State’s budget is signed, which may occur after July 1. For merits and promotions that are effective on July 1, the date of payment of associated salary increases depends on when the University’s budget is adopted for the fiscal year. In the event the University’s budget is not adopted in time to meet applicable payroll deadlines for a July 1 effective date, there may be a delay in payment of salary increases until the University’s budget is adopted. Under these circumstances, salary increases will be paid as soon as possible, with retroactive payment to the effective date of the merit or promotion.
c. **Normal Periods of Service at Salary Steps**

Normal periods of service are assigned to the various salary steps in the published academic salary scales. Although these indicate the usual intervals between advancements, they do not preclude more rapid advancement in the case of exceptional merit or slower advancement when warranted.

i. Two or more quarters of service at one-half time or more by an academic-year appointee in any one academic year (from the beginning of the fall quarter to the end of the spring quarter, as set forth in the academic calendar) count as one full year of a normal period of service. Less than two quarters at one-half time or more in any one academic year does not count.

ii. One and one-half semesters of service at one-half time or more by an academic-year appointee in any one academic year (from the beginning of the fall semester to the end of the spring semester) count as one full year of a normal period of service. Less than one and one-half semesters at one-half time or more in any one academic year does not count.

iii. Six months or more of service at one-half time or more by a fiscal-year appointee in any one fiscal year (July 1 to June 30) count as one full year of a normal period of service. Less than six months of service at one-half time or more in any one fiscal year does not count.

610-24 **Authority**

a. **General Scale Increases**

The President has authority to establish general scale increases.
b. **Merit Increases**

Chancellors are authorized to approve a merit increase, in accordance with established salary policies, for any academic appointee under their jurisdiction except for a merit increase resulting in a salary exceeding the Indexed Compensation Level (ICL) threshold, which is subject to approval by the Provost.

610-96 **Reports**

The Chancellor shall maintain records of salary increase actions and submit reports to the President or the President’s designee as needed.
620-0 **Policy**

This policy provides guidance on the use of off-scale salaries. In order to preserve the significance and value of the salary scales, salaries should be on-scale to the greatest extent feasible. However, when justified, appointment or advancement to a position with an off-scale salary may be approved in situations when necessary to meet conditions described below.

620-4 **Definition**

A salary for an appointee at a certain rank and step is designated off-scale if the salary is above that associated with the given rank and step in the published salary scale for the relevant title series.

620-14 **Eligibility**

All academic titles except student titles may be considered eligible for off-scale salary. For academic appointees covered by a Memorandum of Understanding (MOU), eligibility for off-scale salaries is determined by the terms of the MOU. Generally, off-scale salaries are not awarded to Health Sciences Compensation Plan faculty.

An off-scale salary may be used:

(1) To meet competitive conditions;

(2) With promotion from one rank to a higher rank in the same title series or in lieu of that promotion;
(3) With or in lieu of a within-scale merit increase in salary; and/or

(4) As the consequence of a general scale adjustment applied to an off-scale salary.

620-18 **Effect of a General Scale Adjustment on Off-Scale Salaries**

a. Except as noted below, any academic appointee with an off-scale salary within established salary scales at the time of a general scale adjustment will receive the same dollar increase in salary as those of the same title, rank and step on the regular salary scale in question. This rule will be followed unless the Chancellor gives explicit directions to the contrary.

b. When a person is appointed or advanced to an off-scale salary, the Chancellor may specify that the salary is to be unaffected by the first concurrent or subsequent range adjustment. In such case the affected academic appointee shall be notified in writing of this stipulation by the Chancellor and the stipulation noted on the appropriate campus approval document.

620-24 **Authority**

The Chancellor has the authority to approve off-scale salaries up to and including the Indexed Compensation Level (ICL) threshold. Authority rests with the Provost and Executive Vice President—Academic Affairs to approve salaries beyond the compensation threshold.

620-80 **Campus Procedures**

The Chancellor or the Executive Vice Chancellor and Provost, in consultation with the appropriate committee(s) of the division Academic Senate, shall develop local procedures for implementation of the off-scale policy. Procedures shall include the
criteria for appointment or advancement to a position with an off-scale salary, as well as for an appointee’s continuation with an off-scale salary or return to an on-scale salary. When an individual is placed on an off-scale salary, the appointee must be notified of this action and any limitation.
633-0  **Policy**

In recognition of added administrative responsibility, administrative stipends may be paid to eligible academic appointees. Additional administrative responsibility is distinct from additional service, which is to be recognized through the academic review process.

Administrative stipends are considered covered compensation for purposes of the UC Retirement Program.

633-14  **Eligibility**

Academic appointees in the following titles are eligible for administrative stipends in accordance with APM - 240, - 241, - 246, and - 360. Chancellors may designate additional eligible titles as appropriate.

Dean
Associate Dean
Assistant Dean
College Provost
Vice Provost
Associate Vice Provost
Vice Chancellor
Associate Vice Chancellor
Department Chair
Department Vice Chair
Director

Associate Director

Academic Assistant to the Chancellor/Vice Chancellor

Faculty Assistant to the Chancellor, Vice Chancellor or Dean

Librarian-Manager/Supervisor

Interim or Acting appointees in the titles listed above

633-16 Restrictions

This policy does not apply to non-Senate academic appointees covered by a Memorandum of Understanding (MOU).

633-80 Procedures

a. Each Chancellor shall develop local guidelines for the establishment of administrative stipends based on such criteria as budgeted department funds, the size and complexity of the unit, the number of FTE supervised and the relevant administrative experience and academic leadership of the appointee.

b. When an administrative stipend is applied, it shall be distinguished and recorded separately from the academic appointment(s) with the use of a specific position title code for administrative stipends.
661-0  **Policy**

Academic appointees may receive additional compensation for Summer Session teaching in accordance with policy. Teaching at a University campus other than the home campus requires pre-approval from the home campus.

661-14  **Eligibility**

Only the following academic appointees may receive additional compensation for Summer Session teaching:

a. Academic-year appointees

b. Appointees holding split appointments partly on an academic-year basis and partly on a fiscal-year basis, provided the fiscal-year portion of the appointment is less than half-time during the Summer Session period.

c. Full-time fiscal-year faculty appointees who relinquish vacation days equal to one day for every six contact or podium hours with students.

d. Part-time fiscal-year faculty may request a temporary increase in their percentage of appointment for Summer Session teaching.

e. Non-faculty fiscal-year appointees must request the use of vacation days or request a temporary percentage reduction in their current appointment.

661-16  **Restrictions**

a. Compensation for academic-year appointees may not exceed one-ninth per month of the annual salary, and may not exceed three-ninths during the “off-duty” summer period.
b. Compensation for fiscal-year appointees may not exceed one-twelfth per month of the annual salary.¹

c. These additional compensation maximums are cumulative of all concurrent sources of additional University compensation.

661-18 Salary

a. Summer Session teaching
   The amount of pay is negotiated based on the teaching load. Each campus shall determine the formula by which pay is calculated.

b. Additional compensation is based on the salary rate in effect June 30th of the calendar year in which Summer Session begins.

661-24 Authority

Each Chancellor is authorized to approve additional compensation for Summer Session teaching for eligible academic appointees.

¹ This is effective for appointments made July 1, 2013 or later. Those appointed prior to July 1, 2013 to the Professor, Astronomer or Agronomist series are eligible for payments up to one-eleventh of the annual salary of a fiscal-year appointee.
662-0 Policy
Full-time faculty members may receive additional compensation after obtaining
pre-approval from the faculty member’s immediate supervisor for specific additional
University of California teaching activities under certain conditions. For information
regarding Additional Compensation/Summer Session, see APM - 661 and for information
regarding Additional Compensation/University Extension (UNEX), see APM - 663.

662-2 Purpose
Compensation for additional teaching is a privilege that must not interfere with normal
University duties. As a prerequisite for any additional compensation under this policy,
the faculty member must carry the full approved teaching load for his or her respective
department, even if he or she normally teaches less. Department chairs must take special
care to insure that faculty, especially assistant professors, are able to meet expectations
for all their responsibilities in teaching, research/creative work, and University and public
service.

This policy should be read in conjunction with APM - 025, Conflict of Commitment and
Outside Activities of Faculty Members.

662-8 Additional Teaching Eligible for Additional Compensation
During academic or fiscal year appointments, two kinds of teaching are eligible for
additional compensation, when beyond the assigned teaching load:
a. Teaching of matriculated students whether in self-supporting University
degree or UNEX courses and programs

b. Teaching of non-matriculated students, including those in UNEX courses and
programs (see APM – 663) and other continuing education courses and
programs run by the University.

662-9 Additional Teaching During Summer Period (excludes teaching in Summer Session)

a. During the summer, or equivalent term if on a year-round schedule, a full-time
academic-year faculty member may be paid up to one-third of his or her nine-month
salary rate for additional teaching as defined in this policy. If the faculty member is
receiving additional compensation from other University sources during the summer
or equivalent term, he or she may not receive more than three-ninths for all such
services combined.

b. During the summer period or equivalent term when a faculty member earns up to
three-ninths from such sources as research grants and Summer Session teaching, a
faculty member also may engage in additional teaching defined in APM policy up to
a limit of one day per week inclusive of all outside professional activities performed
during the period in which additional University compensation is received (See
APM - 025).

c. A full-time fiscal year faculty member may use accrued vacation leave in order to
receive compensation for additional teaching as defined in this policy up to a limit of
one-twelfth\(^1\) of the annual salary. Fiscal year faculty may not earn University compensation above the one-twelfth limit. Fiscal year faculty may also use APM - 025 days to increase the amount of time they may spend on additional teaching given appropriate local approval.

662-14 **Eligibility**

Faculty titles covered by this policy are listed in APM - 110-4(15). Faculty participating in the Health Sciences Compensation Plan are subject to the Plan and local campus Implementing Procedures regarding income from additional University teaching. See APM – 670, Health Sciences Compensation Plan for additional information on the Plan.

662-16 **Restrictions**

Teaching activities ineligible for additional compensation are:

a. Any course assigned by the department chair as part of the faculty member’s assigned teaching load. For example, a faculty member may not receive additional compensation for teaching:

i. A course in a self-supporting degree program (funds from the self-supporting degree program would be used to pay for this portion of the faculty member’s assigned teaching load);

ii. Extra teaching duties assigned in place of research; or

iii. Courses taught in a variety of less common modes or locations (e.g., online, off-site, at another campus).

\(^{1}\)This is effective for appointments made July 1, 2013 or later. Those appointed prior to July 1, 2013 to the Professor, Astronomer or Agronomist series are eligible for payments of up to one-eleventh of the annual salary of a fiscal year appointee.
b. Extra courses taken voluntarily. These are courses that do not fit into the categories listed in APM - 662-8.

662-17 Limitations on Time

The following time limits apply:

a. Time spent on additional teaching during the academic year or when receiving University compensation or University summer compensation will be deducted from the time limits on outside activities described in APM - 025. To calculate time under the provisions of APM - 025, teaching activities consist of preparation time, contact teaching hours, office hours, grading, supervision of Teaching Assistants, etc.

b. The following rules must be used for calculating time under APM - 025, regardless of how much time is actually spent:

i. For traditional or hybrid in-person instructional formats (lectures, discussions), every six contact or “podium” hours spent with students equals one day.

ii. For fully online courses, hours will be determined by course units under the assumption that campuses will ensure online courses provide unit workloads equivalent to the same or similar in-person course formats according to Senate Regulation 760. Each unit for an online course will be assumed equivalent to one “podium” hour per week. Thus, a three-unit lecture/discussion/laboratory course would count for three hours each week, or the equivalent of one day every two weeks. In some instances, the effort may be defined differently, with the Chancellor’s approval (see section iii).
iii. The Chancellor or Chancellor’s designee may grant an exception to the general rules of calculating time for a specific course or for a category of courses such as field trips and courses with electronic or online delivery components.

c. Additional teaching hours count against the limits applicable at the time the teaching takes place. For example, teaching done during the academic year must be counted toward the limits that apply during the academic year and may not be paid on a summer-ninths basis. For courses that span the academic year and the beginning or end of the summer or off-duty period, the time shall be allocated in proportion to when the work was performed.

d. Exceptions to the time limit are not allowed for faculty during any period in which they receive part or all of their salary directly charged to contracts and grants.

662-24 Authority

The Chancellor may grant exceptions to the time limits under any of the following conditions:

a. To specific individuals who wish to teach beyond the limits, or to a specific additional teaching program, such as a self-supporting degree program, which would then apply to all individuals teaching in that program. Any individual who teaches beyond the time limits assumes full responsibility for ensuring that full-time effort is devoted to regular University duties.

b. When course assignments are reduced due to other University service, such as serving as department chair.
c. The Chancellor also has the authority to make exceptions to the general time calculation rule. See APM - 662-17 on Limitations on Time.

d. Requests for other exceptions to policy, such as payment for courses taught off-site or in University-sponsored for-profit programs, shall be recommended for approval by the Chancellor to the Provost and Executive Vice President—Academic Affairs.

e. Exceptions shall be made in writing prior to the conduct of additional teaching.
663-0  **Policy**

Academic appointees, including University Extension (UNEX) appointees, may receive additional compensation for UNEX teaching in accordance with this policy.

663-10  **Criteria**

UNEX academic appointees may receive additional compensation for UNEX teaching provided the following requirements are met (see APM - 663-18 for restrictions on payment):

a. The appointee receiving additional compensation has no direct or delegated financial authority or academic responsibility for directing or organizing the program in which he or she is teaching.

b. The Dean approves any compensation arrangement in advance. The Dean or the Dean’s designee will assure that services rendered are in addition to and do not conflict with the employee’s primary professional responsibilities.

663-14  **Eligibility**

a. UNEX appointees whose primary appointment is in UNEX as Continuing Educators and Academic Coordinators.

b. Faculty titles covered by this policy as listed in APM - 110-4(15).

c. Full-time Lecturers, Associates and Acting Instructors are eligible to teach one course in UNEX during the academic year.

d. To ensure that the University employment of one enrolled as a student does not interfere with his/her work as a student and his/her timely progress toward a degree, the appointments of Teaching Assistants, Teaching Fellows and
Graduate Student Researchers are limited to half-time inclusive of all appointments during the academic year.

e. Teaching Assistant, Teaching Fellow, Associate and Acting Instructor and Graduate Student Researcher titles may teach for UNEX only during the summer, provided that this work does not interfere with the performance of duties in the graduate student academic title.

f. Medical Residents may be employed in Medical Extension programs as authorized by the Chancellor with the understanding that (1) the authorization may not be extended to Interns, (2) each Resident may work on only one course per term and (3) all Resident appointments to Medical Extension must have the prior approval of the Dean of the School of Medicine and Dean of UNEX.

g. Other academic appointees provided the work is performed exclusively outside the appointees’ regular work hours or if they have received prior approval from their supervisor.

h. Faculty participating in the Health Sciences Compensation Plan are subject to the Plan and local campus Implementing Procedures regarding income from additional University teaching.

i. Prior approval from the home campus/department is required when employing faculty from other UC campuses.
663-16 **Restrictions**

A UNEX appointee may not receive additional compensation for teaching that is part of the individual’s regular duties. If teaching assignments are a customary part of the individual’s duties, that teaching load is considered as part of the appointee’s regular job.

663-18 **Salary**

a. UNEX Appointees
   i. The rate of pay will be consistent with pay earned by others for the same instructional services. Additional compensation may be provided for teaching that is occasional and not regular.
   ii. There is no dollar or percentage limitation on the amount that may be earned for teaching because it is anticipated that a UNEX appointee will teach a course only on an occasional basis and not regularly. “Teaching done regularly” is defined as teaching one or more courses every year.
   iii. In no event should such compensation exceed 20 percent of the annual salary rate in one year’s time.

b. Academic Year Faculty
   i. When the UNEX teaching or related work is performed during the summer or off-duty term, a full-time academic year faculty member may be paid up to one-third of his or her nine-month salary rate for performing work in UNEX programs.
ii. When the faculty member is receiving payment from other University sources during the summer or off-duty term, he or she may not receive more than three-ninths for all such services combined.

iii. In any summer period or off-duty term, when a faculty member earns up to three-ninths in University summer salary, a faculty member may also engage in additional work in UNEX programs up to a limit of one day per week inclusive of all outside professional activities performed during the period in which University compensation is received. (See APM - 025, Conflict of Commitment and Outside Professional Activities of Faculty Members.)

c. Fiscal Year Faculty

A full-time fiscal year faculty member may use accrued vacation leave in order to receive compensation for UNEX teaching and related work up to a limit of one-twelfth the annual salary. Fiscal year faculty may not earn University compensation above the one-twelfth limit. Fiscal year faculty may also use APM - 025 days to increase the amount of time they may spend on additional teaching given appropriate local approval.

d. Academic Appointees

Other full-time academic appointees may engage in UNEX teaching provided the work is performed exclusively outside the appointee’s regular work hours or if they have received approval from the department chair.

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1 This is effective for appointments made July 1, 2013 or later. Those appointed prior to July 1, 2013 to the Professor, Astronomer or Agronomist series are eligible for payments of up to one-eleventh of the annual salary of a fiscal year appointee.
e. Reporting Under APM - 025

Faculty covered by APM - 025 must report UNEX teaching or related work as a Category II activity when it is performed during the service period.
Policy

If not regularly engaged on the project concerned, a member of the faculty (as defined in APM - 110-4-15) may receive additional compensation for occasional consultant services on projects conducted under the auspices of the University. Service on projects conducted under the auspices of the University is an activity separate from consulting as defined under APM - 025. If the project is financed by extramural funds, the grant or contract should be examined to determine whether it prohibits such compensation. (See also APM - 380 and APM - 600-14-a.)

Amount

Faculty consultants are paid at a negotiated rate which is approved by the Chancellor, Lawrence Berkeley National Laboratory Director or equivalent official at the campus or UC location where the consulting is done. The maximum amount per day which is permitted is the daily rate plus an additional 30 percent which may be paid in consideration of the fact that there are no benefits for such services.

The daily rate for academic-year appointees is determined by dividing the appointee’s total nine-month salary by 171. For fiscal-year appointees, the daily rate is determined by dividing the total annual/negotiated salary by 236.

Authority

a. Authority to approve receipt of additional compensation for services as a faculty consultant rests with the Chancellor of the faculty member’s home campus.
b. The official at the location where the consulting is performed must notify the Chancellor at the faculty member’s home campus in advance of the activity being performed so that the approval to pay the faculty member is obtained prior to the service being performed.
Policy

Academic appointees may receive honoraria for lectures and similar services in accordance with this policy. For additional compensation involving lectures and similar services under the auspices of University Extension, see APM - 663.

Reimbursement of Expenses

An academic appointee may be reimbursed for allowable expenses\(^1\) incurred in presenting lectures and similar public appearances on campuses of the University other than the campus or campuses on which the appointee normally serves.

Definition

An honorarium is defined as a payment provided to an academic appointee for services for which fees are not legally or traditionally required. For academic appointees, services rendered may be related to recognized University duties, but the service falls outside normal academic responsibilities due to the nature of the work or where it is performed (e.g., delivering an occasional lecture at a campus other than the home campus). Honoraria, for the purpose of this policy, is defined as payment by the University to an academic appointee for occasional lectures and similar public appearances beyond normal academic responsibilities to the University. Honoraria may be paid only under the conditions described in Section 666-8 below.

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1 See Business and Finance Bulletin G-28 for guidelines related to reimbursement of business and travel expenses.
666-8 Types of Honoraria

a. Seminars, Lectures or Campus-Sponsored Program Reviews
   Academic appointees may receive honoraria for seminars, lectures or UC-sponsored program reviews when these activities occur on any campus or location of the University, including the campus or location at which the appointee normally serves.

b. University-Sponsored Conferences, Panels and Concerts/Creative Works
   Academic appointees may receive honoraria for concerts or other creative work or for University-sponsored conferences and panels when these activities occur on any campus or location of the University, including the campus or location at which the appointee normally serves.

666-16 Restrictions

No academic appointee may receive additional compensation for any activity relating to departmental personnel actions or ad hoc committees, service on thesis committees or service on campus or systemwide committees (including systemwide program review committees), except as stated in APM - 666-8.

666-18 Amount

a. There is no set dollar amount for honoraria as defined in this policy. The honorarium may be subject to negotiation in each case but may not exceed an amount stipulated periodically by the Provost and Executive Vice President—Academic Affairs.

b. Total annual additional compensation for lectures or similar services as
described in APM - 666-8-a and -b may not exceed 10 percent of the faculty member’s annual base salary.

666-22 **Funds**

Compensation to full-time faculty for lectures or similar services as described in APM - 666-8-a and -b may not be made from State funds, but is permitted from gifts, endowments, contracts and grants with specifically budgeted provisions for such honoraria, Chancellor’s discretionary funds or similar sources.

666-24 **Authority**

a. Authority to approve honoraria as defined in this policy is delegated to each Chancellor.

b. In cases where the activity related to the honoraria occurs on a campus other than the campus or campuses on which the appointee normally serves, the Chancellor of the sponsoring campus must approve and notify the home campus of the activity in advance of the activity being performed. The home campus must authorize that the academic appointee is eligible to receive the honorarium prior to payment.

c. When the activity related to the honoraria occurs under the sponsorship of a major Department of Energy Laboratory, the home campus must be notified of any honoraria prior to payment.

d. It is the responsibility of the home campus to monitor the total annual compensation paid for these services in accordance with APM - 666-18-b.
Policy

Within the limits established in Section 600-14-b, an academic appointee may receive additional compensation for services rendered in connection with extramurally funded research projects undertaken by the University, unless the terms of the appointee’s University appointment prohibits acceptance of additional compensation.

Restrictions

Agency (e.g., NIH, NSF) maximum salary caps must be observed and State funds may not be used to pay for any cap gaps other than the Health Sciences Compensation Plan Scale 0 that may result from such maximum amounts.

Rate

Additional compensation for extramurally funded research is computed at a rate equivalent to the appointee’s total negotiated salary effective at the time the research is conducted. See APM - 600, Appendix 1, for guidelines on calculating the rate of compensation.
680-0 **Policy**
This policy provides instruction on the conversion of salary for faculty who transfer from a campus to the Lawrence Berkeley National Laboratory (Laboratory), or when a faculty member holds a concurrent appointment at a campus and at the Laboratory simultaneously.

680-14 **Eligibility**

a. This policy applies to faculty who transfer permanently to the Laboratory on either a full-time or part-time basis.

b. This policy applies to individuals whose primary appointment remains with a campus and who are eligible to earn additional compensation through the Laboratory for services not directly related to their regular academic year duties.

680-16 **Restrictions/Limitations**
No contract between the University of California and the Laboratory shall include a provision for a higher rate of salary.

680-18 **Salary Rate**
a. The faculty member’s academic year salary, excluding administrative stipends and any other additional compensation, shall be the basis on which the fiscal year salary will be calculated and paid by the Laboratory.
b. If the faculty member’s regular salary is paid on an academic year basis, the Laboratory will convert the salary to a fiscal year basis. The calculation is made by increasing the academic year salary by 16 percent and rounding to the nearest $100.

c. The faculty member’s fiscal year salary paid by the Laboratory is covered compensation for purposes of the University of California Retirement Plan.

d. Faculty paid by a campus on an academic year basis may be employed at the Laboratory during the summer with additional compensation for such service paid at the rate of one-ninth of the academic year salary for each month of summer service, not to exceed three months.

e. Faculty paid by the Laboratory on a part-time basis during the academic year shall be paid at the rate of one-twelfth of an academic year salary.

f. Faculty paid by a campus on a fiscal year basis may be employed at the Laboratory and compensated at their fiscal-year salary rate. In addition, the Chancellor may approve payment of one-twelfth\(^1\) of the annual salary of a fiscal-year appointee as additional compensation for work performed during his/her vacation. An appropriate number of accrued vacation days must be deducted.

g. Compensation paid to faculty who accept employment at the Laboratory will be made in accordance with established University policies.

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\(^1\) This is effective for appointments made July 1, 2013 or later. Those appointed prior to July 1, 2013 to the Professor, Astronomer, or Agronomist series are eligible for payments of up to one-eleventh of the annual salary of a fiscal-year appointee.
680-20 **Terms/Conditions of Employment**

a. Faculty members transferring permanently from a campus to the Laboratory shall permanently vacate the portion of the campus appointment that is transferred to the Laboratory. This means resignation from the faculty appointment or acceptance of the appropriate permanent reduction in the percentage of the appointment.

b. Temporary appointments to the Laboratory on either a full-time or part-time basis may be established on an annual basis through a Memorandum of Understanding between the Laboratory and the campus. Such appointments should be made to correspond with the academic year.

680-24 **Authority**

Such appointments or transfers require the Chancellor’s approval and the concurrence of the Laboratory Director or Laboratory Director’s designee.
FOR THE ORAL EXAMINATION:

"Upon the student's satisfactory completion of all preliminary requirements set by the department or graduate group of his/her major field of study and by the Graduate Council, including the maintenance of an average of at least three grade points per unit in all upper division and graduate courses related to his doctoral program and elected during his/her residence as a graduate student, the department or graduate group shall nominate a qualifying committee to the Graduate Council for appointment. This committee consists of not fewer than five members, at least one of whom shall be from a department or graduate group other than that of the student's major. The anticipated principal director of the student’s research shall normally be a member of the committee."

"Before he/she is admitted to candidacy, the student must pass a series of qualifying examinations, both written and oral. The written examination may be administered by the department or graduate group but the oral examination must be conducted and reported to the Dean of the Graduate Division by the student's qualifying committee. The qualifying oral is not open to the general public but members of the Academic Senate may attend."

“The oral examination must be administered in its entirety on one date. This date is to be communicated in writing to the Graduate Division at least two weeks (preferably one month) before the examination. Any changes in this date or the composition of this committee must be communicated in writing to the Graduate Division not less than 24 hours before the oral examination is held. The student's major advisor(s) must be physically present at the oral examination. In exceptional circumstances, determined in advance of examination scheduling, one remaining member of the examining committee may participate via video (e.g., Skype) or telephone conferencing. Exceptional circumstances may include (but are not limited to): travel for research, or permanent residence, outside of the United States; participation in academic or research travel within the United States that cannot be shifted to accommodate the intended date of the oral examination or defense; hospitalization or other medical conditions that make it impossible to be physically present. All members of the qualifying committee must be present for the entire oral examination period as well as the entire deliberation period. Faculty may not participate virtually. The qualifying oral examination is not open to the general public but members of the Academic Senate may attend. There are no conditional passes.”

“The findings of the committee must be reported within 48 hours to the Graduate Council through the Graduate Division on Ph.D. Form 3, "Report of Qualifying Examination". A unanimous committee report for or against approval will be accepted for the Graduate Council by the Dean of the Graduate Division. If a student has failed the qualifying examination, the committee should make a recommendation for or against a second examination, ordinarily not to be given until at least three months have elapsed. The date of the second oral examination should be communicated
to the Graduate Division in writing at least two weeks prior to its occurrence. **A third examination is not permitted.** If there is a divided vote, the committee shall first make every effort to arrive at unanimity. Failing unanimity, a committee report that contains only one negative vote will be deemed a pass; a committee report that contains two or more negative votes will be considered a failure. When the vote is split, the committee or any member of the committee may petition (in writing) the Graduate Council to consider a reversal of the judgment. In that event, the Administrative Committee of the Graduate Council will make the final determination whether the student has passed. In such cases no statement shall be made to the student regarding passing or failing the examination until the final determination has been made. The student shall be informed within 48 hours that the vote is split and the Graduate Council will make the final determination.”

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**FOR THE DISSERTATION DEFENSE:**

“A dissertation on a subject chosen by the candidate, bearing on his/her principal study and demonstrating his/her ability to make independent investigation, is required of every candidate for the degree. In its preparation, the candidate is guided by a dissertation committee, nominated by the candidate’s department or graduate group to the Graduate Council for appointment. This committee is composed of not fewer than three members. The membership may be the same as the qualifying committee, except that the principal director of the candidate’s research shall be Chair of the committee. The committee guides the candidate in his/her research and passes upon the merits of his/her dissertation and may conduct a final or oral examination. **If an oral examination is held, the Chair of the committee must be physically present. In exceptional circumstances, determined in advance of examination scheduling, ONE remaining member of the examining committee may participate via video (e.g., Skype) or telephone conferencing. Exceptional circumstances may include (but are not limited to): travel for research, or permanent residence, outside of the United States; participation in academic or research travel within the United States that cannot be shifted to accommodate the intended date of the oral examination or defense; hospitalization or other medical conditions that make it impossible to be physically present.**”

Linda Scott also provided the following information about existing practice: What the Council then approved was “for dissertation defenses, on an emergency basis, a video conference might be acceptable.” We [i.e., Grad Division] took this last paragraph to mean approval but the Dean would have to review the circumstances and approve before it was done.

In the course of getting the above rules from Linda Scott, the following additional information came to light. Perhaps at a future date, Graduate Council should consider consolidating in a single document the existing rules (already approved by Council) that govern faculty with respect to examination and dissertation committees:

In May of 2010 this was approved by the Graduate Council: "Dean Childers presented a change in policy regarding the defense of a dissertation as well as a deadline for completion of the dissertation to the Council. The change entails allowing faculty to indicate that a student has passed the defense of their dissertation with “revisions.” Should the committee chose this option, the student would be notified that they have 120 days from the defense of the dissertation to successfully complete revisions and file the dissertation. The Council unanimously approved this change in policy.”

This was approved in February 2012: To avoid conflicts of interest or the appearance of a conflict of interest, when domestic partners or spouses are a majority of the faculty overseeing an exam or dissertation, another faculty member will be added to that committee.

There was also the whole matter about who could chair a dissertation committee which was discussed in January 2012. The topic was whether cooperative extension or adjunct faculty could be chairs of the dissertation committee. The Graduate Council said that they could if the Graduate Dean approved.

In November 2008 the Graduate Council voted unanimously that the final defense must be passed unanimously.
March 15, 2013

To: Connie Nugent, Professor of Cell Biology and Neuroscience and Graduate Council Chair

CC: Joseph Childers, Dean of the Graduate Division and Professor of English; Sarah Miller, Academic Senate Staff Support; Nosang Myung, Chair of Chemical and Environmental Engineering

From: Sharon Walker, Associate Professor of Chemical and Environmental Engineering and Graduate Advisor

Re: Response to Graduate Council’s Findings and Recommendations

The Department of Chemical and Environmental Engineering (CEE) would like to respectively submit our response to the Graduate Council’s comments from 2010 on our graduate program review. I apologize for the delay in this response. The review of our graduate program and initial response by our Chair was done under previously leadership (both Department Chair and Graduate Advisor). Our current Chair, Nosang Myung, and I only learned of this outstanding report and response recently. We hope the materials provided below meet your needs. I am happy to provide any further information requested by the Graduate Council.

Below are the findings and recommendations of Grad Council (paraphrased) and our responses. We are happy to respond further to any of these issues that are identified.

1. Develop and implement a five-year strategic plan including faculty growth and consideration of curriculum and enhanced visibility/ranking.

Our department meets annually at a faculty retreat during which we have length strategic planning discussions. Our department has a unified and clear plan for hiring and growth in areas we’ve determined to be high profile and competitive. We’ve also carefully accounted for needs to meet undergraduate and graduate curricular needs (ie. ABET) in this plan. The most recent strategic plan was provided to our Dean earlier this month as part of the Chancellor’s Strategic Plan.

2. Engage the Dean in discussions on CEE hiring.

In the last two years, the CEE department has made six new hires: Phillip Christopher, Xin Ge, Juchen Guo, David Jassby, Haizhou Liu, and Ian Wheeldon. Of these six, two are environmental engineers, two are chemical engineers and two are joint appointments with the material science and engineering (MSE) program.
3. Develop and implement a procedure for allocating access to space and instrumentation that gives adequate weight to funded research and consideration for junior faculty.

Our department’s allocated space is about the same from when this review was done. The new faculty took over vacated faculty space from faculty separations. Juchen Guo gained new space in MSE, however it is not officially CEE space. BCOE is still following the 1,000 square feet of lab space per new junior faculty member.

4. Review curriculum to ensure adequate course offerings in both environmental and chemical engineering.

We are now offering electives in both chemical and engineering. These are now feasible with a growing faculty and the staff to teach them. The electives offered annually for environmental engineering (the previous shortcoming) are CEE 233: Advanced Air Pollution Control and Engineering, CEE 241 Water Quality and CEE 232 Green Engineering.

5. Develop a graduate student handbook

We have a Graduate Student Handbook and it is updated annually. The handbook is readily available as a download online through the CEE website. Incoming students are also given copies of the handbook during the fall CEE orientation. The website to download handbook from: http://www.cee.ucr.edu/graduate/Resources.html. Changes to the handbook over the past two years (since the program review) are as follows:

Preliminary Exam
   a. The most recent change to the preliminary exams was to allow the department to excuse a student from the program if they fail three sections of the written exam.
   b. Students have a required oral portion of the exam if they fail a written section.
   c. As of the 2012 preliminary exam, committee members have changed due to additional faculty members.
   d. One way to address confusion regarding the exam could be to have sample questions circulated.

Research Ethics/Professional Development
   e. To address a requirement from the UCR Graduate Division, all programs including CEE now have a Professional Development requirement built into the program. CEE has added this in three ways: Professional Development seminars, student meetings with visiting seminar speakers, and a Grant Writing/Proposal workshop given by the Graduate Advisor, Dr. Sharon Walker.

6. Increase recruitment of high quality domestic graduate students.
The CEE department has made a concerted effort to improve our recruitment of high quality students. Our efforts now include a faculty-staffed recruiting booth at the American Institute of Chemical Engineering (AIChE) annual conference and talks at regional institutions (ie. Cal Poly Pomona, Cal Baptist, Cal State Long Beach). These efforts appear to be improving the quality of our applicants and our incoming class of SIRed students. This is evident from the data in the table below, which compares the domestic student profile of our 2009 and 2012 incoming classes:

<table>
<thead>
<tr>
<th>Ph.D. and M.S.</th>
<th>2012</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA Offered</td>
<td>3.52</td>
<td>3.38</td>
</tr>
<tr>
<td>GPA Accepted</td>
<td>3.52</td>
<td>3.28</td>
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</table>

Over the past four years our department has been having a steady increase in the number of students applying to our graduate program. However, we have also found it much more difficult to predict the numbers of students who will accept our offers. As can be seen from the table below, our previous assumption of 50% SIR rate no longer applies. We attribute this to our graduate program now attracting applications from a higher tier student that is receiving acceptance offers from multiple, high quality programs. We are now competing in a different “league”. Hence, we now have to work harder to recruit the students we’ve accepted. We do this through a combination of new mechanisms (personal correspondence with faculty member in area of interest, the graduate advisor, and a current graduate student). We also commenced working with the Hobson’s Connect program for the recruitment/admissions cycle for the 2013 class.

<table>
<thead>
<tr>
<th>Applications</th>
<th>Admits</th>
<th>SIR Yes</th>
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<td>186</td>
<td>69</td>
</tr>
<tr>
<td>Fall 2013</td>
<td>208</td>
<td>58</td>
</tr>
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</table>

Updated graduate program statistics – From inception to Fall 2012: Grad program enrolled 232 students and granted 117 terminal degrees (41 M.S., 76 Ph.D.). Since Fall 2009, 15 students transferred to other engineering programs and 4 students withdrew from the program. Of note, one of the students that transferred and one that previously withdrew are both coming back to complete their degrees in Spring 2013.
Department of Chemical and Environmental Engineering
3 Year Plan (FY 2013-2014 to 2015-2016)

CEE department lies primarily in its young, dynamic and active faculty. The CEE faculty are amongst the most active in the campus in research output and seeking research funding. During FY 11-12, CEE faculty members published over 5 peer-reviewed publications per faculty, and received approximately $7.8 million as new contracts and grants. We are committed to becoming one of the top 25 programs in both Chemical and in Environmental Engineering over the next three years. This will be accomplished by increasing faculty size, increasing research visibility and impact, and achieve a wider recognition of the quality of our programs.

The CEE department holds excellent perspectives for targeted growth and rapidly reaching high impact. Unlike other engineering disciplines, successful chemical and environmental programs do not require very large and costly departments. Most very successful chemical or environmental engineering departments have fewer than 30 faculty, and infrastructure is relatively modest compared to e.g., mechanical engineering departments. Several of these successful CHE/CEE departments (e.g., UCSB) are relatively young and have rapidly risen to the top tier after selected cluster hires were made, and appropriate resources were made available. Hence, the CEE department feels that it is ideally positioned to follow a similar path and achieve its vision of reaching the top 25 in its discipline.

While the CEE faculty are committed to achieving the targets for elements directly in their control, the department needs commitment of resources and laboratory space from the administration for future hire, for meeting increasing instructional demands, and for infrastructure maintenance and development. Of particular importance to achieving its goals, the department will need to add 9 new outstanding faculty in the identified focus research areas.

Based on the above stated vision, the CEE faculty have set the following objectives for the next five years.

1. Increase impact of CEE department research, improve visibility and perception of CEE department among peer institutions

Important measures of national rankings are based on research impact, size of graduate program, number of Ph.D. graduated, number of peer-reviewed publications per faculty, annual research expenditure and peer perception. The steady-state goals on a per faculty basis are approx. 6 graduate students, average of 5-6 peer-reviewed publications per year in high impact factor journals and about $500,000 of research expenditure per year. Additionally, we will continue, and increase our efforts in implementing strategies towards increasing the visibility our research and instructional programs to increase awareness of our excellence by our peers.
The department will like to re-establish its "Distinguished Seminar" series each year in which well-known senior researchers and department chairs from across the United States will visit with the CEE faculty and give a departmental seminar. These interactions will help us a) promote the department (department chairs are the ones conducting peer evaluation for US World and News Report ranking), b) establish or strengthen collaborations, c) help junior faculty who will require letters from senior individuals for tenure, d) recruit graduate students from other institutions, e) create opportunities to recruit already established faculty members, and f) enhance our graduate student experience.

2. Add Outstanding Senior and Junior Faculty to Achieve Critical Mass

In order to develop nationally recognized academic and research programs of distinction, the Chemical and Environmental Engineering faculty will have to grow beyond its current number of 15.5 members. Our goal is to increase the faculty size to 24.5 by the end of 2016, which will bring us closer to the average faculty size in Chemical Engineering Departments (18) and Environmental Engineering Program (10) in Civil Engineering Department in the eight UC peer institutions. The proposed size will also allow making a significant impact in the targeted growth areas. Table 1 outlines the deployment plan for the faculty positions including the estimated IC and needed lab space. Considering that the time required for a junior faculty's research program to mature and receive recognition is on an average about three years, our goal is to fill about 50% of the new lines with senior faculty. This will help to bring instantaneous recognition to the

<table>
<thead>
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<th>Research Area</th>
<th>13-14</th>
<th>14-15</th>
<th>15-16</th>
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</tr>
<tr>
<td>Air Quality</td>
<td>1(^b) (Regional Air Modeling)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Quality</td>
<td>1(^b) (Environmental Biotechnology)</td>
<td>1(^b) (Water Resource Management)</td>
<td></td>
</tr>
<tr>
<td>Advanced Materials</td>
<td>1(^b) (Computational Materials)</td>
<td>1(^b) (Energy Storage and Generation)</td>
<td>1(^b) (Polymer)</td>
</tr>
<tr>
<td>Sustainable Engineering</td>
<td>1(^c)</td>
<td></td>
<td>1(^b) (Molecular Modeling)</td>
</tr>
<tr>
<td>Modeling</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total growth</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Total faculty</td>
<td>18.5</td>
<td>21.5</td>
<td>24.5</td>
</tr>
<tr>
<td>Estimated IC</td>
<td>$2.2 million</td>
<td>$2.2 million</td>
<td>$1.5 million</td>
</tr>
<tr>
<td>Additional laboratory space for new faculty and for expanding research (in sq. feet)(^d)</td>
<td>1800 ft(^2) (wet)</td>
<td>2000 ft(^2) (dry)</td>
<td>3800 ft(^2) (wet)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resource Needed</th>
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<tbody>
<tr>
<td>Additional staff FTE</td>
<td>0.25</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total staff FTE(^e)</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>TA FTEs(^d)</td>
<td>X</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>CHE + ENVE undergraduate students total(^f)</td>
<td>402</td>
<td>420</td>
<td>440</td>
</tr>
<tr>
<td>Graduate students total(^f)</td>
<td>64</td>
<td>80</td>
<td>100</td>
</tr>
<tr>
<td>Instructional and infrastructure equipment needs(^f)</td>
<td>$100,000</td>
<td>$400,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>Funds for distinguished seminar speakers</td>
<td>$10,000</td>
<td>$10,000</td>
<td>$10,000</td>
</tr>
</tbody>
</table>

\(^a\) Junior or senior, to be determined. \(^b\) Junior and \(^c\) Senior. \(^d\) Estimate based on ~1000 sqft for experimental junior faculty, and ~1800 sqft for senior experimentalist. Lower area for theorician. \(^e\) Includes special one
department. Two types of senior candidates will be targeted: early career Associate Professors ("rising stars") and distinguished Professors, NAE caliber members. The projected CEE faculty growth area is based on the campus’s strategic plan, UCR 2020 and their justification is listed below.

- Advances in sustainable energy technologies and global environmental protection have been of strategic importance to the long-term development of UCR, and CEE in particular. Over the past few years, a number of outstanding faculty members have joined the UCR devoting their research on the experimental sides of these strategic areas. Capitalizing on their capabilities and fostering UCR leadership in these foundational fields will require an integration of experimental research with theoretical and computational modeling to study complex materials and chemical processes across multiple time and length scales. CEE seeks to team up with the Materials Science and Engineering (MSE) program and WCERC to hire a few outstanding faculty in computational materials.

- Clean, Safe, and Sustainable Energy is one of the strategic interdisciplinary research areas of UCR. The projected dramatic increase of world energy consumption within the next 50 years, coupled with the growing demand of “greener” energy sources, has brought increasing need to develop efficient, clean, and renewable energy sources. In response to these needs, UC-Riverside has established a new Winston Chung Global Energy Research Center (WCGEC). To become a world leader in clean, safe, and sustainable energy researches, CEE seeks to team up with the Materials Science and Engineering (MSE) program and WCERC to hire a few outstanding faculty in energy storage and generation to build a critical mass in the area.

- Air quality monitoring and control and climate change are one of the strategic research areas of CE-CERT and BCOE. CE-CERT is in the process of expanding its atmospheric chamber laboratory by creating a national research user facility available for use by U.S. industry, universities, other national laboratories, state and local governments, and the scientific community to directly address many of the issues relating particulate matter (PM), ozone, and atmospheric transformations, modeling, and monitoring. The proposed hire will fill a void created by the retirement of Professor Joseph Norbeck. A new hire with expertise in the anticipated needs areas of atmospheric regional modeling (focused on PM), atmospheric PM mechanistic modeling, life cycle energy systems and GHG analysis, and or research instrumentation development will advance discovery and provide important synergies. In addition, this new hire will provide the overall campus with an important technology complement as we pursue a major research initiative in sustainable communities.

- Sustainable water quantity and quality is one of the strategic interdisciplinary research areas of BCOE as well as CNAS and CHASS. As part of the Chancellor’s strategic initiative, all three colleges have committed to supporting this research thrust. Clean, Safe, and Sustainable Energy is a strategic interdisciplinary research area for BCOE. The projected dramatic increase of world energy consumption within the next 50 years, coupled with the growing demand of “greener” energy sources, has brought increasing
need to develop efficient, clean, and renewable energy sources. A new hire with expertise in sustainability, process engineering, process design, and life cycle analysis can bring integrate these core areas to build greater strength and recognition for the overall effort and engage in new funding opportunities. In addition, this new hire will provide the UCR campus with an important technology complement to support major research initiatives in sustainable development and communities.

To accommodate the new hires, additional space should be essentially wet lab space, though a small fraction (e.g. analytical lab, lab space for theoreticians) can be semi-wet lab or dry lab. The additional space for instruction is also required to accommodate supplemental laboratories will be implemented.

3. Stabilize graduate and undergraduate student enrollments, target high achieving students

Our undergraduate curricula are strong and well designed. An excellent measure of the quality of the curricula is the passage rate of students taking the Engineer-In-Training/FE exam, which tests knowledge and competence in engineering science. To-date, over 90% CEE students who have chosen to take this exam have passed. This is significantly better than the average passing rate of 60 to 65% in California. Thus, the curricula and training provide to our CEE undergraduates appear to lay a good foundation for their engineering career. Students from our program have received admission to graduate programs at CALTECH, Stanford, UT Austin, UC Berkeley and UCLA.

In last ten year, the undergraduate enrollment is almost triple in the CEE program. (141 in 2002-2003 to 402 in 2012-2013). The faculty view this increase positively, as it will increase the visibility of the program. However, the increased enrollment will have significant consequences on course offerings, and enrollment will need to be carefully monitored, and controlled if needed. Especially, a significant fraction of the teaching and research equipment are more than twenty years old and requires frequent maintenance and is requiring replacement. Equipment maintenance and replacement is critical if the department is to continue with high quality research programs and attract outstanding new faculty members and graduate students. During last few years, the instrumental equipment fund has been significantly reduced (e.g., $40,000 in FY 09-10, $40,000 in FY 10-11, and $25,000 in FY 11-12). Thus, CEE likes to request maintain and replace instructional and infrastructure equipment. The request budget includes one-time purchase of a liquid-chromatography mass-spectrometer (LC-MS, $220,00) with an add-on module allowing capillary electrophoresis followed by mass-spectrometry (EC-MS, $80,000). This equipment is essentially for research purposes and would be an asset to many faculty members in department. It can also be used for instructional purposes in several laboratory courses. The faculty members view these investments as being a critical part of building attractive programs for undergraduate and graduate students. Additionally, CEE likes to convert a part-time developing engineer to a full-time developing engineer to oversee the undergraduate lab and lab-safety for the department.

During next three years, we like to significantly increase the graduate student enrollment from 64 to over 100 graduate students will place the department in a situation comparable to some of the top schools in the nation. As the student body grows, the faculty will make every effort to attract
high achieving students and place these students in top graduate schools. Growing the graduate student body will serve to meet the demand of newly hired faculty, and will satisfy the increasing needs for TA. This means that the number of TA FTEs and graduate student support central fellowships will need to grow accordingly over the next three years. Good domestic students and excellent international students with high GRE and TOEFL scores from highly ranked international universities will be our primary targets.

4. Establish major research programs and collaborations in key emerging areas
In order to develop nationally and internationally recognized research programs, the Chemical and Environmental Engineering faculty will make every effort to be leaders or active participants in major collaborative grant proposals, and in new multidisciplinary research and education programs. These include, but are not limited to funding opportunities such as NSF Engineering Research Center grants, MRSEC, GANN, IGERT, REU Site and other agencies’ major center grant proposals. It also includes strengthening presence in current efforts on campus to develop and grow research and education in energy, advanced materials, sensors, and biological engineering.
CHEMICAL & ENVIRONMENTAL ENGINEERING
GRADUATE STUDENT HANDBOOK
2012-2013
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INTRODUCTION

The ABET accredited programs in the Department of Chemical and Environmental Engineering (also known as CEE) are unique in California universities, combining the disciplines of chemical and environmental engineering. We provide students with the right combination of knowledge, skills, and practical experience to prepare them for exciting new careers in chemical and environmental engineering – careers that will lead to the development of new and emerging technologies to improve the quality of life as well as the environment.

Our teaching labs facilitate close student-faculty interaction and emphasize real-world needs rather than abstract problems. Students have abundant opportunities to interact with industrial partners and faculty members on engineering challenges. The department also benefits from its close association with the College of Engineering – Center for Environmental Research and Technology (CE-CERT).

Graduate students deepen their understanding of fundamental principles in chemical and environmental engineering, and increase their knowledge of the needs and directions in their chosen field of study. Our goal is to produce engineers with advanced degrees who will be highly trained in the methods of scientific inquiry and technological discovery through advanced course work and independent research. We want to prepare our graduates for research/development and leadership positions in industry and government, and for research and teaching positions at major research universities.

The information contained in this manual is intended to help graduate students and particularly students new to the UCR campus. Other sources of information that should be consulted by graduate students include:

- UCR General Catalog
- Graduate Student Handbook, Graduate Division
- Thesis and Dissertation Format Guide, Graduate Division
- Policies and Regulations Governing Graduate Student Employment, Graduate Division
- Financial Support Regulations, Graduate Division
- UCR Graduate Division Website (www.graduate.ucr.edu)

The Department may specify more rigorous requirements for the degree than listed in the Graduate Division Graduate Student Handbook. Therefore, when there appears to be a conflict in requirements for the degree, the more rigorous requirements must be satisfied. In addition to degree requirements, this manual also summarizes CEE policies and procedures. Graduate students in these programs should carefully review this document and become familiar with the information so that they may avoid possible difficulties during their graduate studies. The Department reserves the right to modify the departmental procedures and requirements outlined in this manual. Such modifications generally will not be considered retroactive.
**General Information**

**Employment**

If you are going to be employed as a Graduate Student Researcher (GSR) or Teaching Assistant (TA) you will need to complete hiring paperwork with Mrs. Jenny Chen. You will need to bring your Driver’s License and Social Security card. International students should also bring their passport and visa paperwork. All 1st Year students will meet with Jenny during the Graduate Student Orientation.

**Paycheck**

As a student in CEE, you will be receiving your financial package paychecks via stipends (fellowships) or payroll (GSR/TA appointment). Stipends are paid on the 1st of every month for that month (i.e. on October 1st, you are paid for the month of October). Stipend paper checks can be picked up at the Student Services Building. Payroll is paid on the first of the month for the previous month (i.e. on October 1st, you are paid for the month of September). Payroll paper checks can be picked up from the front desk at the CEE department office. Please be aware that students are switched from fellowship payments to GSR appointments at the end of their first academic year. This means beginning July students will receive their payments on a GSR payroll cycle (August 1st). Direct deposit of funds into a checking account is also an option available to students (a voided check is required) and will be a part of the employment paperwork filled out during Graduate Student Orientation.

**E-mail**

All students are provided with a UCR e-mail account (student@ucr.edu) and an Engineering (ENGR) e-mail account (student@engr.ucr.edu). During new Graduate Student Orientation, the process of activating your ENGR e-mail account and linking it to your UCR e-mail account will be presented by Systems Administrator, Mr. John Cleary. Once activated, all official CEE e-mail will be sent to your ENGR e-mail account, not to personal or CE-CERT e-mail addresses. It is expected for every student to check their ENGR e-mail account at least once a day.

**UCR Card**

Upon your arrival you should obtain an UCR Card (Photo identification card). The card allows you to check books out of the library and is used for card access for most of the doors in Bourns Hall. UCR cards can be obtained from the UCR Card office, located in the UCR ID Card Office Suite 249 in the Highlander Union Building (HUB), between the hours of 9:00am and 4:00pm, Monday through Friday. The cost of the UCR Card is currently $25.

Card key (UCR Card) access to general student areas is granted when the students first apply for a computer and e-mail account during the CEE Orientation. This access will be continuous as long as a student is in good academic standing. Access to research laboratories must be requested by the faculty member supervising the specific research laboratory. Access to instructional laboratories is granted to TAs on a quarterly basis by the Department Chair.
Mail

Incoming mail and intercampus notices may be picked up from mailboxes in the mailroom, A204 Bourns Hall. Mail is distributed daily at approximately 9:00am and 2:00pm. Outgoing intercampus mail and official university mail can be deposited in the brown bag located in the department suite, A242 Bourns Hall. Students should send and receive all personal mail at their personal residence.

Copy Codes and Usage

There is a department copier in the mailroom in A204 Bourns Hall that is available 24 hours a day. A form to receive a copier code is available through Mrs. Carol Hurwitz. The request for a copy access code must first be approved by the student’s advisor or TA faculty supervisor.

The copier may be used only by graduate students copying material associated with their duties as a teaching or research assistant. Personal copying including: copying of notes, homework or exam solutions and journal articles not associated with research or teaching assistant duties, as well as thesis drafts, is not permitted on departmental copiers. Public copy machines are located in the UCR Bookstore, Rivera Library, and the Science Library.

SPEAK Test Requirement

To meet the degree requirements of the Chemical and Environmental Engineering program, all students whose native language is not English must achieve a “Clear Pass” on the SPEAK test before the completion of their first year or they will be asked to leave the program. However, for those who receive a “conditional pass,” a departmental committee will evaluate their English Proficiency before a final decision is made. The SPEAK test costs $50.00 and the student is responsible for this fee when registering for the test.

Unit Requirement

All graduate students must be enrolled in a minimum of 12 units per quarter to maintain a full-time student status.

Graduate Student Symposium

The Graduate Student Symposium takes place before the official start of classes in September. The symposium is held over two days to accommodate every student presentation. The symposium is a student organized event and an opportunity for students to learn the various types of research projects that their fellow students are conducting. All students are required to participate in the annual symposium. Second year students are required to prepare a research poster to present. Third year and above students are required to make a 15 minute oral presentation with power point. Abstracts for each presentation are assembled into a CEE Graduate Student Symposium booklet.
**Financial Assistance**

Financial assistance is available through several mechanisms. The Chemical and Environmental Engineering Department has a limited number of Graduate Student Research and Teaching Assistant positions that are used for graduate student support. Most graduate students are supported on a continuing basis by Graduate Student Research Assistantships provided by the individual Professors. In addition, UCR offers several fellowships, which are available on a competitive basis.

Students are strongly encouraged to apply for support through federal agencies and private foundations. This is a valuable experience that will not only assist students financially while in school, but will also help to build up their resume and provide contacts for the future. Organizations that have awarded fellowships and research support to UCR students include the Nation Science Foundation and the Fulbright Program. Students wishing to explore these sources of support should speak to their graduate advisor or consult the Annual Register of Grant Support and other similar directories either at the reference department of the library or through the financial support section at the Graduate Division web page: [http://graduate.ucr.edu/fin_aid.html](http://graduate.ucr.edu/fin_aid.html). There are also many sites on the World Wide Web devoted to various sources of aid for graduate students.

**Dissertation Research Grants:** Provide funds to doctoral candidates for research expenses associated with the dissertation. Applicants must be advanced to candidacy and plan to be registered during the period of the award. Proposals may be funded up to a maximum of $1,000. These funds may not be used for preparing the dissertation copy or as a stipend for personal support. Go to the Grad Division financial support web page to download an application.

**Graduate Student Association (GSA) Mini-grants:** Provide funds to assist in paying the travel expenses of a student who has been invited to present scholarly papers or posters at a regional and/or national professional conference. This program is administered by the Graduate Student Association and requires the departments to agree to provide matching funds. Contact the GSA or the for the mini-grant applications.

**Other Support Definitions**

Graduate student are supported from a variety of sources. Here is information on the various types of funding and definition of the commonly-used acronyms:

**Graduate Division Stipend:** Usually awarded as part of a larger fellowship package, these dollars go directly from Graduate Division to the student through the Financial Aid System. The student receives “pay checks” at the beginning of each month starting in late September (for the October 1 stipend check) through May (June 1 for stipend check).

**Graduate Student Researcher (GSR):** An employment title for graduate students conducting research (either independent or directed). Campus policy prohibits students from working more than 49% during the academic year. GSR appointments are 25% or more during the academic year are entitled to GSHIP and PFR (see below). Financial support for GSR employees is provided by faculty extramural grants and departmental general funds. Students are paid in arrears and receive their first check after their first month of work. (i.e. a student who begins work in the fall quarter does not get a pay check until November 1.)

**Fee Differential:** The left-over university mandatory fee amount for a student with a PFR and GSHIP and NRTR entitlements. This dollar amount changes as GSHIP and PFR go up. Most students are required to pay this.
Financial Assistance (cont.)

Teaching Assistant (TA): The employment title is for graduate students who are teaching part of a course (normally labs or discussion sections) under the guidance of a faculty member or instructor. Students may not be appointed at more than 50% during the academic quarter. If appointed at 25% or more time during an academic quarter, GSHIP and PFR will be awarded. There are many rules that are associated with this title, see the United Auto Workers Union Contract for more information. TA funds are distributed to the departments by the College of Engineering Dean's Office. Students are paid in arrears and receive their first check after their first month of work. (i.e. A student who begins work in the fall quarter does not get a pay check until November 1.)

Partial Fee Remission (PFR): Students who are appointed at 25% or more time during an academic quarter as a GSR or TA are entitled to PFR. This entitlement pays part (but not all) of the students’ mandatory university fees. The Graduate Secretary provides Graduate Division with a list of the students who are eligible for this entitlement before the student bills are printed. If an award is placed on the system after the bills are printed the student’s bill will not reflect the correct fees they owe.

Graduate Student Health Insurance (GSHIP): Students who are appointed at 25% or more time during an academic quarter as a GSR or TA are entitled to have their GSHIP fees paid for them. The Graduate Secretary provides Graduate Division with a list of the students who are eligible for this entitlement before the student bills are printed. If an award is placed on the system after the bills are printed the student’s bill will not reflect the correct fees they owe. The actual dollar amount of GSHIP changes as the insurance prices change from year to year. Students who have private Health Insurance comparable to the University’s coverage can apply for waivers of the GSHIP fees.

Non-Resident Tuition Remission (NRT or NRTR): Non-residents of California (either domestic or international) who are appointed at 45% or more as a GSR and are Ph.D. students are entitled to have their Non-Resident Tuition paid for them. The Graduate Secretary provides Graduate Division with a list of the students who are eligible for this entitlement before the student bills are printed. If an award is placed on the system after the bills are printed the student’s bill will not reflect the correct fees they owe. International students cannot ever establish residency and will owe Non-Resident Tuition for their entire student careers. However, when a Ph.D. student advances to candidacy, the Non-Resident Tuition is reduced by 100% for a period of three years. Domestic non-resident students must establish California residency by the second year of study (this does occur automatically, but forms must be submitted).

Department Grant In Aid (DGIA): Departments or individual faculty members with unrestricted funds (many federal grants will not allow payment of student fees) can grant fellowship-like awards to individual students. This is most often used to pay the student’s fee differential. The Graduate Secretary provides Graduate Division with a list of the students who are to receive these awards indicating the account and fund information. Graduate Division then pulls the money out of the account and awards it to the student through the Financial Aid System.
Teaching Assistantship

All Ph.D. students must be employed as teaching assistants for at least one quarter. TAs must meet two requirements before starting: the SPEAK test (for non-native English speakers) and TADP training. For additional information regarding teaching titles please visit: [http://graduate.ucr.edu/ta_gsr.html](http://graduate.ucr.edu/ta_gsr.html)

SPEAK Test

To be appointed as a TA, any student born outside the United States or whose native language is not English must pass the SPEAK test. The purpose of the SPEAK test is to evaluate spoken English proficiency and to measure student comprehensibility in English. The SPEAK test is administered by University Extension when the student first arrives on campus. Ratings based on SPEAK test scores are as follows: Clear Pass (50-60), Conditional Pass (40-45), No Pass (20-35).

Those who score a conditional pass can be appointed as a TA but are required to participate in the appropriate English language classes at University Extension and retake the test. The courses are about $380.00 and must be taken during the same quarter that the student is a TA. Graduate Division will pay for the first time a student takes these courses. However students will be responsible for the fee if it is determined that they will have to retake the course due to not achieving a Clear Pass on subsequent SPEAK tests. Appointments for students who have not achieved a clear pass on the SPEAK test will only be approved for one quarter at a time so that their progress on the SPEAK test can be monitored. For those students within the probationary range, a determination of their continuing eligibility to serve as TAs will be made by the Graduate Dean on the basis of:

- Departmental recommendation, including an assessment of the student's academic ability;
- Student teaching evaluations;
- Other evidence of commitment to/performance in teaching (e.g., faculty evaluations or statements of support, videotapes);
- Evidence of a good-faith effort to improve English skills; and
- Relative proximity to the level of competence represented by a clear pass.

All students whose native language is not English must achieve a “Clear Pass” on the SPEAK test before the completion of their first year. However, for those who receive a “conditional pass,” a departmental committee will evaluate their English Proficiency before a final decision is made.

There are additional GPA requirements for all Teaching Assistants. Please see the Academic Standards section on page 9 of this handbook for more details.

TADP Training

All students will have to take TADP training which consists of an Orientation and two training sessions. The Graduate Student Affairs Assistant will contact you with information regarding TADP training. For additional information about TADP please visit: [http://www.tadp.ucr.edu/](http://www.tadp.ucr.edu/).

CEE 302 Teaching Practicum

Students must enroll in CEE 302 Teaching Practicum for 1 unit during the quarter that they are employed as a TA.
**Academic Standards**

Every student was chosen for graduate study in CEE after an extensive selection process. You were chosen because the faculty believes you have the motivational and intellectual qualities needed to perform well in our program. We fully expect every student to perform well and to be successful in their graduate career. There are three standards that all graduate students must adhere to for eligibility in the program. Please contact the Graduate Student Affairs Officer if you have any questions on any of the standards.

**Standards of Scholarship**

The following is an excerpt from the UCR Graduate Council Policy on Academic Standards. The full policy is on the Office of Graduate Studies website: [http://graduate.ucr.edu/requirements.html](http://graduate.ucr.edu/requirements.html)

Only courses in which grades of "A," "B," "C," or "S" are received are counted toward satisfying graduate degree requirements. To continue in good standing and obtain an advanced degree, students must maintain a minimum grade point average (GPA) of 3.0. In addition, all students must demonstrate acceptable progress toward their degree objectives. This entails the satisfactory completion of all course work and other degree requirements in a timely fashion.

Students are considered to be making unacceptable progress and become subject to dismissal when:

- They have 12 or more units of "I" grades outstanding;
- The overall GPA falls below 3.0;
- The quarterly GPA falls below 3.0 for two consecutive quarters;
- They fail to take their oral qualifying exams within five years;
- They fail to fulfill program requirements such as exams or research in a timely & satisfactory manner;
- They have not completed their programs within one year after reaching the normative time;
- They fail to pass comprehensive or qualifying examinations in two attempts.

**Fellowship Standards**

All students on Fellowship are required to maintain a 3.0 GPA. If a 3.0 GPA is not maintained, the student will no longer be eligible to receive Fellowship funds.

**Teaching Assistant Standards**

All students who hold the Teaching Assistant payroll title must maintain a 3.0 GPA. If a 3.0 GPA is not maintained, student will no longer be eligible for a Teaching Assistant title.
**Areas of Study**

The Graduate Program in Chemical and Environmental Engineering offers training leading to the degrees of M.S. and Ph.D. in Chemical and Environmental Engineering. Fields of specialization include biochemical engineering, environmental biotechnology, air quality systems engineering, water quality systems engineering, molecular modeling and theory, advanced materials, and nanotechnology.

Graduate study and research programs can be designed to allow for study in two or more related areas, specialization in one area, or a program of study can be designed for some other specialized or newly evolving area of chemical or environmental engineering. The choice is made by the student along with the student’s advisor. Proposed M.S. and Ph.D. programs for other emphases must be approved by the Graduate Studies Committee and must include applicable basic core courses prescribed by the CEE Department.

**CEE Core Courses**

To ensure that advanced degree recipients in the graduate program have advanced knowledge in mathematics and chemical engineering principles that form the foundation for chemical and environmental engineering, a core course program has been implemented. All M.S. or Ph.D. students must participate in the core course program. Students who have completed these (or equivalent) courses elsewhere may petition to have the core-course requirement waived or some of their units transferred (see the graduate division policy for transferring of course units). Competency in these areas will be tested as part of the comprehensive exam for M.S. students and in the written preliminary examination for Ph.D. students. The current core courses are as follows:

- **CEE 200 (Advanced Engineering Computations)**
- **CEE 202 (Transport Phenomena)**
- **CEE 204 (Advanced Kinetics and Reaction Engineering)**
- **CEE 206 (Advanced Chemical Engineering Thermodynamics)**

Incoming students without a B.S. in chemical or environmental engineering must demonstrate competency in these areas either by taking the appropriate undergraduate courses and/or by passing the written preliminary exam. At UCR, the required courses are CHE 100, CHE 110A, CHE 110B, ENVE 171, CHE 114, CHE 116, CHE 120, CHE 130, and ENGR 118. The students may also be required to take some of the above courses to satisfy the prerequisites of the core graduate courses.

**CEE 286: Colloquium in Chemical and Environmental Engineering (1 unit):**

Each quarter, all M.S. and Ph.D. students in residence must enroll in CEE 286, Colloquium in Chemical and Environmental Engineering. In addition, all M.S. and Ph.D. students are required to participate each year in the CEE Graduate Student Symposium, usually held just before the beginning of the Fall quarter.

**Sample Timeline (Ph.D. and M.S.)**

On pages 11 and 12 you can find a sample timeline for your degree objective. **Please note that these are only meant to be samples and give you an overview of your degree objective.** The Graduate Advisor and your Faculty Advisor/Advisory Committee may have a different timeline for you to follow with additional coursework and requirements.
Sample Ph.D. Degree Objective Timeline

Please note that this is only meant to be a sample and give you an overview of your degree objective. The Graduate Advisor and your Faculty Advisor/Advisory Committee may have a different timeline for you to follow with additional coursework and requirements. Please see the Doctor of Philosophy (Ph.D.) Degree Program on page 15 for more information.

Year 1

Your first year is comprised of the CEE core courses: CEE 200, 202, 204, 206. In addition, you will be taking seminars in areas of your research interest (CEE 250-270), the CEE colloquium series (CEE 286), research units (CEE 297), and completing your 1-2 Quarters of Teaching Assistantship (CEE 302—Teaching Practicum taken concurrently). Additional courses may be required per the Graduate Advisor’s guidance. You will also be able to choose a faculty mentor towards the end of Fall quarter. The qualifying examinations take place in the summer.

<table>
<thead>
<tr>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEE 200 /206 (4 units each)</td>
<td>CEE 202/204 (4 units each)</td>
<td>CEE 206 (1 unit)</td>
<td>Additional required upper division or graduate level coursework can be taken any quarter.</td>
</tr>
<tr>
<td>Seminars (1-2 units each) CEE 286 (1 unit) *CEE 302 (1 unit)</td>
<td>Seminars (1-2 units each) CEE 286 (1 unit) CEE 297 (1-6 units) *CEE 302 (1 unit)</td>
<td>Seminars (1-2 units each) CEE 286 (1 unit) CEE 297 (1 unit) *CEE 302 (1 unit)</td>
<td></td>
</tr>
<tr>
<td>Choose Faculty Mentor</td>
<td></td>
<td></td>
<td>Preliminary Exam (July)</td>
</tr>
</tbody>
</table>

Year 2

Your second year continues coursework in seminars, colloquium and research (CEE 297 or 299). At the start of Fall quarter, all second year students are required to participate in the CEE Graduate Student Symposium and present a poster on their research thus far. All students generally Advance to Candidacy before the start of the next Fall quarter.

<table>
<thead>
<tr>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seminar (1-2 units each) CEE 286 (1 unit) CEE 297 (1-6 units) or CEE 299 (1-12 units)</td>
<td>Seminars (1-2 units each) CEE 286 (1 unit) CEE 297 (1-6 units) or CEE 299 (1-12 units)</td>
<td>Seminars (1-2 units each) CEE 286 (1 unit) CEE 297 (1-6 units) or CEE 299 (1-12 units)</td>
<td></td>
</tr>
<tr>
<td>CEE Graduate Student Symposium</td>
<td></td>
<td></td>
<td>Advance to Candidacy before Fall quarter</td>
</tr>
</tbody>
</table>

Years 3-5

The next few years are focused on completing your research for the Dissertation Defense. Coursework will be comprised of seminars, colloquium, and research (CEE 299). All third year and above students are required to participate in the CEE Graduate Student Symposium and have a full 15 minute presentation on their research.

<table>
<thead>
<tr>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seminar (1-2 units each) CEE 286 (1 unit) CEE 299 (1-12 units)</td>
<td>Seminar (1-2 units each) CEE 286 (1 unit) CEE 299 (1-12 units)</td>
<td>Seminar (1-2 units each) CEE 286 (1 unit) CEE 299 (1-12 units)</td>
<td></td>
</tr>
<tr>
<td>CEE Graduate Student Symposium</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Sample M.S. Plan I (Thesis) Degree Objective Timeline

Please note that this is only meant to be a sample and give you an overview of your degree objective. The Graduate Advisor and your Faculty Advisor/Advisory Committee may have a different timeline for you to follow with additional coursework and requirements. For the M.S. degree objective, a total of 36 units of approved coursework must be taken. Please see the Master of Science (M.S.) Degree Program on page 14 for more information.

**Year 1**

Your first year is comprised of the CEE core courses: CEE 200, 202, 204, 206. In addition, you will be taking seminars in areas of your research interest (CEE 250-270), the CEE colloquium series (CEE 286), and research units (CEE 297). Additional courses may be required per the Graduate Advisor's guidance. You will also be able to choose a faculty mentor towards the end of Fall quarter.

<table>
<thead>
<tr>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEE 200/206 (4 units each)</td>
<td>CEE 202/204 (4 units each)</td>
<td>Seminars (1-2 units each)</td>
<td>Graduate level coursework can be taken any quarter.</td>
</tr>
<tr>
<td>Seminar s (1-2 units each)</td>
<td>Seminars (1-2 units each)</td>
<td>CEE 286 (1 unit)</td>
<td></td>
</tr>
<tr>
<td>CEE 286 (1 unit)</td>
<td>CEE 286 (1 unit)</td>
<td>CEE 297 (1-6 units)</td>
<td></td>
</tr>
<tr>
<td>Choose Faculty Mentor</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Year 2**

Your second year focuses on research towards M.S. Candidacy and/or continued coursework in seminars, colloquium and research (CEE 297 or 299). At the start of Fall quarter, all second year students are required to participate in the CEE Graduate Student Symposium and present a poster on their research thus far. All M.S. students generally finish their M.S. Candidacy before the start of the next Fall quarter.

<table>
<thead>
<tr>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seminar s (1-2 units each)</td>
<td>Seminars (1-2 units each)</td>
<td>Seminars (1-2 units each)</td>
<td>Graduate level coursework can be taken any quarter.</td>
</tr>
<tr>
<td>CEE 286 (1 unit)</td>
<td>CEE 286 (1 unit)</td>
<td>CEE 286 (4 unit)</td>
<td></td>
</tr>
<tr>
<td>CEE 297 (1-6 units) or CEE 299 (1-12 units)</td>
<td>CEE 297 (1-6 units) or CEE 299 (1-12 units)</td>
<td>CEE 297 (1-6 units) or CEE 299 (1-12 units)</td>
<td></td>
</tr>
<tr>
<td>CEE Graduate</td>
<td></td>
<td></td>
<td>Present M.S. Thesis</td>
</tr>
<tr>
<td>Student Symposium</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Sample M.S. Plan II (Exam) Degree Objective Timeline

Please note that this is only meant to be a sample and give you an overview of your degree objective. The Graduate Advisor and your Faculty Advisor/Advisory Committee may have a different timeline for you to follow with additional coursework and requirements. For the M.S. degree objective, a total of 36 units of approved coursework must be taken. Please see the Master of Science (M.S.) Degree Program on page 14 for more information. This timeline also applies to BS/MS students.

Year 1

This year is comprised of the CEE core courses: CEE 200, 202, 204, 206, special topics, graduate level courses, and the CEE colloquium series (CEE 286). Additional courses may be required per the Graduate Advisor’s guidance.

<table>
<thead>
<tr>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEE 200/206 (4 units each)</td>
<td>CEE 202/204 (4 units each)</td>
<td>*Grad Level Course</td>
<td>*Graduate level coursework can be taken any quarter.</td>
</tr>
<tr>
<td>Special Topics Course</td>
<td>Special Topics Course</td>
<td>*Grad Level Course</td>
<td></td>
</tr>
<tr>
<td>CEE 286 (1 unit)</td>
<td>*Grad Level Course</td>
<td>Special Topics Course</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CEE 286 (1 unit)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Register for the MS Exam</td>
<td>MS Exam at the end of the quarter</td>
<td></td>
</tr>
</tbody>
</table>
MASTER OF SCIENCE (M.S.) DEGREE PROGRAM

The M.S. degree in Chemical and Environmental Engineering can be earned by completing a thesis (Plan I), which reports an original investigation of a defined problem, or by passing a comprehensive examination (Plan II).

Plan I (Thesis)

Plan I (Thesis) requires completion of a minimum of 36 units of approved course work including the core courses and submission of an acceptable M.S. thesis. At least 24 of these units must be in regular lecture graduate courses (200 series courses). No more than 4 units of CEE 290 or CEE 297 combined and 6 units of CEE 286 or special topics courses (CEE 250 or CEE 260 series) may apply towards the 36 units. Normative Time to Degree for Plan I is 6 quarters.

Plan II (Comprehensive Examination)

Plan II (Comprehensive Examination) requires completion of a minimum of 36 units of approved course work including the core courses and successful passage of a comprehensive examination. At least 28 of these units must be in regular lecture graduate courses (200-series courses), and none may be in courses numbered CEE 286, 290, 297, 299, or 302. Typically, the examination is a six-hour written, closed-book examination emphasizing fundamental knowledge and breadth of the study area rather than specifics covered in individual courses. An oral follow-up session may be requested by the examination committee following its evaluation of the written exam. No more than two attempts to pass the exam are allowed. Students who fail the exam once and then want to switch to the thesis plan should contact the graduate advisor. Students who fail the exam twice may not switch to the thesis plan.

For the M.S. degree, Students must complete a minimum of three quarters in residence in the UC with a GPA of 3.00 or better in all 100- and 200-level course work related to the degree. The Normative Time to Degree for both Plan II is 3 quarters.

Thesis Committee

The committee consists of three members. The student and advisor nominate the committee before the end of the first year with the concurrence of the graduate committee. After review of the nominations, the dean of the Graduate Division appoints the committee on behalf of the Graduate Council. The committee, once approved by the graduate dean, rather than the department, becomes responsible for the student's academic guidance and evaluation. The chairman of the committee is the director of the candidate's research and is normally a faculty member of the CEE department or a cooperating faculty member. A member may be appointed who is a researcher on campus, from off-campus, or a visiting lecturer within the department; however, a memo indicating the academic degree and affiliation of the nominated member, as well as a curriculum vitae, must accompany such a request. (Memos need not accompany the nomination of an adjunct faculty member.) After the committee is formed, the committee must approve the subject of the thesis. A joint meeting of the committee members and the student should be held before work on the thesis is begun to ensure the topic is clear and acceptable to all. Once the thesis is completed, all three members of the committee must approve the thesis and sign the title page. Students must give a departmental seminar presentation of their thesis work to the department and members of the academic community before completing the thesis.
MS Time to Degree and Degree Conferral

Students must be advanced to candidacy for the degree no later than the first week of the quarter in which their degree is expected to be awarded. Deadlines for submission are published each quarter in the Schedule of Classes and in the annual Graduate Division Calendar. If the application is not received by the deadline date, the degree may be deferred until the following quarter. If the Master's degree requires a thesis (Plan I), a thesis committee should be nominated. When the student is formally advanced to candidacy and the thesis committee appointed (if applicable), the student and the academic units are notified.

The Graduate Division certifies the candidacy of the student and checks for the completion of the University and departmental requirements. The student is sent a "Certificate of Candidacy" when certified. All requirements for the degree must be satisfied within a calendar year from the time of completion of the required course work. Should the student be unable to complete the degree requirements within this time, candidacy will lapse. The student must then file a General Graduate Student Petition requesting a reinstatement of Master's Candidacy with the Graduate Division.

The Master's degree is conferred at the end of the academic quarter in which all requirements have been satisfied (the official conferral day is the last day of the quarter). The student must have been formally advanced to candidacy during the quarter in which they finish their degree. Ordinarily, a graduate student will be registered or on Filing Fee status the quarter in which all degree requirements are completed and the degree is to be conferred. However, students may complete the requirements during the quarter break. If they were enrolled or on Filing Fee status the quarter before, they may complete degree requirements before the next quarter officially begins and not be assessed registration fees for that quarter.

If a student wishes to complete degree requirements during the summer months, they must have had student status (be enrolled or on Filing Fee status) every quarter of the previous academic year to complete without paying additional fees. If they were withdrawn or on leave any one of those quarters, they must use Filing Fee status or enroll in two units of Summer Session course work to complete during the summer.

If a student does not complete the necessary courses by the end of the quarter in which degree conferral is expected, or does not attain the required level of scholarship, registration for the next regular academic session is mandatory - otherwise student status will lapse and candidacy for the degree may lapse. Once student status lapses, the degree can be conferred only after readmission of the student, followed by at least one quarter of registration or Filing Fee status.

Students are advised by mail of formal degree award at the end of the quarter in which the degree is conferred. As soon as all degree requirements are completed, the student may request a formal letter of certification of completion bearing the Graduate Dean's signature and University Seal from the Graduate Division. A formal certification of completion is the equivalent of the diploma or the official academic transcript posting for employment and career advancement purposes.

Once the diploma is ready, the Registrar will notify students by postcard that they may pick-up their diploma at that office. If they want it mailed to them they must pay the Registrar for postage. They should make these arrangements with the Registrar's Office. A graduate student pursuing the Master's degree as a terminal degree may not continue to register as a graduate student once the degree has been awarded unless they have been formally admitted to another program.
DOCTOR OF PHILOSOPHY (PH.D.) DEGREE PROGRAM

The Ph.D. degree provides an opportunity for students to pursue a program of in-depth research in a specialized area. The procedure for satisfying the requirements for the Ph.D. degree in Chemical and Environmental Engineering at UCR consists of four parts:

1. Successful completion of an approved program of course work
2. Passing a written preliminary examination
3. Approval of a dissertation proposal
4. Defense and approval of the dissertation

Course Work

Upon choosing a faculty advisor, each Ph.D. student is appointed a Ph.D. advisory committee consisting of two CEE faculty members and the faculty advisor. This advisory committee is responsible for guiding the students in formulating their research activities and preparing for the preliminary and qualifying exams.

The program of course work is formulated by each student and a faculty advisor in the first or second quarter after admission to the program and must be approved by the student's advisor and advisory committee. Every student must complete a program of study that includes:

1. A major area of study intended to increase the student's depth of knowledge in an engineering research specialty and
2. A minor area of study intended to support and increase the student's breadth of knowledge in the major area

The CEE graduate program requires a coherent program of a minimum of:

1. Sixteen units of core courses and
2. Eight units of graduate and/or upper-division work approved by the advisory committee
None of these credits may be in courses numbered between CEE 250 and CEE 270, CEE 286, CEE 290, CEE 297, CEE 299, or CEE 302.

Teaching Requirement

All students must be employed as a Teaching Assistant for at least one quarter. For more information, please refer to the Teaching Assistantship section on page 8 of this handbook.
Written Preliminary Examination

The preliminary examination is taken at the end of the student’s first year in the Ph.D. program. The purpose of the preliminary examination is to test students’ understanding of the fundamental principles of chemical and environmental engineering at the undergraduate level. The examination will take place during June 25-27 with a re-take (if necessary) taking place during July 9-11.

**It is important that students who will be taking the preliminary examination to not make any vacation plans during this time period.**

The preliminary examination consists of three written tests (2 hours each) given on specific days during the exam week in areas selected from the following five subjects:


The three subjects selected should be closely connected to the student’s undergraduate training and approved by his/her advisory committee. Students who fail any portion of the exam will be granted a final attempt to pass a makeup written examination which includes an oral defense of their answers in front of a faculty committee. Students who fail one or two subjects after the retest are required to enroll in remedial undergraduate courses and pass with a grade of B+ or better. Credits from these remedial courses do not count toward the PhD course-work requirement. Students who fail all three subjects after the retest must leave the PhD program.

The Ph.D. Qualifying Committee

By Academic Senate Regulation and Graduate Council policy, the Qualifying Committee is comprised of five members, a majority of whom, but not all, are affiliated with the program. The Chair of the Qualifying Committee is normally the student’s Ph.D. advisor, who must be a voting member of the Academic Senate. (All committee members should normally be voting members of the UC Academic Senate.) Any exceptions must hold Ph.D.s, be qualified for a UC faculty appointment and must be supported by a memo of justification from the Graduate Adviser. A memo need not be written for those holding Adjunct faculty positions.

One member of the Qualifying Committee, designated the “outside member,” must be a voting member of the UC Academic Senate who does not hold an appointment in the CEE department. This person represents the faculty at large and acts most importantly, as a “third party ensuring fairness.” Special expertise in the area of the student's dissertation is not expected; this member's academic field may be unrelated to the field of study of the student and the other committee members, and this member is expected to be unaffiliated with the department. For the purpose of the qualifying committee, a cooperating member cannot be an “outside member.”
The Ph.D. Qualifying Committee (cont.)

The student and their advisor may nominate three committee members with the concurrence of the Department chairperson or Graduate Adviser. Two members must be CEE faculty and the other is a faculty member outside of the CEE department. The remaining members are nominated by the CEE Graduate Committee. After review of the nominations, the Qualifying Committee is appointed by the Dean of the Graduate Division on behalf of the Graduate Council. This Committee, once approved by the Graduate Dean, becomes responsible for the student's academic guidance and evaluation until advanced to candidacy.

The proposed Qualifying Committee and the date set for the exam must be submitted to the Graduate Division Office on the Ph.D. Form 2 (Nomination for Qualifying Examination for the Degree of Doctor of Philosophy) at least two weeks (preferably one month) prior to the date of the final qualifying examination date. If any nominee is not a member of the University of California Academic Senate, a curriculum vitae and a memo justifying the appointment from the Graduate Adviser or Department Chair should be submitted with the Form 2.

Once the committee has been formally appointed, the date and time of the oral proposal presentation/defense will be scheduled. Any changes in the exam date or in the composition of the Committee must be communicated in writing to the Graduate Division not less than twenty-four (24) hours before the oral examination is held.

The qualifying oral dissertation proposal/defense is not open to the general public but members of the Academic Senate may attend. The recommendation of the committee must be reported to the Graduate Council within forty-eight (48) hours on Ph.D. Form 3 (Report on Qualifying Examination and Nomination of Dissertation Committee) which is provided by the Graduate Division to departments on request. Each committee member must sign the form. No one can sign for them.

A unanimous committee report for or against approval will be accepted for the Graduate Council by the Dean of the Graduate Division. If a student has failed the qualifying examination, the committee is required to make a recommendation for or against a second examination, ordinarily not to be given until at least three months have elapsed. The date of the second oral examination shall be communicated to the Graduate Division in writing at least two weeks prior to its occurrence. A third examination is not permitted. The student will be notified of the results immediately following the exam when a unanimous vote is reached.

If there is an initial divided vote, the committee will make every effort to arrive at unanimity. Failing unanimity, a committee report which contains only one negative vote will be deemed a pass, and a committee report which contains two (or more) negative votes will be considered a failure. When the vote is split, the committee or any member of the committee can petition (in writing) the Graduate Council to consider a reversal of the judgment. In that event, the Administrative Committee of the Graduate Council will make the final determination as to whether the student has passed. In such cases no statement is made to the student regarding his/her passing or failure until the final determination has been made. The student shall be informed within forty-eight (48) hours that the vote is split and the final determination will be made by the Graduate Council.

When the Committee meets to conduct the oral Qualifying Examination, it must report the vote and/or action to the Graduate Council via the Graduate Dean. If the Committee decides to reexamine the student at a later date or does not pass the student for any reason, this must be reported. Once a committee convenes an examination, either a pass or fail must be reported by that committee. The Form 3 must be signed by all committee members at the time the qualifying examination is concluded, and submitted even if the examination was failed.
Qualifying Examination and Dissertation Proposal

After successful completion of the written preliminary examination, each student, with advisement from an advisor, prepares a dissertation proposal. Typically, students submit a dissertation proposal to their qualifying committee within one year after successfully completing the written preliminary examination. The proposal should clearly demonstrate the student’s adequate preparation for the completion of his/her thesis research. This includes, but is not limited to, a thorough review of the pertinent literature, a presentation and discussion of the candidate’s own research, and a detailed research plan with sufficient breadth and depth for the completion of the thesis. The qualifying committee chair schedules an oral defense normally within one month of the written proposal submission. The presentation is given only to the dissertation committee members.

The oral presentation/defense of the proposal focuses on the dissertation problem. Students should demonstrate considerable depth of knowledge in the student's area of specialization and a clear understanding of the research methods that are needed for successful completion of the dissertation research. The oral presentation/defense begins with a presentation by students on their dissertation topic and is followed by questions and suggestions from the qualifying committee.

On the basis of the written proposal and oral defense, the qualifying committee decides whether the student should be advanced to candidacy, asked to modify and enhance the proposal, or requested to withdraw from the program.

Advancement to Candidacy

After successful completion of the qualifying examinations and completion of all University and departmental requirements, the student is eligible for advancement to candidacy. At that time, the CEE department submits the "Report of Departmental Requirements for Ph.D. Degree" to the Graduate Division to conduct a degree check. The student will be billed the Candidacy Fee after the degree check has been completed. After a successful degree check, the student and CEE department are notified of the formal advancement to candidacy. The Candidacy Fee is later used to pay for microfilming the student's Ph.D. dissertation.

All students who are considered nonresidents for tuition purposes and are advanced to candidacy for the Ph.D. receive a reduction of 100 percent of the non-resident tuition. Each student is eligible for a maximum of three calendar years of non-resident tuition reduction. Time spent not registered (withdrawn, on leave, or on filing fee status) will count toward the three-year total unless the Graduate Dean grants an exception. A student must be advanced by the first day of the academic term to qualify for that quarter.

Candidacy for the Ph.D. will normally lapse if the student loses graduate standing by academic disqualification or failure to comply with the University policy on continuous registration. A readmitted student who was a candidate for the Ph.D. may be required to again advance to candidacy and thereafter enroll as a candidate for at least one academic quarter before the Ph.D. will be conferred. If less than three years has passed since the student withdrew, the candidacy will normally remain in effect. If three or more years have passed since Advancement to Candidacy, candidacy status will be determined by consultation between the Dean of the Graduate Division and the department.
Dissertation and Final Oral Examination

Following advancement to candidacy, students formally focus on their dissertation research. The progress of the dissertation is monitored by the student's dissertation committee. Candidates should interact frequently with members of their dissertation committee to insure that dissertation progress is acceptable.

The graduate committee nominates the dissertation committee after consideration of the suggestions made by the student and his/her thesis advisor. The dissertation committee consists of a minimum of three UCR Academic Senate members. The chair and majority of members must be from Chemical and Environmental Engineering. All committee members should be in a position to offer guidance and be able to judge the scholarship of the dissertation work. Upon recommendation of the graduate advisor, doctoral dissertation committees are appointed by the dean of the Graduate Division.

After completing the dissertation research, students must submit a written copy of the dissertation for approval for defense by the student's dissertation committee. Once a draft has been approved, an oral defense of the dissertation is scheduled. This defense consists of a seminar open to the entire academic community, followed by a question-and-answer period conducted by the dissertation committee. Students must complete at least six quarters in residence in the UC with a GPA of 3.00 or better in all 100- and 200-level course work related to the degree.

Degree Conferral

Ph.D. degrees are conferred, subject to the final approval of the Graduate Council, as of the last day of the regular academic quarter in which all requirements have been satisfied (the last day of the quarter), including the final positive recommendation of the Doctoral Committee, and the acceptance of the approved dissertation by the Graduate Division on behalf of the University. A graduate student must be registered or on Filing Fee status the quarter in which the dissertation is submitted and the degree is to be conferred. No fee for filing the manuscript itself is required. If a student misses that deadline, he/she has until the day before the next quarter officially begins to file and not pay next quarter's registration fees. Unless payment of a Filing Fee or a Leave of Absence is approved, all graduate students must register each regular academic quarter (excluding Summer Session) until all degree requirements are completed - otherwise, student status and candidacy for the Ph.D. will normally lapse. Once the status lapses, the degree can be conferred only after readmission of the student, followed by at least one quarter of registration or Filing Fee status and possibly re-advancement to candidacy.

Students are advised by mail of formal degree conferral at the end of the quarter in which the degree is completed. As soon as all degree requirements are completed, the student may request a formal letter of certification of completion bearing the Graduate Dean's signature from the Division office. A formal certification of completion is the equivalent of formal degree conferral for faculty and post doctoral appointments and other employment and career advancement purposes.

Once the diploma is ready, the Registrar will notify the student by postcard that they may pick-up their diploma at that office. If they want it mailed to them they must pay the Registrar for postage. They should make these arrangements with the Registrar's Office.
Useful Websites

Chemical and Environmental Engineering Homepage
http://www.cee.ucr.edu

Chemical and Environmental Engineering Seminar Schedule

General Catalog Online
http://www.catalog.ucr.edu/

Graduate Division Student Handbook
http://www.graddiv.ucr.edu/GSHndbk.pdf

UCR Graduate Student Association
http://www.gsa.ucr.edu/

Schedule of Classes Online
http://www.classes.ucr.edu/

GROWL Online Registration
http://ucribm.ucr.edu/Paws/PAWS.html

UCR Libraries
http://library.ucr.edu

UCR Highlander Union Building (HUB)
http://www.highlanderunionbuilding.ucr.edu/pages/default.aspx

UCR Housing Office
http://www.housing.ucr.edu

City of Riverside (information about the city and surrounding areas)
http://www.riversideca.gov/
Campus Police
http://www.police.ucr.edu/
(951) 827-5222
Adding the campus police's phone number to a cell phone will aid in getting emergency assistance to your classroom quickly.

Campus Escort
http://www.escortservice.ucr.edu/
(951) 827-3772
Campus escort can walk you to your car after night classes.

Graduate Division
http://www.graduate.ucr.edu
For assistance with financial aid, enrolled students, etc.

Counseling Center
http://www.counseling.ucr.edu
Psychological counseling, stress management, and vocational testing. The center makes actual appointments or TAs can refer students for appointments.

Career Center
http://www.careers.ucr.edu/Pages/default.aspx
Career counseling, assessment, workshops, and job search assistance.

Ombudsman
http://www.ombudsperson.ucr.edu
For assistance in resolving various conflicts (sexual harassment, fee disputes, instructor-student) on campus.

Student Business Services
http://www.sbs.ucr.edu
Deferred tuition payments plans, loans and loan counseling, registrar.

International Services Center
http://www.internationalcenter.ucr.edu
Assistance for international students, instructors and faculty. Also offers opportunities abroad.

Dean of Students Family of Departments
http://deanofstudents.ucr.edu/Departments
Access to student resources including Students Special Services, Women’s Resource Center, LGBT Resource Center, and the Student Recreation Center.
## Important Contacts

The administrative suite is located in A242 Bourns Hall. A listing of key contact personnel in the CEE Department and the College of Engineering with whom graduate students may interact is given below.

<table>
<thead>
<tr>
<th><strong>Faculty</strong></th>
<th><strong>Administrative Staff</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sharon Walker</strong></td>
<td><strong>Jenny Chen</strong></td>
</tr>
<tr>
<td>Professor and Graduate Advisor</td>
<td>Contracts and Grants/Payroll and Personnel Analyst</td>
</tr>
<tr>
<td>Bourns B355</td>
<td>Bourns A242</td>
</tr>
<tr>
<td>827-6094</td>
<td>827-4654</td>
</tr>
<tr>
<td><a href="mailto:swalker@engr.ucr.edu">swalker@engr.ucr.edu</a></td>
<td><a href="mailto:jennyc@engr.ucr.edu">jennyc@engr.ucr.edu</a></td>
</tr>
<tr>
<td>Responsible for advising graduate students until they pick a faculty advisor. Also approves committee nominations, course waivers, and curriculum changes.</td>
<td>Responsible for payroll and contracts &amp; grants activities.</td>
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<tr>
<td><strong>Nosang Myung</strong></td>
<td><strong>John Cleary</strong></td>
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<td>Professor and Chair</td>
<td>Systems Administrator</td>
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<td>Bourns B353</td>
<td>Bourns A315</td>
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<td>827-7710</td>
<td>827-2638</td>
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<tr>
<td><a href="mailto:myung@engr.ucr.edu">myung@engr.ucr.edu</a></td>
<td><a href="mailto:systems@engr.ucr.edu">systems@engr.ucr.edu</a></td>
</tr>
<tr>
<td>Responsible for all the department functions.</td>
<td>Provides computer systems support.</td>
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<tr>
<td><strong>Hugo Galdamez</strong></td>
<td><strong>Cheryl Gerry</strong></td>
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<td>Asst. Development Engineer</td>
<td>Financial and Administrative Officer (FAO)</td>
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<tr>
<td>(Lab. Manager)</td>
<td>Bourns A243</td>
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<td>Bourns B307</td>
<td>827-4655</td>
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<tr>
<td>827-2097 (office) 282-1325 (cell)</td>
<td><a href="mailto:cgerry@engr.ucr.edu">cgerry@engr.ucr.edu</a></td>
</tr>
<tr>
<td><a href="mailto:hgaldame@engr.ucr.edu">hgaldame@engr.ucr.edu</a></td>
<td>Oversees all financial and administrative affairs.</td>
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<tr>
<td>In charge of safety in the labs and set up of the instructional labs.</td>
<td>Handles purchasing activities for labs and processes reimbursements.</td>
</tr>
<tr>
<td><strong>Carol Hurwitz</strong></td>
<td><strong>Will Suh</strong></td>
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<tr>
<td>Purchasing Assistant</td>
<td>Grad. Student Affairs Officer (GSAO)</td>
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<td><a href="mailto:wsuh@engr.ucr.edu">wsuh@engr.ucr.edu</a></td>
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<tr>
<td>Supports graduate program admissions process and enrolled student affairs.</td>
<td>In charge of safety in the labs and set up of the instructional labs.</td>
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**CE-CERT**

College of Engineering Center of Environmental Research and Technology

1084 Columbia Ave.  781-5791
Copyright

Copyright is an issue that many graduate students come across during their academic career; whether for their thesis dissertation or copying pages from a textbook for a course. To find out more about copyright issues and how they might affect you please visit the two websites below.

This website includes a video that goes over copyright basics.

http://printing.ucr.edu/copyright_faqs.html
This website has links to official UC policies on copyright.

The following is an excerpt from the UCR Policies and Procedures manual section 550-20. The full manual can be viewed at: http://fboapps.ucr.edu/policies/

A. GENERAL POLICY

It is the policy of the University that copyrightable material in the form of books, musical or dramatic compositions, architectural designs, paintings, sculptures, or other works of comparable type developed by employees either in conjunction with or aside from their University employment, will be the property of the author unless the material is prepared by means of special contractual arrangements or as a specific part of their University assignment. A faculty member's general obligation to produce scholarly works does not constitute such a specific University assignment.

1. University Owned copyrights

Copyrightable material, other than mentioned above, developed by employees either in conjunction with or aside from their University employment utilizing University funds, or the staff, equipment, and facilities of the Learning Resources, Media, and Computer Centers or other University production facilities, shall be the property of the University and shall, at the University's option, be copyrighted in the name of The Regents. However, the University shall provide for the disclosure of appropriate credits and shall consider the comments of participating employees regarding subsequent presentation of the material.

2. Sharing of Royalties

The University may allow employees who develop copyrightable material, other than that mentioned above, using University resources, to share in any royalties which accrue from the sale or lease of such material outside the University, provided an appropriate agreement is entered into prior to the beginning of a project. Any such agreement shall take into account the employee's effort and contribution as well as the extent of the University's development costs (and any conditions on the recoupment of such costs imposed by extramural funding sources) in setting the employee's royalty, the University's income share, and the recoupment of the University's costs. See Policy 550-70.

3. Employee Copyrights Developed in Conjunction with University Employment

Copyrightable material prepared without use of University funds and facilities by employees in conjunction with their University employment shall be the property of the author unless the material was prepared through special contractual arrangements. However, the University shall reserve the right to receive a free and irrevocable license to use such material in connection with its educational, research, and public service functions. It shall be the policy of the University to acquire only such license right, leaving authors free to establish copyrights in their own names, if they wish. The University shall not profit from the use of such material, and authors shall have the right to periodically comment on the material as provided above.

4. Copyright Agreements With Outside Individuals And Organizations

In all cases in which persons or organizations other than University employees prepare copyrightable material with the support of University resources or facilities, exclusive of libraries, an agreement shall be executed in advance setting forth the understanding regarding the use of facilities, ownership rights, and financial arrangements.
Frequently Asked Questions

- **What is the process to register for courses?**
  - The Graduate Student Affairs Officer (GSAO) will send out a Quarterly Advising Form before each quarter begins. You would work with your Faculty Advisor to choose courses that fit your academic plan. Once your Faculty Advisor signs the form, take the form to the GSAO to obtain the Graduate Advisor approval. You can now sign up for all courses except for 297 or 299 Research via GROWL. The GSAO will enroll you in 297/299 Research. The completed form will also go in your student file.

- **Where do I register for courses?**
  - For all courses except for research, you would register online via GROWL: [https://ucribm.ucr.edu/Paws/PAWS.html](https://ucribm.ucr.edu/Paws/PAWS.html)

- **Which research course should I take, 297 or 299?**
  - You can take up to 6 units of 297 Directed Research and up to 12 units of 299 Thesis/Dissertation Research. Prior to Advancement to Candidacy 297 research is recommended. Afterwards, 299 is taken. Other factors may require that you take 299 even if you have not Advanced to Candidacy such as amount of units and co-advisors. Please see the Graduate Student Affairs Officer if you have any questions.

- **How many units of research should I take?**
  - You need a minimum of 12 units to be considered a full time student. Once you have the amount of units calculated from required courses, research units would make up the difference. For example, if you have 8 units of required courses, you would take 4 units of 297 or 299 research to make the minimum of 12 units.

- **What is a Filing Fee Petition and when should I complete one?**
  - In a special circumstance, a student who has completed all course requirements for their degree may find that they will not finish their dissertation before the quarter ends. In that situation, the student may elect to use some time the following quarter to complete their dissertation without taking courses. This is when a Filing Fee Petition is completed: to have the student avoid paying full tuition and fees for a quarter in which they will only be working on their dissertation. For more information on the Filing Fee Petition, please visit: [http://www.graduate.ucr.edu/ESforms.html](http://www.graduate.ucr.edu/ESforms.html). Go to the Forms for Student Use Section and choose the appropriate filing fee petition for your degree. Due dates are dependent on the quarter in which you will need a filing fee.

- **What is the deadline for the Filing Fee Petition?**
  - Fall quarter: September 15
  - Winter quarter: December 15
  - Spring quarter: March 15
Frequently Asked Questions (cont.)

What are the steps I should take to Advance to Candidacy?

1. If your Faculty Advisor confirms that you are ready to Advance to Candidacy (also known as the Oral Qualifying Exam), you must work with your Faculty Advisor to nominate three faculty members for your Oral Qualifying Exam committee. One faculty member will be the Chair and the other must be from within the CEE department. The third faculty member must be from another department and will act as an Outside Committee Member.

2. Once you have these members identified, e-mail the Graduate Student Affairs Officer (GSAO) with the names of these members as well as: the approximate date you will be taking the qualifying exam, your current local address, your area of research interest, the title of your presentation for the qualifying exam and a copy of your abstract. The GSAO will need this information to complete an approval form for you. The information will also be sent for approval to the CEE Graduate Committee.

3. The Graduate Committee will approve or disapprove of the three nominated members, and will also choose two additional members for your committee. The names of all five members for your committee will be sent to you. It will be your responsibility to coordinate an appropriate date and time for the exam with them and inform the GSAO of the final date and time. The GSAO will then reserve a room and you will be set for the exam.

What happens if I fail the exam?

If the committee determines that you did not pass the exam, they will then decide if you are eligible for a second examination. The second examination will take place at least three months after the original exam date. A third examination is not allowed.

What are the steps I should take for Ph.D. completion?

1. Your Oral Qualifying Exam committee will have nominated a committee for your Defense of Dissertation Committee. You would work with your nominated members to schedule a date for your defense.

2. Once a date has been determined, e-mail the Graduate Student Affairs Officer (GSAO) to reserve a room and create a flyer. The GSAO will also need a copy of your abstract and title to create the flyer for distribution.

3. You would provide copies of your dissertation to your committee at least two weeks before your defense.

4. Once your defense is completed and all members have approved, you will bring a draft of your dissertation to the Grad Division for format review. The Graduate Division will provide you with forms to complete in order to graduate.

5. You will also need to provide the Grad Division final copies of your dissertation on or before the last day of the quarter in which you defended.
Frequently Asked Questions

- Can I get a M.S. degree on my way towards the Ph.D.?

  Yes, you can however both degrees are treated separately. Although classes double count, you would still have to pursue either a M.S. Plan I (thesis) or Plan II (comprehensive exam) while still making satisfactory progress towards your Ph.D. A Ph.D. student pursuing a M.S. Plan I would have to do the following: Course requirements, Preliminary Exam (Ph.D.), M.S. Thesis Candidacy, M.S. Thesis Defense, Advancement to Candidacy (Ph.D.), Ph.D. Thesis Defense. A Ph.D. student pursuing a M.S. Plan II would have to do the following: Course requirements, Preliminary Exam (Ph.D.), Comprehensive Exam (M.S.), Advancement to Candidacy (Ph.D.), Ph.D. Thesis Defense.
May 20, 2010

Yushan Yan, Chair
Chemical & Environmental Engineering

The Findings and Recommendations Report of the Graduate Council resulting from the review of the Chemical & Environmental Engineering graduate program is enclosed. A formal response is due from your program by December 1, 2010. This response, developed in consultation with program faculty, should include appropriate program changes, descriptions of changed procedures, course proposals, etc., or other materials, as necessary. Should program faculty determine that a particular recommendation not be pursued, a rationale should be provided. Acceptance of your response package by the Graduate Council will conclude the present review of the program.

Morris Maduro, Acting Chair
Graduate Council

MM/vb

Cc: Chancellor White
   Executive Vice Chancellor and Provost Rabenstein
   Dean Abbaschian, BCOE
   Academic Senate
   *Chemical & Environmental Engineering faculty

  *Dr. Asa-Awuku
  Chen
  Cocker
  Cwiertny
  Deshusses
  Haddon
  Kisailus

  *Dr. Matsumoto
  Mulchandani
  Myung
  Norbeck
  Walker
  Wu
  Wyman
Graduate Council Findings and Recommendations
Graduate Program in Chemical & Environmental Engineering

Introduction

The Department of Chemical & Environmental Engineering (CEE) offers the M.S. and Ph.D. degrees (both initiated in 1998) with specializations in biochemical engineering and biotechnology, environmental biotechnology, air quality systems engineering, water quality systems engineering, thermodynamics and molecular modeling, advanced materials, renewable energy, and nanotechnology. From inception through Fall 2009, the Graduate Program has enrolled 177 students and granted 71 terminal degrees (26 M.S. and 45 Ph.D.). Nineteen students left with no degree, seven transferred to other engineering programs, 80 are currently enrolled, and 71 earned a terminal degree, for an attrition rate of 21% (19/90). The median time to degree was 2.3 years for the M.S. and 4.5 years for the Ph.D. At the time of the review, there were 14 faculty members with full-time appointments in the Department of Chemical & Environmental Engineering, one adjunct appointment, and four cooperating faculty members.

This was the first review of the CEE Graduate Program. The review was conducted from January 25-26, 2010. Reviewers were Professor Alex Bell (UC Berkeley), Professor Robert Kelly (NC State University), and Professor Richard Luthy (Stanford University). The report of the review team was received on February 15, 2010.

Review Team Report Summary

The report is organized into six main sections: (1) Graduate Division Support of CEE, (2) College of Engineering Support of CEE, (3) Departmental Administration and Leadership, (4) Faculty, (5) Graduate Students, and (6) Recommendations.

1. Graduate Division Support of CEE

The team echoes concerns expressed by the Graduate Division about the relatively large proportion of international students vis-à-vis recruitment funding, and the need to improve recruitment of high-quality domestic students. The team notes that financial support from the Graduate Division is “relatively generous compared to other institutions,” and believes this support should be viewed by the program as an asset. The team believes tighter admission standards could help improve the quality of domestic students.

2. College of Engineering Support of CEE

The team states that the BCOE Dean has a “very favorable opinion of CEE,” particularly in terms of extramural research support and research accomplishments. However the team also notes some tensions between CEE and the Dean with regard to
hiring, despite statements by the Dean that additional hires are needed in CEE to maintain its strong trajectory and despite the planned emphasis on environmental, materials, and energy research in BCOE over the next five years. For example, a recent proposed hire in CEE was rejected by the Dean, and it is not clear how the proposed program (and associated hires) in Civil Engineering could benefit CEE. The team emphasizes that the Dean and CEE must work together immediately to develop a five-year growth plan for CEE that meets the needs and aspirations of both the program and the college.

3. Departmental Administration and Leadership

The team finds a history of solid leadership in CEE, including the current Chair. The team recommends that development of the five-year growth plan should be a top priority for the Chair.

4. Faculty

The team states that the department is small but highly regarded at both campus and national levels, and believes this is largely due to successful extramural funding efforts. The team finds there to be strength among both senior faculty members and more recent junior hires, and believes that overall faculty morale is good. Collegiality appears to be high and mentoring of junior faculty appears to be effective.

Faculty expressed concerns about hiring -- specifically, the recent disagreements with the Dean and the impact of the lack of hires on the size of the department, the development of the Environmental Engineering discipline, and possibly on student recruitment. Faculty also are concerned that access to space and instrumentation is “mostly based on historical grounds and does not reflect the current state of research activity in the college.” The team states that greater weight should be given to contracts and grants activity, and that “failure to deal with the space issue in an effective and timely way could create a very significant program in retaining talented faculty, especially junior faculty.”

5. Graduate Students

The team finds the graduate students to be “capable and engaged” and satisfied with both the program and faculty mentoring. However the team detected “some variability in terms of ‘work ethic’ and commitment to excellence” particularly among domestic students. Students expressed concern about the perceived emphasis on the chemical engineering discipline and about the rigor and quality of some of the core graduate classes (particularly the math class). Students also felt that the core courses could be better connected to the expectations on the preliminary exam. The team suggests that the faculty might consider using oral rather than written examinations to better assess students’ abilities to synthesize knowledge.

6. Recommendations
The team has four main recommendations:

1. In conjunction with college and campus planning, CEE should immediately develop a five-year strategic plan that addresses issues such as faculty size and research space.
2. CEE should increase faculty headcount to address problems stemming from less than adequate coverage of two disciplines and to enhance the national stature of the program. One to two additional hires in each discipline over the next five years would be needed to achieve critical mass. Careful consideration should be given before starting a new program in Civil Engineering.
3. The department and college should undertake a review of current and projected space needs, and a fair process for space reassignment should be developed. As a rule of thumb, 1000 square feet of quality lab space should be allocated to each new junior faculty.
4. CEE should review its graduate curriculum particularly with respect to course offerings and preliminary exams. Teaching should be emphasized as a core value. A Graduate Student Handbook should be developed to help clarify expectations. Components of research ethics and professional development should be considered.

Overall the team views the program in “very favorable terms” and believes it is positioned to continue improving its quality and national reputation.

**Program Response Summary**

Professor Yushan Yan, Chair of the Department of Chemical & Environmental Engineering, provided the response on behalf of the program. Professor Yan’s letter states that the CEE faculty reviewed the team report and requests no corrections of fact or interpretation.
Findings and Recommendations

The Graduate Council commends the Program for the very positive nature of the review and for the progress it has made since its relatively recent inception. Based on the team report, the Council has the following recommendations:

1. Develop and implement a five-year strategic plan, in conjunction with college planning, and consistent with campus planning. Include a plan for faculty growth that will provide adequate coverage of the curriculum in both the chemical and environmental disciplines. Carefully consider how each hire will raise the national stature of the program.

2. Engage the college Dean in discussions about making CEE hires a priority for the college. The discussions should explore the impact of a new program in Civil Engineering on CEE.

3. Develop and implement a procedure for allocating access to space and instrumentation that gives adequate weight to contracts and grants activity and special consideration to new junior faculty members.

4. Thoroughly review the curriculum to ensure adequate course offerings and quality of instruction in both disciplines. Give special attention to core courses and their relationship to preliminary examinations.

5. Develop a graduate student handbook and ensure it is updated annually.

6. Increase efforts to recruit high-quality domestic graduate students.

APPROVED BY GRADUATE COUNCIL ON 5/17/2010.
Dear Colleagues,

The response of the sub-committee following up on the Creative Writing review, and the recommendation we were to make to the Council yesterday, was as follows.

We feel Creative Writing made good faith efforts to respond to Graduate Council's findings and recommendations in the time since those were issued. We recommend that this review be closed out.

Please consider this recommendation as you vote.

Thank you,

jt

James Tobias, Ph.D.
Associate Professor
Director, Graduate Studies
Department of English
University of California, Riverside
james.tobias@ucr.edu

On Mar 22, 2013, at 11:56 AM, Sarah S Miller wrote:

Dear Graduate Council,

Attached, please find the response to the F&R received from Creative Writing. Since we ran out of time at yesterday’s meeting, this is being circulated for an email vote. Please respond with your vote to either approve this response and close out the review, or to respond to the program with additional requests. For your reference, I have also attached the external reviewers’ report and all past correspondence between the program and Graduate Council. Please let me know if you have any questions.

Thanks,
Sarah
TO: Connie Nugent, Chair
Graduate Council

TO: Lynda Bell, Vice Chair
Graduate Council

TO: James S Tobias, Chair
Graduate Council Review Subcommittee A

FROM: Andrew Winer
Chair, Department of Creative Writing

DATE: January 15, 2013

RE: Creative Writing response to Graduate Council's Findings & Recommendations

To recap: Graduate Council received Creative Writing’s response to the Findings & Recommendations (F&R) in May, 2010. A response from Graduate Council was sent to the program on June 9, 2010 via Virginia Bustamante. That memo indicated that the program responded adequately to some, but not all of the Recommendations. The goal of this memo is to respond to the remaining, inadequately-answered recommendations and effectively, if belatedly, close the graduate program review of Creative Writing & Writing for the Performing Arts.

Recommendation 4: The sentence fragment surely was the beginning of a statement about Professor Krieger’s wish to move over to main campus (from Palm Desert). He has since done so, and is presently Chair of Theatre.

Recommendations 5 & 6: Please see attached Bylaws for both the Main Campus CWPA MFA Program and the Palm Desert Low Residency MFA Program.
Recommendation 8: We now enjoy regular, faculty-sponsored but student-organized MFA readings, both on campus and at bookstores and libraries throughout Southern California, including Riverside, Pasadena and Los Angeles. Furthermore, students now have opportunities to have their dramatic work produced within the curriculum, in the Playworks and New Play festivals, the new departmental short film, as well as the department-supported but student-run extracurricular Golden Mean Players ensemble.

Recommendation 10: The culture of the department has changed for the better in this respect, and more faculty involvement continues to be part of our conversation. In 2014, for example, we are moving to a model whereby the 2nd Year MFA Readings will be incorporated into Writers Week, which is always well attended by faculty, thus ensuring that graduating 2nd Years will have a significant faculty audience for their final readings. Theatre faculty regularly make appearances at play productions, and the CRWT Chair is encouraging CRWT faculty to also attend Theatre productions. We are also contemplating taking a cue from the way Palm Desert’s residency works: a couple of days when all the faculty and students are able to get together and share ideas, critical and constructive suggestions, and general community feelings; such a possibility will require resources that may not be available in our present budget climate, but it nevertheless remains a part of our conversation and has generated much interest on the part of faculty and students. The present CRWT Chair has also made it a habit to consistently stress to CRWT faculty the importance of their on-campus presence—particularly those faculty (a majority of the department) who live in Los Angeles. This is obviously an ongoing issue, but, again, one that is very much a part of our regular conversation. That is to say that it is never not on our radar. To be sure, the current Chairs, Grad Advisors, and the Graduate Director are all regular presences on campus, and very involved in the weekly culture of the program.
Date: June 9, 2010

From: Paul Green, Chair
Graduate Council Review Subcommittee A

To: Chris Abani, Director
Graduate Program in Creative Writing & Writing for the Performing Arts

Re: Graduate Program Response on May 19, 2010 to Findings & Recommendations

The Graduate Council’s Review Subcommittee A met on June 1, 2010 to consider the Program’s response to the Findings & Recommendations. The Subcommittee feels that the Program has responded adequately to some but not all of the Recommendations. The Subcommittee’s specific responses to the Program, numbered according to the original findings and recommendations, are below.

1. Accepted.

2. Accepted.

3. Accepted.

4. Please clarify the apparent sentence fragment in your response: “The adjunct faculty and Stu Krieger from that program who desire it will be transferred”

5. Your response mentions your efforts to revise the handbooks for both the Riverside and Palm Desert programs. The Subcommittee interprets a “handbook” as a document used primarily by students and their major professors as a reference for guiding students through the program. Rather than a handbook, the Subcommittee expects the program to develop bylaws to address the issues raised in this recommendation. Bylaws are distinctly different from a handbook and are used primarily to define how the participating faculty should administer the program. Bylaws for interdepartmental programs are reviewed by the Graduate Council; handbooks are not. Attached is a copy of the guidelines for developing bylaws for Interdepartmental Graduate Programs as well as a sample set of bylaws for the Program to reference. Sample handbooks can typically be found on the websites of other graduate programs (e.g., http://envisci.ucr.edu/downloads/ESGPhandbook.pdf).

6. See #5 above.
7. Accepted. Please notify the Graduate Division when the handbooks are complete.

8. The Subcommittee notes that the external team report emphasizes the importance of readings and production opportunities for students. The report states bluntly (p.17): “Opportunities for production in all programs is not an option, but an essential.” In light of this, the Subcommittee requests additional information from the Program regarding its plans to enhance these opportunities, including potential sources of funding. At the very least, the program should convey to the CHASS Dean the importance of such opportunities and request additional funding from the college for this “essential” activity.

9. Accepted.

10. The Subcommittee is encouraged that the faculty has recommitted itself to a greater on-campus presence, but remains concerned that this may not materialize given the nature of the discipline and the current culture in the Program. Faculty availability, presence, and engagement are crucial elements of program quality in the short-term, and also for building and maintaining a nationally competitive program in the long-term. The Subcommittee therefore requests more information from the Program regarding what else it specifically will do, beyond the student performance committee, to promote faculty engagement with students. Regarding class time and office hours, the Subcommittee suggests that the Program consider utilizing teaching evaluations and perhaps an annual survey of students to determine whether faculty are meeting these obligations. Classroom instruction is the province of department chairs. The Subcommittee urges the Chairs of Creative Writing and Theatre, in the strongest terms, to discharge this important responsibility.

11. The Graduate Division does not provide such compensation to programs.
MEMORANDUM

TO: MORRIS MADURO, ACTING CHAIR
   GRADUATE COUNCIL

FROM: CHRIS ABANI, DIRECTOR
       MFA PROGRAM IN CREATIVE WRITING AND WRITING FOR THE
       PERFORMING ARTS

SUBJECT: SECOND RESPONSE TO GRADUATE PROGRAM REVIEW

DATE: 05/19/10

Please find attached our program response to the action memo from the Graduate Council following our program review. This represents both sides of the program and faculty.

Sincerely

Chris Abani
Following the external review report of the MFA in Creative Writing and Writing for the Performing Arts in Riverside and the satellite program in Palm Desert, and the recommendations of the graduate council, the two departments that host the joint program (Creative Writing and Theater) and the program staff (the Director and MFA Coordinator) have met and begun to take action on the points listed below extracted from the report.

This response is to inform the graduate council not just on the areas where we have achieved compliance, but also to respond to areas where we have begun to comply but need more time to achieve the stated objectives.

1. Work with the Graduate Dean to establish a new Director for TPR and ensure that the position rotates between the departments of Creative writing and Theatre.

When the directorship was set up two years ago, in 2008, it was agreed that it would reside with an appointee for two years and would rotate between the two departments that co-host the program.

After consultation, discussion and a joint faculty meeting for the Program and a unanimous vote, Professor Robin Russin was selected as the candidate for the position. The current director, Prof. Abani has sent Professor Russin’s nomination up to the Graduate Dean, J. Childers, who has accepted it and passed it on to the graduate council for final approval.

2. Work with the Dean of CHASS to clarify the responsibilities of the Administrative Assistant—with particular attention to how this position can better link the departments together—and to restrict the role of the MSO to administrative matters.

It is important here to point out that the AA position was created after consultation with the current director and staff, to take the extra workload of program administration off the MSO, who is currently responsible for the CRWT program as a whole. The MSO graciously undertook many of the tasks that this position (that of the AA) should have been undertaking in the difficult transition time it took to train and clarify the roles. The MSO has gladly passed those tasks onto the AA.

The important linking of the two departments can only be partially facilitated by the AA, but this will be achieved best through the programmatic approaches that she facilitates. The point of the appointment is to create a unified program, and then have the program form the link, rather than that individual staff or faculty of appointees such as the directors. We have already implemented some programs prior to the review like joint admissions committees and joint program administration committees.

Post report and recommendations, we have taken further steps along these lines. One of them is to develop a monthly newsletter, prepared by the AA, with announcements of
upcoming deadlines, news of faculty and student publication and readings, statements by the chairs and advisors of the two departments, local literary and theatrical events, and other news. A first trial publication of this new venture was emailed on April 22, 2010, with new issues to follow on the third Friday of each month, overseen by the Program Director and produced by the Administrative Assistant, with contributions from both departments and from both the main campus and Palm Desert programs.

The newsletter is one way to better link the two departments and, at the same time, to increase transparency through regular publication of all Program activities.

With the help of the chairs of both theatre and creative writing, the faculty have also agreed to regular quarterly meetings of the full faculty (the first two—and the first two in the history of the program—have already occurred), and the faculty committed itself by acclamation to the institution of regular events involving graduate students and faculty from both departments.

The new graduate admissions process instituted this year (SIS), and the internal program online system using Blackboard, initiated in 2008, that allows public online evaluation of all prospective students, with visible comments by faculty from both programs, have also added a level of mutual involvement that didn't exist in the past, and added to a sense of transparency and community.

The joint production of a revised Handbook for the program has done the same. The said handbook is now ready and undergoing final edits.

We are bringing all of TAs from both programs into a common space (or at least onto one floor) and hope this will ease some of the anxieties in this area. We are also reviewing our current TA selection process (using the CNAS model) to create more transparency.

3. Work with the Dean of CHASS to determine if there is viable neutral space for housing the CWWPA Program administration.

Finding neutral space was not seen as viable or advisable by the majority of the faculty or by the Administrative Assistant (AA). The faculty feels whatever perceived need existed for a neutral administrative space has already diminished (many doubted it was ever very widespread) and will continue to diminish. If the question arises again we will of course revisit it.

Most of the TA offices are on the fourth floor of INTS, next door to the AA's office, and arrangements are being made to house the remaining TAs on the same floor. One faculty member suggested housing the AA in the Arts building, but this would isolate the AA from the majority of students; would not appear to be neutral space either, but to favor Theatre; and would not foster a greater sense of community. The only practical neutral space, one that would encourage rather than discourage a greater sense of community,
might be the third floor of INTS, halfway between the two departmental homes, but such a move seemed to have very little value, to incur expense, and to require an extra office (presumably the Director would not relinquish their faculty office). In the faculty meetings held in response to this report with the full faculty from both departments, there was very little interest in any such move. The AA reports that she has not heard a single complaint from students about the location of her office.

4. Engage the CWWPA Program faculty and relevant UCR administrators in a discussion of the future of the Traditional Program at Palm Desert. Consider the option of closing this program and report your deliberations to the Council by June 2010.

The faculty on the main campus has agreed through vote to close the Traditional Program at Palm Desert. This was brought to discussion with the CHASS Dean and it was agreed that it is no longer a viable program and that the low residency would be the way forward. This, it was felt, would also help with the branding and identity issues raised by the conferring of a degree with the same name.

Palm Desert Associate Director Tod Goldberg has discussed the various options with all students remaining in that program and all but two have opted, without demur, for finishing their degrees in the Low Residency Program. The other two students would prefer to finish their degree programs on the main campus, and the faculty by unanimous vote on its meeting of April 19 agreed to accept those students into the main campus MFA. The understanding is that these students would not be eligible for any main campus funding sources that were not available to them in Palm Desert. The program will thus be shut down at the end of Spring quarter 2010.

The graduate dean was included in the conversation and has agreed to this.

The adjunct faculty and Stu Krieger from that program who desire it will be transferred

5. Engage the CWWPA Program faculty and relevant UCR administrators in a discussion of the relationships between the Riverside and Palm Desert campus programs. Address the inherent problems with multiple programs awarding the same degree. Establish, document, disseminate, and enforce how these programs function in concert with and independently of each other.

In meetings on March and April 19, the faculty committed by acclamation to forging a better relationship between the two programs.

The original idea, when the program was founded, was that sharing fulltime faculty by splitting their appointments between the two campuses would provide the social and academic glue between programs, but the Palm Desert program, caught between the necessity to become self-supporting and the beginning of serious budget cuts, was forced
to hire non-ladder faculty for the majority of its courses, and faculty on strenuous (if for no other reason than because of the commute) overloads. Two of the three faculty with joint appointments resigned their Palm Desert appointments and became full time Riverside faculty. The fact that these three professors taught on both campuses, and the fact that some ladder faculty from Riverside taught a course in Palm Desert on overload did little to bind the two programs together. In the beginning there were great hopes that the communications technologies built into the Palm Desert facility would allow for joint classes, readings and other group activities, but those technologies never became operational. Faculty and students on both campuses were invited to joint events, but very few ever made the trip in either direction.

In the past, the lack of MFA meetings left each department to develop its own, separate relation to the Palm Desert programs, and the hectic pace of Palm Desert program development left little time on that end for worrying about the relationship.

Regular full-program faculty meetings, with Palm Desert participation, will provide the basis for future collaborations. Fruitful areas of cooperation include more thorough discussions of future hires, sharing of visiting writers, joint publication ventures, and communication through the newsletter.

Palm Desert academic personnel procedures are handled by the Creative Writing MSO, and with the growth of that program to a size considerably larger than the Riverside program, this has required significant increased work. We would like to see a more thorough dissemination of search materials for the Palm Desert program on the Riverside campus; the MSO properly compensated for this increased workload, and full program faculty meetings for votes on new hires.

The faculty is circulating and revising the Handbooks for each program, with the idea of establishing or re-establishing, documenting, and disseminating the practices and procedures of each program, including policies for admissions, curricular requirements, course scheduling, advising, TA selection, student grievances, and other important aspects of program administration and functioning.

6. Establish, document, disseminate, and enforce bylaws for each program including policies for admissions, curricular requirements, course scheduling, advising, TA selection, student grievances, and other important aspects of program administration. Work to ensure transparency.

Handbooks are being completed for each program. They will contain all the relevant information, and the Director will translate these practices into bylaws, which the faculty will then ratify.

7. Publish a handbook for each program, and ensure these are updated at least annually.

See above. The Director will ensure annual updates.
8. Provide more opportunities for student readings and productions; ensure adequate faculty involvement with these.

To the extent these have no cost, the departments are dedicated to make them happen. The sad fact is that reductions in our discretionary budgets will ensure fewer rather than more extracurricular activities.

It also bears stating here that faculty such as Prof Russin and Abani have both assisted students with setting up on-going readings with bookstores in LA such as Skylight Books. The Arts Block has also helped where they can. Professor Jayme has through Writers Week over the years, helped with this same issue. We also have a bi-monthly on campus reading for students that has been in place for five years.

9. Develop and implement specific strategies to improve communication and interaction among faculty, students, and staff. Ensure an equitable sharing of the programmatic administrative responsibilities across the departments of Creative Writing and Theatre.

We believe the concerns of the first sentence are addressed above; the rotating Directorship ensures some equity in administrative responsibilities, and the Director has been charged to ensure an equitable sharing of the programmatic administrative responsibilities across the departments.

10. A physical on-campus presence by faculty is important to students. Ensure adequate contact time with students, including class time, office hours, and faculty presence at student readings and productions.

At the most basic level—standard class time, office hours—procedures are already in place, and faculty have expressed their commitment to these. Faculty presence at extracurricular activities is by its very nature voluntary, and the balkanized nature of the faculty ensures that TV writing faculty will be unlikely to show up for the poetry readings, and the novelists unlikely to attend light opera. That being said, we have recommitted ourselves as a group to a more visible presence of the faculty, and have assigned faculty (as a service activity) to a student performance committee, chaired by the director and staffed by the person in charge of student readings in Creative Writing (this coming year Juan Felipe Herrera) and Rickerby Hinds & Erith Jaffe-Berg in Theatre.

11. Prepare for an internal review of the CWWPA Program in two years.

We ask that the Graduate College ensures adequate compensation for any staff time required for such a review.
March 23, 2010

Christopher Abani, Director
Creative Writing and Writing for the Performing Arts

The Findings and Recommendations Report of the Graduate Council resulting from the review of the Creative Writing and Writing for the Performing Arts graduate program is enclosed. A formal response is due from your program by June 24, 2010. This response, developed in consultation with program faculty, should include appropriate program changes, descriptions of changed procedures, course proposals, etc., or other materials, as necessary. Should program faculty determine that a particular recommendation not be pursued, a rationale should be provided. Acceptance of your response package by the Graduate Council will conclude the present review of the program.

Alan E. Williams, Chair
Graduate Council

AEW/vb

Cc: Chancellor White
Executive Vice Chancellor and Provost Rabenstein
Dean Cullenberg, CHASS
Academic Senate
*Creative Writing and Writing for the Performing Arts faculty

*Aslan        *Hoffman        *Russin
Barr                                Simon
Buckley                      Jaffe-Berg    Smith
Davis                       Jayme        Straight
Evered                  Krieger      Waters
Goldberg                   Lalami      Whitney
Herrera                   Lutz         Winer
Hinds                     Park         Yu
Graduate Council Findings and Recommendations
Graduate Program in Creative Writing & Writing for the Performing Arts

March 19, 2010

Introduction

The Graduate Program in Creative Writing & Writing for the Performing Arts (CWWPA) offers the M.F.A. degree (initiated at the main campus in 2002 and at the Palm Desert campus in 2005). From inception through Summer 2009, the Program has enrolled 170 students (101 at the main campus and 69 at Palm Desert) and granted 86 degrees (72 at the main campus and 14 at Palm Desert). Twelve students left with no degree (7 at the main campus and 5 at Palm Desert), 72 students are currently enrolled (22 at the main campus and 50 at Palm Desert), and 86 earned a degree, for an attrition rate of 12% (12/98 overall; 7/79 (9%) at the main campus and 5/19 (26%) at Palm Desert). The median time to degree for students completing degrees is 2 years. At the time of the review, there were 22 ladder-rank faculty participating in the Program (all from the departments of Creative Writing and Theatre), two visiting assistant professors, and one assistant adjunct professor.

This is the first review of any kind for the CWWPA Program. The review was conducted from October 19-20, 2009. Reviewers were Professor David Bradley (University of Oregon), Professor Camille Dungy (San Francisco State University), and Professor Emeritus Jorge Huerta (UC San Diego).

Review Team Report Summary

There are five main sections of the review team report: (1) Introduction and Overview, (2) Low Residency Program at Palm Desert, (3) Traditional Program at Palm Desert, (4) Traditional Program at the Riverside campus, and (5) General Recommendations. 1

1. Introduction and Overview

The review team found the Traditional Program at the Riverside campus (TPR) and the Low Residency Program at the Palm Desert campus (LRPD) to be “vibrant, viable, and potentially competitive with top programs.” However, the team found the Traditional Program at Palm Desert (TPPD) to be “anemic, derivative, dependent, pedagogically inferior, and a potential liability.” Despite the fact that each of these programs awards the same degree, the team found the only shared aspect among them to be the cross-genre concept. In terms of how the programs function, the team identified common problems related to “an ongoing and persistent lack of communication, spirit of negotiation, and conceptual agreement among all involved entities.” The team found there to be a “lagging sense of community,” an insufficient amount of mutual respect, and a “certain disdain for the expectations and concerns of the students” in each.

1 Throughout this document, the MFA degree program is referred to as the “CWWPA Program” or “the Program,” while the Riverside and Palm Desert operations are referred to as “programs.”
program. Therefore the team recommends that the top priority for CWWPA should be to foster a greater sense of community and mutual respect, mainly through better communication and institutionalized procedures including a process for student suggestions and grievances.

2. Low Residency Program at Palm Desert (LRPD)

The review team believes that LRPD is based on an established, viable, and potentially profitable pedagogical model that continues to grow in popularity. The team finds that LRPD is generally similar to other programs that have adopted this model, in terms of its functioning. LRPD is “well-equipped, in terms of faculty” in the area of writing for the performing arts, but “allows little opportunity for actual performance.” The team sees this as a weakness rather than a critical problem. Because LRPD is so new and because the team spent most of their time on the Riverside campus engaged with the Riverside program, it recommends only that LRPD be “reevaluated in three years by a [team] with specific experience in low residency programs.”

3. Traditional Program at Palm Desert (TPPD)

Although TPPD is supposed to be no different from TPR, it has no resident ladder-rank faculty, “inadequate consultation with the full faculty of either the Creative Writing Department or Theatre Department,” and differing standards of instruction. There is also a “lack of production opportunities for the playwrights and screenwriters at TPPD” which effectively undercuts the primary purpose of such a program. The team is “greatly concerned” about the faculty staffing situation, primarily because the TPPD Director has the authority to hire adjunct faculty “without the advice and consent of any personnel committee staffed by ladder faculty,” and wonders if such an ad hoc process is permitted anywhere else in UC. The team worries that this practice is not sustainable for a program that desires to be first rate. The team is also concerned about the admission process at TPPD, which seems “arbitrary, ambiguous as to standards, and commercially-driven to a troubling degree.”

Generally the review team feels that by purporting but failing to be the same as TPR, TPPD creates a liability for the reputation of TPR and the credibility of UCR. The team believes that TPPD is “inferior” to TPR and largely serves a perceived need by the UCR administration to utilize the Palm Desert Campus. Therefore the team wonders “whether TPPD should have a future,” and urges that this question be answered soon.

4. Traditional Program at the Riverside Campus (TPR)

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2 During the exit interview, the team stated that community, connections, and networking are very important in this field, but the students are “not getting any help” in these respects. The team also stated that there are insufficient amounts of academic advising and student-faculty interaction. They noted that there is no programmatic orientation offered for incoming students.

3 The team believes that the UCR administration could do more than it has in the past to help the programs solve these problems.

4 The team acknowledges that students seem “engaged, contented and committed” and that the class scheduling and part-time enrollment option make the program appealing to a different cohort of students relative to TPR. During the exit interview, the team also stated that the Palm Desert program director is doing a “wonderful job” considering the challenges he faces.
The team writes that TPR has “an impressive faculty, good student financial support, and ample and enviable housing.” The cross-genre philosophy is perceived by the team to be “venerable and demonstrably viable” and a distinguishing characteristic that makes TPR different from and potentially superior to many top programs.

However, the team states that TPR has “problems of development and identity” which appear to stem from the relationship between the two departments (Creative Writing and Theatre) that are effectively the exclusive participants in this interdepartmental graduate program. The development problems are related to the unequal growth rates the departments have experienced, with Creative Writing now having a dominating presence in the program. The team finds that there are both real and perceived academic and administrative tilts toward the creative writing component, which has led to a sense of disjunction within the program. The team says that “students and some faculty perceive the program as being made up of two distinct cohorts.” Cohesion, community, and cooperation are lacking, with the team going so far as to say that the departmental faculties “appear to have at times behaved irresponsibly with respect to the joint MFA program.” For example, although the team acknowledges that an off-campus public presence by the faculty is necessary to maintain and enhance the reputation of the program, students have sometimes paid an unfair price including canceled and shortened classes. The team states that faculty must fulfill their teaching commitments to the program and provide adequate contact hours for students.

The problems of identity are reflected in the team’s comment that TPR must “state clearly, as a result of a serious internal conversation, what it is, what it intends to be; to cease to try to be all things to all people, and to decide what it will be and for which people.” The team feels that the program’s “promise of interdisciplinarity is unsupported by what students seem to be taking, and required to take, and is not coherently integrated into the requirements of graduate-level study.” Some students apparently have had difficulty meeting the cross-genre requirements because individual faculty will not admit them into workshops outside their area of concentration. The team provides several specific suggestions to address this problem.

The team report also identifies specific structural and administrative issues in the program that could be improved. The team is pleased with the establishment of a rotating Director and the allocation of an administrative assistant to the program. However, the team believes that the “functions and responsibilities of the administrative assistant need to be clarified” and rearranged, and believes that the current reporting structure (to the Creative Writing MSO) is potentially problematic. The team writes that “establishment of the MFA program in neutral space would encourage both students and others to view the administrative assistant as the link between departments, rather than as part of any.”

One of the team’s “most serious concerns is the lack of documentation and standard published protocols governing the operations of TPR.” The team finds that “information about the specific mechanics of the program seem to be at best unofficial and certainly non-binding.” The result is

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5 During the exit interview, the team stated that the program focuses too much on publishing at the expense of student placements.

6 During the exit interview, the team stated that the cross-genre concept is attractive but found the implementation of it to be unclear and confusing.
the appearance of arbitrariness and favoritism, which has led to “vehement and persistent objections of some students to some administrative decisions and the manner in which these decisions were made, published, and enforced.” The team states that at times the program seems to run as an “apparent dictatorship,” whereas “good administration depends on consistent, published, and binding policies and procedures.” The team finds the absence of these to be an “intolerable liability” and recommends that the program be required to produce a handbook immediately. The team also recommends that the program leadership “be required to document their decisions and actions, and the supporting rationales, and that these practical actions be regularized, codified and published no later than the end of academic year 2010-11.” The team specifically states that “it is crucial that the MFA program establish consistent, written protocols for student selection, curriculum, advising, TA selection, and grievances.” The team also recommends precisely defining, promulgating, and vigorously enforcing the roles, responsibilities, and limitations of all programmatic positions.

Other specific recommendations for TPR include:

- Redouble efforts to make this program work.
- Establish participation requirements for program faculty, including attendance at student readings and performances and at least biannual meetings of the full faculty.
- Work to concentrate teaching (but not advising) responsibilities for each faculty into two quarters so that most off-campus requirements can be satisfied during the third.
- Develop an admissions protocol in which faculty from multiple genres review admissions applications; undertake better assessment of student abilities before they arrive on campus; make this a joint process involving faculty from both departments.
- Establish clearer communication with students, particularly regarding TAships; utilize a TA selection committee with applications and interviews.
- Provide more opportunities for production; direct funding and resources into this area.
- Establish a student-run reading series with rotating faculty attendance.

5. General Recommendations

The team is very concerned that all three programs confer the same degree even though they are substantially different programs. Therefore the team strongly recommends establishing separate degrees for the traditional and low residency formats. The team also believes that a “linguistically neutral” name would be beneficial for the CWWPA Program, though it does not provide any specific suggestions. The team emphasizes that the problems of documentation that are made prominent in the TPR section of the report are common to all programs and need to be addressed; to the extent the programs remain unified in the future, documentation and guidelines must be made consistent across programs. Finally, although the team believes that in the long-run the program should transition from two years to three, they recommend that it remain a two-year program in the near-term while the other issues identified in the report are addressed.

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7 During the exit interview, the team stated that in some cases verbal commitments to students have not been kept and the current director has made “ad hoc decisions,” both of which have contributed to the problem.
8 With regard to TAships, and in light of the success the program has had with its students serving as TAs in a variety of departments, the team states that “it seems a shame that the TAships appeared to be a contentious and anxiety-inducing issue for so many of the MFA graduate students.”
Program Response Summary

Professor Chris Abani, Director of the Riverside program, and Professor Tod Goldberg, Director of the Palm Desert programs, provided the response on behalf of the CWWPA Program.

Professor Abani’s letter, on behalf of TPR, states that TPR is “not connected” to the Palm Desert programs, and that the main campus faculty “unanimously distances themselves” from the Palm Desert programs; however TPR disagrees that there are differing standards of instruction across programs. The letter states that the Administrative Assistant reports directly to the Associate Dean of CHASS, not the Creative Writing MSO. TPR disagrees that classes were cancelled due to external activities by faculty members, and believes that the team overlooked efforts by the faculty to support student readings. TPR believes that both faculty cohesion and implementation of the cross-genre concept are better than the team has reported. Professor Abani’s letter states that a faculty-authored handbook exists, and that policies and procedures—particularly with regard to admissions and TAships—are clearer and more transparent than the team suggests.

Professor Goldberg’s letter, on behalf of TPPD and LRPD, states that these programs afford students greater opportunities for performance than suggested by the team. The Palm Desert programs also agree with TPR that the instructional standards do not differ across campuses, and add that neither do the academic and admissions standards. Professor Goldberg’s letter cites many ladder faculty who have taught at Palm Desert, and states that the Palm Desert faculty hiring process has included input from UCR ladder faculty and the Associate Dean of CHASS.

Findings and Recommendations

The Graduate Council acknowledge the unique and, in many ways, challenging situation faced by the CWWPA Program, particularly with regard to its presence at both the Riverside and Palm Desert campuses. Although this review has reaffirmed that the faculty associated with the Program are impressive scholars, it also has identified several crucial issues that must be addressed if the Program is to remain viable.

The Council is concerned about TPR’s response that the “UCR main campus joint program is not connected to the Palm Desert program” and that the “faculty of the main program unanimously distances themselves from the Palm Desert program.” There is only one MFA in Creative Writing and Writing for the Performing Arts that is conferred by all three programs (TPR, TPPD, and LRPD), and therefore the programs are intimately connected even if their financial and operational structures are distinct. Furthermore TPR’s statement about the lack of any connection between programs strikes us as inconsistent with its statement that standards of instruction do not differ across programs, and inconsistent with what Professor Goldberg wrote about the involvement of ladder rank faculty from the Riverside Campus in both instruction and hiring at the Palm Desert campus. The Council concludes from this that the relationship between the programs is unclear even to the faculty in the programs, and believes that this contributes to an ad hoc approach to administering the CWWPA Program that is detrimental, risky, and unsustainable.
The Council also echoes the team’s concern that administration is a problem within each of the three programs, as well. The Administrative Assistant for TPR may, in fact, report to the Associate Dean of CHASS and not the Creative Writing MSO, but even the appearance of the latter reporting structure is problematic. The Council feels similarly about policies and procedures in general: clarity, transparency, fairness, and effectiveness should be judged not by the program leadership but by the students and faculty at large. The Council notes a litany of troubling comments by this group, expressed in the anonymous questionnaires: the program leadership is aloof; the program is run by the MSO who determines when and if classes are taught; the program leadership is unreceptive and hostile to student suggestions and concerns; the class scheduling process is opaque; the program specifics are never adequately explained to students; disorganization and miscommunication; lack of information flow and structure; seemingly uncoordinated academic advising; lack of communication about course offerings, degree requirements, TAships, and scholarships; lack of transparency; program requirements are unclear; program is run by administrative fiat; faculty have little say in many academic matters. One respondent writes: “The greatest weakness is in the administration of the program, where there are major problems with efficiency, scheduling of classes, interactions with graduate students and faculty by particular staff members, and sometimes unfair favoritism shown to certain grad students and faculty by administrators and staff. This is reflected in TA awards, in course scheduling, and several other areas, and has led to a sad lack of morale among students and faculty.”

The Council draws the same conclusion: poor administration has been a main contributor to low morale. However the Council also believes that the overall level of faculty engagement in the CWWPA Program has contributed, as well. Although TPR states that classes were not cancelled due to external activities by faculty members and believes that support for student readings and productions is adequate, the Council finds compelling evidence to the contrary provided by the team and by the anonymous questionnaires. Although some students seem satisfied with the level of engagement in teaching and mentoring, many make it clear that they are not -- to the extent that the Council is concerned about the ramifications for the reputation of the CWWPA Program and its ability to recruit good students in the future. The Council is concerned that the faculty has, in some cases, shied away from its responsibility to own its curriculum and ensure that instruction and mentoring are delivered to students responsibly.
In light of these findings, the Council has the following recommendations:

1. Work with the Graduate Dean to establish a new Director for TPR and ensure that the position rotates between the departments of Creative Writing and Theatre.

2. Work with the Dean of CHASS to clarify the responsibilities of the Administrative Assistant -- with particular attention to how this position can better link the departments together -- and to restrict the role of the MSO to administrative matters.

3. Work with the Dean of CHASS to determine if there is viable neutral space for housing the CWWPA Program administration.

4. Engage the CWWPA Program faculty and relevant UCR administrators in a discussion of the future of the Traditional Program at Palm Desert. Consider the option of closing this program and report your deliberations to the Council by June 2010.

5. Engage the CWWPA Program faculty and relevant UCR administrators in a discussion of the relationships between the Riverside and Palm Desert campus programs. Address the inherent problems with multiple programs awarding the same degree. Establish, document, disseminate, and enforce how these programs function in concert with and independently of each other.

6. Establish, document, disseminate, and enforce bylaws for each program including policies and procedures for admissions, curricular requirements, course scheduling, advising, TA selection, student grievances, and other important aspects of program administration. Work to ensure transparency.

7. Publish a handbook for each program, and ensure these are updated at least annually.

8. Provide more opportunities for student readings and productions; ensure adequate faculty involvement in these.

9. Develop and implement specific strategies to improve communication and interaction among faculty, students, and staff. Ensure an equitable sharing of the programmatic administrative responsibilities across the departments of Creative Writing and Theatre.

10. A physical on-campus presence by faculty is important to students. Ensure adequate contact time with students, including class time, office hours, and faculty presence at student readings and productions.

11. Prepare for an internal review of the CWWPA Program in two years.

APPROVED BY GRADUATE COUNCIL ON 3/19/2010.
March 13, 2013

Dear Professor Nugent and Committee Members,

This letter is to be considered the Department of Entomology’s formal response to the UCR Graduate Council’s Findings and Recommendations (dated December 13, 2012) resulting from our recent graduate review. Overall, it was extremely encouraging to the whole department to see the strongly positive tones of the review, providing independent corroboration that we are in general on the right track and doing the right things. Below, I have denoted and responded to the four findings and recommendations from the Council.

1. The Program should continue efforts to increase diversity among its faculty as it proceeds with its hiring plan. They should continue to advocate for replacement faculty in conjunction with their existing hiring plan. Cooperating faculty could be brought in from other departments, including from the new Medical School. The Graduate Council would like to see the Program articulate their vision for how upcoming hires will best serve and integrate into the program, and also how the Program will address diversity and leadership issues in the coming years.

Response to Diversity Issues: This is perhaps one of the most chronically frustrating issues facing the Program and one with which we have continually grappled for the last ~15 years. Let me first state categorically that the Department is 100% in favor of increasing our diversity in all respects. A brief history of our efforts in this area needs to be stated such that the Council can understand the nature and extent of our efforts to increase the Department’s diversity. Since 1996, in addition to our normal search procedures, the Department has attempted to hire six targeted female faculty members (2 at the Assistant level, 2 at the Associate level, and 2 at the Full level). Two of the six were willing to accept our offers, but required spousal accommodations which were denied without consideration by the EVC at the time. Two declined our offer due to personal reasons (did not want to move to southern California), and one attempt was cancelled due to a hiring freeze. For our most recent attempt (June, 2012), the EVC/Provost refused to consider the hire. Subsequently, this individual was hired by the University of Illinois, the top-ranked Entomology program in the country (UCR Entomology was #2 in the recent NRC rankings). Thus, three out of six of our directed searches were killed by the UCR administration while criticisms of lack of diversity continue. Without full support in our efforts to correct diversity imbalance in our faculty, we cannot hope to rapidly correct this issue. Specifically, in these three searches, the Department did its part in persuading the candidates to come to UCR. However, the administration stymied these efforts by failing to provide the resources required to consummate the hires.

As to our normal search procedures, we continually make every effort possible to cast a wide net to capture applicant pools that are as diverse as possible. In addition to normal search routines, this includes an extensive “on-the-ground” advertising campaign to make colleagues aware, not only of our
academic desires in the position, but also our need for faculty diversity. In the last several searches, this has resulted in very diverse candidate pools and successful diversity hires. But again, here too, we have been stymied by administrative decisions beyond our control. One search resulting in an offer to a diversity candidate ultimately failed, because the EVC at the time refused to consider spousal accommodation issues. Summing across both directed and normal searches, five out of seven offers that would have increased our diversity have died for reasons outside and above Departmental control.

None-the-less, we have made significant improvement in both gender and ethnic diversity over the last decade. Examining our last eight faculty hires, five have been hires from underrepresented groups, with three of these being women. Our future plans to address this situation are simply to continue to make every available effort to maintain broad candidate pools, enthusiastically encourage diversity candidates to apply, and to continue to target outstanding candidates for directed hires at the Associate and Full professor levels as opportunities allow. Furthermore, it was suggested that we increase diversity in the Department indirectly by offering Cooperating Faculty Members status in Entomology to faculty from underrepresented groups in other departments. We had already begun to do this, and we are continuing to do so. Currently we have four CFM with the intention of adding a fifth; two of the five represent underrepresented groups.

Response to Vision for Upcoming Hires: The Department has a long-term hiring plan through approximately 2021 (see attached Table 2). This plan was developed during a departmental retreat in 2010 and was presented within the graduate review documents. The hiring plan provides a mechanism to account for maintaining and restructuring (rebuilding if necessary) the research emphasis of the graduate program as we transition through a wave of retirements. All faculty hires, targeted or otherwise, are currently following that plan. When fully implemented, the plan will necessarily provide a balance of junior, mid-level, and senior faculty across the four areas of Departmental general expertise. This should allow an adequate pool of faculty from which leaders may be chosen. Additionally, the current Departmental administration is striving to place junior faculty on departmental committees as soon as possible in their careers such that when promoted they will have the experience and expertise to take on leadership roles in the Department.

2. Some faculty recruit graduate students primarily through other programs, which could potentially reduce the size of the student body in the Entomology program. This issue relates at least in part to newer methodologies within the discipline. The program should address this issue. One potential solution would be for the course curriculum and program requirements to include tracks that attract graduate students and cater to research interests of recent hires.

Response: The program is now evaluating curriculum models that include specific tracks within Entomology to accommodate the needs of students with interests that span the spectrum from traditional whole-organism research to the most cutting edge molecular and subcellular experimental approaches. We hope to have recommendations for such models available for faculty consideration soon. However, prior to solidifying and releasing these recommendations, we must first wait for the CNAS Redesign recommendations to be released as these may impact our program and curriculum. We have also broadened our admission requirements to accommodate the needs of a more academically diverse pool of students by dropping the requirement for specific numbers of courses in traditional undergraduate science subject areas (e.g., a full year of organic chemistry plus labs). Instead, each applicant is
evaluated on the basis of the totality of their undergraduate coursework and practical experience related to their proposed area of study.

3. *The program course requirements should be evaluated in comparison with other similar programs, and streamlining of these requirements should be considered. Courses that cannot be offered due to retirements should be removed from the curriculum in a timely manner. The Graduate Council would like to see a summary of proposed course requirements, how these align with the diverse research interests among the participating faculty, and how the overall MS and PhD requirements are comparable to those of other life sciences graduate programs within UCR.*

**Response:** Below (Table 1) we provide the program course requirements for the following graduate programs: Entomology; Evolution Ecology & Organismal Biology; Cell Molecular & Developmental Biology; Genetics, Genomics & Bioinformatics; Biochemistry & Molecular Biology, Neuroscience, Chemistry.

<table>
<thead>
<tr>
<th>Program</th>
<th>Required Graduate Courses (3-5 units ea)</th>
<th>Program “Weekly” Seminar Course (1 unit)</th>
<th>Program “Participatory” Seminar Courses (2 units)</th>
<th>Other additional courses &amp; seminars if required.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entomology</td>
<td>3 courses (Entom. Core)</td>
<td>Yes, every qtr.</td>
<td>4, 1 per year</td>
<td>Advisory Committee dependent.</td>
</tr>
<tr>
<td>EEOB</td>
<td>3-4 (depending on track)</td>
<td>Yes, every qtr.</td>
<td>NA</td>
<td>Advisory Committee dependent.</td>
</tr>
<tr>
<td>CMDB</td>
<td>3 courses</td>
<td>Yes, every qtr.</td>
<td>2</td>
<td>1-2 additional courses from a proscribed list (2-4 units each)</td>
</tr>
<tr>
<td>GGB</td>
<td>4-5 (selection varies by track)</td>
<td>Yes, 1 qtr./year</td>
<td>NA</td>
<td>Advisory Committee dependent.</td>
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<td>Neuroscience</td>
<td>5 (selection varies by track)</td>
<td>Yes, every qtr.</td>
<td>5 (2/year prior to orals, 1/year thereafter)</td>
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<td>Biochemistry</td>
<td>9</td>
<td>Yes, every qtr.</td>
<td>5</td>
<td>quarterly</td>
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<tr>
<td>Chemistry</td>
<td>5 (varies by track)</td>
<td>Yes, every qtr.</td>
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Examination of Table 1 reveals (surprisingly to us) that the required course requirements for the Entomology program are neither excessive nor light in comparison to the requirements of graduate program in which our faculty participate. Students that enter our program are required to take the 3-course core and fulfill the seminar requirement. Feedback that we have received from the students indicates that the 3-course core is a valuable and appreciated set of courses that ensure that all students are exposed to the basic knowledge of entomological science, from field-based integrated pest management.
management principles to generation and manipulation of transgenic insects. Additional course requirements may be considerable (e.g., for a student entering with a B.A. degree in Philosophy) or very light (one additional course) and are entirely dependent on the Advisory Committee recommendations in consultation with the student. Course requirements for the MS degree are similar (3-course core plus annual seminar requirements). Typically, upon recommendations from their Thesis Committees, MS students take an additional 2-4 lecture-based courses during their residency. The Entomology Program data provided in Table 1 reflects recent (within the last year) changes to the curriculum that include reduction in the number of “Participatory” seminars required and a loosening of entry level requirements as described above such that a broader spectrum of students from the life sciences can enter our program. Finally, as mentioned above, we are negotiating alterations to the curriculum to reflect specialized tracks within Entomology.

With regard to removing courses no longer offered due to retirements, separation, etc., four graduate courses have been submitted for removal (ENTM 207 *Arthropod Vectors in Relation to Plant Disease*, ENTM 208 *Host-Parasite Relationships*, ENTM 231 *Insect Pathology*, and ENTM 232 *Molecular Biology of Insects*). ENTM 227 *Insect Population Ecology* is being retained because we anticipate a new faculty member starting in April 2013 may wish to teach it.

4. **The number of enrolled students has been steady since the last review, although the attrition rate seems to have increased, so the program has been producing fewer PhDs. The Council would like to see a statement that summarizes efforts to continue to maintain the size of the program (or grow), which could include changes to the curriculum, addition of cooperating faculty, efforts to apply for training grants, and so on.**

**Response:** Over the past decade or so, nationwide, fewer and fewer individuals are going into the agricultural fields, including Entomology. Most Entomology programs are showing a decline in applicants and enrollments, and some Entomology departments have ceased to exist. UCR Entomology is holding steady in terms of both the number and quality of applicants and enrollments, which in our opinion is very good news given the nationwide trend in the opposite direction. An increase in attrition since the last review is of concern and can partially be explained by a number of students leaving the program early for personal reasons or due to Ph.D. students switching to the MS program for a variety of reasons.

Our recruitment efforts have increased substantially over the last couple of years. We now organize an “official” recruitment day in which we bring in (primarily at our cost) all admissible students with fellowship support for a two-day event. During this time, students are introduced to prospective major professors, shown the facilities, and encouraged to interact with current graduate students. Time will tell if this activity will enhance our enrollment numbers. We feel it allows both us and the students to get a better look at one another, ensuring a satisfactory fit between professors and students such that attrition is minimized.

Additionally, we annually reassess the value of our recruitment packages to ensure they are competitive with other Entomology programs across the country. We continue to advertise and award our endowed graduate student fellowships to both incoming and enrolled students. With regard to training grants, we had intended to submit an application for a GANN grant this academic year; however, given the status of the federal budget, it is questionable as to whether there will be a call for GANN submissions.
With respect to modifying the curriculum, as mentioned earlier, in order to provide a more flexible program for a broader range of students and faculty, we have reduced the number of entrance requirements, reduced the number of required participatory seminars, deleted courses no longer being taught and are investigating ways to provide tracks within the required curriculum.

Faculty diversity continues to be an issue and does play a significant role in recruitment and retention of students. Again, as mentioned above, we take this very seriously and continue to take measures whenever possible to increase our diversity.

Finally, we wish to point out that the success of several of the interdepartmental graduate programs has depended heavily on the participation of Entomology faculty. This is beneficial from a number of viewpoints. First, because we are a large department with a diversity of faculty training and expertise, it makes sense for the campus to make use of that diversity most effectively by allowing faculty, within reason, to cross departmental lines for multidisciplinary projects. Second, for similar reasons it is beneficial for students whose interests are also interdisciplinary, or who want to use insect systems to test ideas whose scope extends well beyond entomology, from the molecular level to the whole organism level. We suggest that the continued participation of our faculty in a strong Entomology graduate program and interdepartmental programs is a win-win for faculty, students, the college, and the campus.

Thank you for the opportunity to provide our responses to the finding and recommendations. The members of the Entomology Graduate Program look forward to final release of this review.

Richard A. Redak, Chair
Department of Entomology
<table>
<thead>
<tr>
<th>Human &amp; Animal Health</th>
<th>Secure and Sustainable Food Supply</th>
<th>Sustainable Urban Environments</th>
<th>Conservation &amp; Biodiversity</th>
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<td>Vector Ecologist (White)</td>
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<td>Biodiversity Systematist (Weirauch)</td>
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<td>Molecular Biology of Social Behavior (PROPOSED 2015-2066)</td>
<td>Evolutionary Biologist-Genetic Adaptations (PROPOSED 2014-2015)</td>
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<td>Global Change Biologist</td>
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<td>Insect-Plant-Natural Enemy Interactions</td>
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<td>Invasive Species @ Ag/Urban/Natural Interface (Wilson)</td>
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<td>Predator-Prey Interactions</td>
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<tr>
<td>Agricultural Acarology (could be CE pending DANR)</td>
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Review of the Graduate Program in Entomology
Findings and Recommendations
UCR Graduate Council
December 13, 2012

Introduction

The Entomology Graduate Program is one of the oldest at UCR, having been in existence since 1961. In the 2010 NRC rankings, the program was ranked as #2 in the country, and is the strongest graduate program at UCR. The program has enrolled a total of 671 students.

The last review of the Program occurred on May 19-21, 2003. Since that time, the program has maintained a steady amount of about 40-45 students. Since the last review, 86 PhD students were enrolled in the PhD program through fall of 2011, with 30 PhD degrees awarded of 49 that finished or left, for an attrition rate of 38.8% (22.7% in 2003). In the MS program, 40 students were enrolled through fall of 2009, with 33 of 38 students finished that received their MS degree, an attrition rate of 13.6% (15.4% in 2003).

The Program was reviewed on January 12-13, 2012 by Dr. George Roderick (UC Berkeley), Dr. Serap Aksoy (Yale University) and Dr. Charles Mitter (University of Maryland), with Dr. Roderick serving as Chair. The team submitted their written report in May, 2012. The Entomology Program was provided the report and given the opportunity to provide corrections to errors of fact or perception, which they submitted to the Graduate Council on June 13, 2012.

SUMMARY OF EXTRAMURAL TEAM REPORT

The Review Team found that the program is strongest of its kind in the world, but that its continued preeminence will depend on maintaining the integrative nature of the department in consideration of upcoming hires to replace faculty retirements. The team composed their report by following the suggested “Questions for Extramural Review” that are part of the documents sent to the team by the Graduate Council. A summary of their findings in these areas is provided below, plus additional areas for discussion raised by the review team.

1. Quality of the Program

The Entomology Graduate program has 36 participating faculty within the Department of Entomology, and an additional 3 faculty outside the department. The review team called the research productivity of the faculty “second to none,” noting that the faculty have an outstanding record of publications and research support. The department publishes some 100+ papers annually, including in journals such as Science, Nature and PNAS, but also including publications in diverse areas (e.g. biotechnology, evolutionary biology, veterinary sciences). The team noted that the program’s “integrative” approach to Entomology was one of its strengths, and that the department must strive to maintain its “horizontal” and “vertical” approach to the discipline to remain strong.

At the time of the review, there were 40 students (38 PhD, 2 MS) enrolled in the Entomology program, plus an additional 26 that were in other programs but supervised by faculty in the Department of
Entomology. The team assessed the program as “selective” and that it “competes well for students against similar programs in the country.”

2. Nature of the Graduate Program

The review team found the program “highly structured and extremely thorough” but noted that the molecular areas of research covered by newer faculty leaves those faculty supervising students almost exclusively through other graduate programs. They suggest that the scope of the Entomology program should be broadened to be more inclusive of molecular disciplines.

3. Faculty quality and quantity

Many faculty, even those without appointments that require teaching, participate in the undergraduate teaching mission. This indirectly helps graduate students who obtain TA support for these classes train as teachers themselves.

While the quality of faculty (see #1 above) was rated as outstanding, there are several critical issues facing faculty makeup. First is the lack of mid-career faculty and the corresponding projected 9-10 retirements within the next five years, and 20-25 retirements within the next 10 years. Limitations of resources within CNAS have resulted in a lack of positions returned to the Department; the lack of mid-career faculty leaves a void in future leadership. As well, there maintains a large disparity in gender diversity with only three female faculty in the department. (The Council notes that the issue of gender diversity was also a prominent concern of the 2003 Program Review.) Hence, a commitment by the college to future hires in Entomology will be critical to its continued success.

4. Program planning

The team recommended that to remain of top ranking, the Department of Entomology should broaden the concept of Entomology to represent all the department’s research interests and integrate emerging areas (e.g. genomics, human health), and to be pre-emptive in retention of stellar junior faculty (beyond the scope of Graduate Council’s Purview, but nonetheless important to maintaining the excellence of the graduate program).

5. National Distinction

As mentioned above, focus on future hires, pre-emptive retentions and diversity are important to maintain the excellence of the program.

6. Admissions

Progress by faculty toward dealing with a needed (and evolving) flexibility in the course requirements was noted by the reviewers.

7. Mentoring and student affairs

The meeting with graduate students was among the highlights for the reviewers. The students are content in the program and with the mentorship they receive. Many students have ambitions for careers outside of academia and would benefit from career mentoring of this type. As Graduate Division
has now mandated professional training (which includes career mentoring) for all graduate students, this issue will become addressed on a broader level.

The graduate student body is highly diverse, and the female graduate students noted a lack of faculty mentors with shared life and career experiences.

8. Limitations

Students and faculty were generally satisfied with research facilities. There is a shortage of teaching laboratory space. TA support has declined recently (a college-wide issue) causing an increase in workload for both graduate students (e.g. increased discussion class size) and faculty. Graduate Council notes that these problems are not unique to the Entomology program.

9. Campus interactions

The review team did not note any specific interactions between Entomology and other departments/programs, though it noted that faculty in Entomology have taken leadership roles in other graduate programs (e.g. Neuroscience and Genetics, Genomics and Bioinformatics). The program could consider some future interaction (e.g. joint hires, collaboration) with the upcoming Medical School.

10. Time to degree

There were no issues noted for median time to degree to degree for PhD (5.6 years) and MS (2.4 years).

11. Diversity

The Department of Entomology lags behind all but one department in CNAS for faculty diversity (% female faculty) although more recent hires have been more diverse. The team recommends continuing efforts to hire women and members of underrepresented groups, as well as to pursue mid-career hires; and to reach out to existing diverse faculty in other departments to be either mentors to graduate students and/or as Cooperating Faculty.

Additional areas for discussion

A. Actions since previous review

The reviewers noted that since the 2003 review, the program has addressed several things. First, they have greatly improved participation in Interdisciplinary programs on campus (the Council notes that the reviewers likely mean to include the Interdepartmental programs in Neuroscience; Genetics, Genomics and Bioinformatics; and Cell, Molecular and Developmental Biology). However, all the growth in mean number of students supervised by Entomology faculty has come from these other programs. Second, the program has done well with recent hires to partially address faculty diversity, but more needs to be done.

B. Postdoctoral researchers

Postdocs contribute to both the graduate program (through mentorship/training of graduate students) and the strength of the department’s research mission. The review team suggested better integration of
postdocs into the graduate mission through the seminar series, as well as increasing their visibility in the department and through the program web site.

C. MS program

The team suggested pursuing a professional (i.e. self-supported) MS degree program as a means to bring in further support for graduate students.

D. Development (fund raising)

The program should exploit opportunities for fund raising at the department, college and campus levels. (This would generate resources to fund more graduate students, and/or recruit faculty through endowed chairs.)

E. Format of the external review

The reviewers made suggestions for the format of the graduate program review; these are outside the scope of the Entomology Program preview and will not be summarized here.

F. Possible reorganization of the college

According to the reviewers, the Entomology faculty members were very concerned about a possible restructuring of the department, which might involve splitting the faculty along disciplinary lines, and hence compromising both the strength of the department and the cohesiveness of the graduate program. While Graduate Council would have very little to say about such a restructuring (other than to advocate for preservation of the strongest graduate programs, which would include Entomology), the team strongly recommends against breaking up the Entomology Department, calling it one of the “crown jewels of the UCR campus.”

External Review Team Recommendations

1. Increase faculty diversity.

2. Continue to develop an integrative view of the Entomology discipline to maintain its preeminence in the field.

3. Replace lost positions and align new faculty to the department’s long-range plan.

4. Streamline the program requirements to be more inclusive of junior faculty research interests and to be comparable to other programs on campus.

5. Increase space for laboratory courses.

6. Address graduate funding by various means. (This is a recommendation to the college and campus, not to the graduate program.)
PROGRAM PRELIMINARY RESPONSE
The program made minor corrections to the external review document (mean age of faculty, names of two other graduate programs) and noted that some of the data presented on publications may not be fully accurate.

GRADUATE COUNCIL FINDINGS AND RECOMMENDATIONS

The external review team finds the Entomology program to be world-class in its faculty, competitiveness and instruction, and the Graduate Council concurs in this assessment. However, there are real and potential challenges to this status due factors such as attrition of senior faculty through retirement, possible difficulties in adapting to newer methodologies within the discipline, ongoing (though improved) faculty diversity issues, and possible departmental restructuring. Maintaining and even enhancing the program should be a priority for UCR. We note that the opinion of the external review team is that the Entomology Graduate Program will maintain its pre-eminence within a single integrative Entomology Department.

Based on the external committee report and its own assessment of the Entomology Graduate Program, the Graduate Council makes the following Recommendations.

1. The Program should continue efforts to increase diversity among its faculty as it proceeds with its hiring plan. They should continue to advocate for replacement faculty in conjunction with their existing hiring plan. Cooperating faculty could be brought in from other departments, including from the new Medical School. The Graduate Council would like to see the Program articulate their vision for how upcoming hires will best serve and integrate into the program, and also how the Program will address diversity and leadership issues in the coming years.

2. Some faculty recruit graduate students primarily through other programs, which could potentially reduce the size of the student body in the Entomology program. This issue relates at least in part to newer methodologies within the discipline. The program should address this issue. One potential solution would be for the course curriculum and program requirements to include tracks that attract graduate students and cater to research interests of recent hires.

3. The program course requirements should be evaluated in comparison with other similar programs, and streamlining of these requirements should be considered. Courses that cannot be offered due to retirements should be removed from the curriculum in a timely manner. The Graduate Council would like to see a summary of proposed course requirements, how these align with the diverse research interests among the participating faculty, and how the overall MS and PhD requirements are comparable to those of other life sciences graduate programs within UCR.

4. The number of enrolled students has been steady since the last review, although the attrition rate seems to have increased, so the program has been producing fewer PhDs. The Council would like to see a statement that summarizes efforts to continue to maintain the size of the program (or grow), which could include changes to the curriculum, addition of cooperating faculty, efforts to apply for training grants, and so on.
April 18, 2013

TO:  Professor Katherine Borkovich, Chair
     Plant Pathology Graduate Program

FM:  Connie Nugent, Chair
     Graduate Council

RE:  Plant Pathology response to Graduate Council’s Findings and Recommendations

The Graduate Council has considered the program’s responses to the Council’s Findings and Recommendations concerning the review of the Plant Pathology Graduate Program. It is clear from these responses that the graduate program has been working to implement many of the recommendations, and we appreciate your efforts. However, there are a few areas in which a more substantive response is requested, as detailed further below.

In response to the fifth recommendation, please provide specific course numbers and changes that will reduce redundancy. Also, please provide a list of new courses, as well as the specific deadlines when the curriculum will be finalized.

To more fully respond to the sixth recommendation; please clarify the program’s plans, if any, for development of a Professional Science Master’s.

With regard to the eighth recommendation, please provide specific details and discussion of the plans for improved graduate student representation in the program. For example, will there be representation on curriculum or seminar committees?

We will expect your response by May 30, 2013.
Plant Pathology Graduate Program Response

We thank the review team and the graduate Council for their evaluations and recommendations. As we have been in a leadership transition, we have focused on making adjustments to our graduate program. We respond to the Graduate Council findings and recommendations for each point below, understanding that these specifically derive from the recommendations of the excellent review team.

Graduate Council Findings and Recommendations

1. The program must work to establish a clear and compelling vision of its future goals and develop a coherent strategy for accomplishing its goals. The program faculty and students should work together to develop a unified vision that integrates plant pathology and microbiology.

We have worked diligently to redesign our vision as our faculty has changed. The new vision is defined as a suite of new goals. “Our departmental goals are to conduct research on the basic biology of plant pathogens and microbes, to develop methods for the management of microbial diseases of plants and other organisms, to provide a quality education to our students; and be a repository of expert advice on plant diseases and microbiology to the citizens of California and the world.”

Building upon this, “The Graduate Program of Plant Pathology at the University of California, Riverside aims at conducting research on the basic biology of plant pathogens; developing methods for the management of plant diseases; providing a quality education to its students; and, providing expert advice on plant diseases to the citizens of California and the world.”

Both goals are stated in our two new websites; for the Department at http://plantpathmicro.ucr.edu, and for the Plant Pathology Graduate Program at http://plantpath.ucr.edu

One output of achieving our goals has been the reinstatement of the interdepartmental Microbiology Graduate program and reinvigoration of the Plant Pathology Graduate Program (see below). Our department is the administrative home for the two programs and most faculty are members of both. This is reflected in our new departmental website, with prominent links to both programs.

2. Work with the CNAS Dean and the Graduate Dean in identifying a faculty member to serve as Department Chair, who has the leadership and interpersonal skills to work successfully with all members of the faculty to build a common vision and strategy.

Professor Katherine Borkovich has accepted the Chairmanship, bringing the breadth of perspective in Plant Pathology and Microbiology broadly to build a new common vision and strategy.

3. Re-evaluate recruitment efforts in hiring some mid-career faculty potentially with focus in host-pathogen interactions that can help to integrate plant pathology and microbiology.
While we continue to request new positions for the Department, we point out that our faculty have matured and we have been successful in hiring new faculty. We currently have a good distribution of junior and senior faculty. We have 10 full Professors (including several step I to IV), 3 Associate Professors, and 3 Assistant Professors, plus 3 Cooperative Extension Specialists.

4. **Undertake a concerted effort to work with the administration and the department in determining a strategy for renovation and/or replacement of the plant growth facilities so that faculty can undertake research of the highest quality.**

We continue to work to improve the ancient, decrepit, and unreliable plant growth facilities. All facilities are under the management of Agricultural Operations directly under the Dean’s office, who are also committed to improving facilities. Efforts are underway to generate funding for a new facility.

5. **Assess the curriculum to reduce redundancy that exists to varying levels among the four core courses, to allow students some flexibility in taking courses that would enhance their knowledge of their area of specialization and to introduce new courses that will increase student exposure to real-world plant pathology.**

Efforts to revise the 4-course base currently in existence (Mycology, Virology, Bacteriology, and Nematology) are underway. Professor Jim Adaskaveg recently redesigned his undergraduate Mycology lecture and laboratory courses so that they could be taken by both undergraduate and graduate students. This will expose our graduate students to real-world fungal diseases and their management.

6. **Discuss mechanisms that can increase the number of domestic graduate students in the program by giving serious consideration to reviving the MS degree program and consider the development of Professional Science Master’s program.**

We are making extensive efforts to increase the number of graduate students, especially domestic students. These include direct calling and aggressive recruitment efforts. We also believe that as our faculty mature, we will continue to increase our student recruitment. These efforts are already paying off, as we had 6 new domestic PhD students last year, and 6 offers out this year, with one acceptance already received. Our primary limitation now to expanding the graduate program is support from the College for GSR funding for new graduate students, and TA positions for 2-5 year students.

We are continuing discussions for the Masters and a Professional Science Master’s degree.

7. **Develop the professional training requirements and cultivate an appreciation of the importance of teaching experience for graduate students and view TA-ships as an essential learning experience for graduate students.**

We redesigned our PLPA265 course to offer a review of the Principles of Plant Pathology and also provide education in professional development to our students. This course was well-received by the graduate students and will be offered again in Spring 2013.
We do agree that teaching experience is a critical part of our training. Many of our students now receive some TA experience. However, the allocation of TAs is ultimately determined by the Dean’s office through the TAAC, and funding cutbacks have curtailed the number of available TA positions.

8. Address the issues of graduate student governance and student representatives to be included in discussions of curriculum and other issues that impact their lives.

We will be asking for student input while we revise our curriculum over the next few years. We are also planning more activities for students in order to increase the \textit{esprit de corps} of the group. Current students are essential and effective contributors to our recruitment of new students.
July 11, 2011

Michael Allen, Chair
Department of Plant Pathology

Dear Dr. Allen:

The Findings and Recommendations of the Graduate Council resulting from the review of the Plant Pathology program are enclosed. A formal response is due from your program by October 11, 2011. Your response package should include appropriate program changes, statements of changed procedures, course proposals, etc., or statements of why the points in the Recommendations are not to be carried out. Acceptance of your response package by the Graduate Council will conclude the present review of the program.

Yours truly,

Morris Maduro, Chair
Graduate Council

Cc: Chancellor White
    EVC and Provost Rabenstein
    Dean T. Baldwin, CNAS
A. Introduction

The Graduate Program in Plant Pathology has a strong and well-deserved reputation in plant pathology. The program was established in 1961-1962, but remains relatively small, consisting of 15 PhD students at the present time. Currently, the Program does not have Master’s students. In total, the Program has conferred 232 PhD degrees, with 23 of these awarded since the prior extramural review in 2002. The overall attrition rate for students who leave without a PhD is 32%. The mean time to completion of the degree for students who earned their doctorate during the period from fall 2002 to winter 2010 is 5 years.

The Program underwent an extramural review on February 7-8, 2011. The extramural review team consisted of Professors Andrew O. Jackson, University of California Berkeley; James D. MacDonald, University of California Davis; Leland S. Pierson III, Texas A&M University. The review team submitted its report on March 30, 2011. Graduate Division received the Program’s response to errors of fact, misperceptions and interpretations in the extramural report on May 2, 2011.

B. Summary of the Extramural Report

The extramural review team positively notes high national ranking of the Plant Pathology Program and recognizes its strengths in subtropical and semi-arid crop production that sets it apart from many other plant pathology programs and provides UCR with a competitive advantage in this area of research. The program is well positioned to build new focus on Microbiology that can interact synergistically with Plant Pathology addressing more fundamental questions of host-pathogen interactions. The team finds the faculty to be strong, internationally recognized and to attract a substantial level of extramural funding. The program recruited a number of outstanding new faculty members in recent years. There was an approximately 50% increase in grants, including federal grant support, and 30% increase in faculty hires during the review period.

The review team found a number of areas in which the Program could be strengthened.

Leadership and Faculty

The review team expressed concerns related to leadership. The team recommends identifying a new chair, someone committed to the future success of the program and equipped with the social networking skills to reach across all
members of the faculty to move the program forward. The team views as essential to the long term success of the program a new leader who can develop a unified vision that integrates plant pathology and microbiology.

The team comments that the department has few mid-career faculty members to fill important leadership roles. The team recommends new mid-career faculty hires in microbiology to meet anticipated instructional needs and to provide a balance between the microbiology and plant pathology.

**Graduate Students**

The review team raises a number of issues with respect to the graduate students. The graduate program is composed of a diverse group of mostly international students and a smaller number of domestic students. The team finds that program’s research focus on subtropical and semi-arid crop production is one of the factors making the program highly attractive to students from developing countries. The team also finds that the difficulty in attracting domestic graduate students to both Plant Biology and Plant Pathology is seen broadly as a national problem. Nonetheless the MS program could provide a mechanism for attracting domestic students to the program that become interested in research and choose to advance to PhD studies. The team raises concerns that there is no effort in recruiting or admitting students to the MS program, even though it is listed as an active option for students. The team also indicates that there are many career opportunities for graduates with the MS degree and there is a strong demand for MS level graduates in private industry and many other agricultural outlets. The team recommends giving serious consideration to the mechanisms for reviving the MS degree program. The team also suggests that undergraduate microbiology interactions with faculty in the plant pathology track might enhance domestic graduate student recruitment efforts.

Although a student group was active in the past, the review team found that the students, in general, appear to be unaware as to how decisions that affect their lives are made. The team recommends addressing the issues of graduate student governance and student representatives to be included in discussions of curriculum and other issues that impact their lives. The team finds the Program’s track record for placing its graduates into faculty positions to have been strong but does question whether this record may have fallen off in recent years.

The team points out that the program should recognize the importance of teaching experience for graduate students (via TAships) as an essential learning experience. The team also recommends that student experiences should be broadened to consider professional opportunities outside academia by inviting industry representatives to speak in the departmental seminar series.
Curriculum

The most significant finding of the team with respect to the structure of the graduate program itself is that there are too many core courses offered to support them. The four core courses currently required of all students are organized around the primary plant pathogen groups, fungi, bacteria, viruses, and nematodes, and the curriculum has been in place for many years without revision. The team recommends reducing the redundancy that exists to varying levels among the four core courses and allowing students some flexibility in taking courses that would enhance their knowledge of their area of specialization.

The team also suggests additions to the curriculum. Noting that undergraduate students do not get involved in plant pathology research, the team suggests converting some of the core courses to cross-listings at both the undergraduate and graduate levels to increase undergraduate student exposure to this area of research that will potentially enhance pool of domestic applicants. The team also suggests separating lecture and lab components of classes, offering them as two related, but independent courses and adding new classes that will increase student exposure to real-world plant pathology.

The team recommends additional mid-career faculty hires with the focus in host-pathogen interactions that can help to integrate plant pathology and microbiology tracks of the program.

The team also indicates the lack of student awareness of career options outside academia. The team recommends the program to invite industry representatives for seminars to educate students about professional opportunities outside academia.

C. Departmental Response

The Department was appreciative of the external review recommendations and considers their assessment to be helpful. The Preliminary Response of the Department of Plant Pathology to the Extramural Report identifies three minor errors as follows:

1. The student group exists and was active in the past. However the strength of student organization has reduced due to lack of programmatic cohesion and the dispersal of students across labs in many buildings.

2. Professor Baldwin has expressed concern about a possible perception that he served as interim chair of the Department of Plant Pathology to facilitate a merger between the Department of Plant Pathology and Nematology, where only a minority of faculty consider themselves to
be programmatically compatible with the Department of Plant Pathology versus with some other department.

3. A college-wide TAAC committee assigns TAships taking into consideration student teaching requirements of the program, their experience and language skills, instead of financial needs.

**D. Graduate Council Findings and Recommendations**

1. The program must work to establish a clear and compelling vision of its future goals and develop a coherent strategy for accomplishing its goals. The program faculty and students should work together to develop a unified vision that integrates plant pathology and microbiology.

2. Work with the CNAS Dean and the Graduate Dean in identifying a faculty member to serve as Department Chair, who has the leadership and interpersonal skills to work successfully with all members of the faculty to build a common vision and strategy.

3. Re-evaluate recruitment efforts in hiring some mid-career faculty potentially with focus in host-pathogen interactions that can help to integrate plant pathology and microbiology.

4. Undertake a concerted effort to work with the administration and the department in determining a strategy for renovation and/or replacement of the plant growth facilities so that faculty can undertake research of the highest quality.

5. Assess the curriculum to reduce redundancy that exists to varying levels among the four core courses, to allow students some flexibility in taking courses that would enhance their knowledge of their area of specialization and to introduce new courses that will increase student exposure to real-world plant pathology.

6. Discuss mechanisms that can increase the number of domestic graduate students in the program by giving serious consideration to reviving the MS degree program and consider the development of Professional Science Master’s program.

7. Develop the professional training requirements and cultivate an appreciation of the importance of teaching experience for graduate students and view TA-ships as an essential learning experience for graduate students.
8. Address the issues of graduate student governance and student representatives to be included in discussions of curriculum and other issues that impact their lives.

APPROVED BY GRADUATE COUNCIL ON JUNE 7, 2011