

Chemical Biology, Biochemistry & Biophysics (CB3) 2015-2016

The Ph.D. track in Chemical Biology, Biochemistry & Biophysics (CB3) is designed to provide students with the opportunity to carry out cutting edge research at the interface between biology and chemistry. The training program emphasizes analysis of molecular structure and mechanism, as well as the use of organic chemistry to address biological questions. Interdisciplinary research is encouraged and supported by a diverse group of faculty from the Departments of Molecular, Cell & Developmental Biology (MCDB), Chemistry & Biochemistry (CHEM), Microbiology & Environmental Toxicology (METX), and Biomolecular Engineering (BME). Our goal is to provide students with an exciting research and training experience that allows them to become highly skilled and independent scientists who can go on to successful careers in academia or biotechnology.

The CB3 training program operates according to the guidelines set out in this handbook. Students are encouraged to provide feedback and suggestions to improve the program.

CB3 Core Faculty

The following are the core faculty participating in the CB3 track. First year students may do rotations with any of these faculty, or with any faculty who participate in the greater Program in Biomedical Science and Engineering. Rotations are contingent on available space and funding within the faculty labs.

Manny Ares	<u>Mechanisms of Splicing regulation</u>
Ilan Benjamin	Computational Studies of Structure, Dynamics and Reactivity at Liquid-model Membrane Interfaces
Phil Berman	<u>Biotechnology and Infectious Diseases</u>
Manel Camps	<u>Use of Random Mutagenesis for Studies of Evolution and for Therapy</u>
Rebecca Dubois	Structure, function and Engineering of Virus Proteins
Ólöf Einarsdóttir	Structure, Mechanisms and Dynamics of Respiratory Heme-Copper Oxidases
Grant Hartzog	<u>How Chromatin Influences Transcription</u>
Ted Holman	Biochemical and Inhibitory Investigations into Lipoxygenase: a Possible Therapeutic for Stroke, Diabetes, Heart Disease and Fungal Infections
Melissa Jurica	<u>Structure and Functional Analysis of Spliceosomes</u>
Kevin Karplus	Long-read DNA Sequencing
Doug Kellogg	<u>Control of Cell Growth and Division</u>
Dave Kliger	<u>Dynamics of Biomedical Molecules in Vision, Allostery, and Folding</u>
Scott Lokey	Chemical Biology, Cyclic Peptides, Small Molecule Screening
Pradip Mascharak	<u>Inorganic Chemistry, Design of Metallodrugs, Protein Active Site Modeling, Biomaterials</u>
Glenn Millhauser	<u>Prions, Metallobiochemistry, Agouti and Melanocortin Signaling, Total Protein Synthesis</u>
Harry Noller	Structure and Function of the Ribosome
Karen Ottemann	<u>The Molecular Virulence Factors of <i>Helicobacter pylori</i></u>
Carrie Partch	Molecular Mechanisms of Circadian Rhythmicity

Jevgenij Raskatov	Disease-Oriented Chemical Biology: Creating Novel Molecular Therapeutic Strategies
Seth Rubin	Biochemical Mechanisms in Cell Growth and Division
Chad Saltikov	<u>Understanding the Molecular Biology and Ecology of Bacteria that Metabolize Toxic Metals</u>
William Scott	RNA Structure, Catalysis and the Origin of Life
Nikolaos Sgourakis	Modeling the Structures of Protein Complexes from Sparse Experimental Data
Donald Smith	Molecular and Functional Impacts of Neurotoxic Agents
Bill Sullivan	<u>Cell Cycle, Cytoskeleton, and Host-pathogen Interactions</u>
Michael Stone	Structure and Dynamics of Telomeres and Telomerase
Christopher Vollmers	DNA Sequencing Tools for the Analysis of B cells
Al Zahler	<u>Alternative Pre-mRNA Splicing Regulation and the Biological Role of Small RNAs</u>

Administrative Structure

The CB3 Track is guided by two committees:

Advising

The Advising Committee is comprised of three program faculty and the Graduate Program Coordinator(s). Responsibilities include student orientation and advising, setting rotation assignments, rotation talk advising and feedback, evaluating and approving oral examination topics, assigning oral examination committees, ensuring that annual thesis committee meetings are held, dealing with requirement compliance and allocating University support for continuing students.

Admissions

Comprised of three CB3 faculty. Responsibilities include reviewing applications, planning recruiting activities, accepting students and developing offers of support.

Application and Admission to the CB3 Ph.D. Program

Deadlines

The application deadline is December 1st for admission to the program in the fall of the following academic year. Application procedures and information are available on the CB3 track web page (<http://pbse.ucsc.edu/PBSE-Application.html>). On-line applications are available at <http://graddiv.ucsc.edu/>. After the deadline, files are reviewed by the Admissions Committee. Late applications are accepted only in exceptional circumstances, are subject to available resources and must comply with Graduate Division admissions policies. The Admissions Committee will review no applications after April 30 of each academic year.

Admission criteria

The Admissions Committee evaluates candidates based on numerous indicators of potential, which include but are not limited to the following:

- Evidence of research potential and commitment to research in the statement of purpose
- Previous research experience
- Evidence of research potential in letters of recommendation (3 required)

- GRE scores: all three parts of the general test are required (verbal, quantitative and analytical; a subject (Biology, Biochemistry, or Chemistry) test is optional, but encouraged, since it can strengthen an application
- GPA
- Grades in relevant undergraduate courses
- Evidence of quantitative and analytical skills
- Evidence of ability to communicate in writing
- Indications of special expertise, experience, or cultural perspectives that the student may contribute to our program
- Performance in interviews

Admission process

After evaluation of each file, the Admissions Committee ranks the applicants. The number of offers made can fluctuate from year to year, depending on the relative strength and size of the applicant pool, and resources available. The CB3 program is committed to supporting all of its graduate students for the five years of a normal degree. Therefore, our total number of offers is guided by the resources (e.g. TA, GSR, Fellowships, etc.) that we expect to have available.

The top ranked applicants are contacted by telephone and invited for a formal interview visit organized by the Admissions Committee prior to any offer. Most interviews are held over a 2-day period in January or February. Prospective students meet with CB3 faculty and students. Feedback from the interviews is used to determine offers. The Graduate Division formally notifies prospective students of the offer by March 15. Students are required to accept or decline the offer by April 15.

International students

Because of limited resources to cover out-of-state tuition, which remains in effect for the duration of the degree, relatively few international students are admitted to the program. The University will cover a significant proportion of the out-of-state tuition after a student advances to candidacy. Consequently, students are encouraged to advance after successful completion of the Oral Qualifying Examination, to minimize tuition expenses to themselves and the department.

Getting Started

General advising

In the 1st year, the CB3 advising committee and the faculty who supervise rotations are responsible for providing academic and research advice. After students join their thesis lab, then the thesis advisor assumes guidance responsibilities. Students are always welcome to seek additional advice from the CB3 advising committee, especially concerning procedural issues.

Administrative Support

Administrative support for the PBSE program is provided by Sarah Amador and Janet Jones. Sarah will provide most administrative support to all first year PBSE students, including organization of advising meetings and research rotations. First year CB3 student teaching assignments will be made by Janet Jones. After the first year, Sarah Amador will provide administrative support for MCD track students, while Janet Jones will be the primary administrator for CB3 track students.

Email

All CB3 graduate students may set up their UCSC e-mail account after accepting their offer of admission, usually by mid-May. The CruzID (login) for each student is typically last name@ucsc.edu (i.e. smith@ucsc.edu), or some variation if the combination is taken. The e-mail address for each graduate student is included in several mailing lists PBSEgrads@ucsc.edu and CB3grads-group@ucsc.edu. The majority of communication with students from the department office is done through e-mail; students should develop the habit of checking e-mail daily.

Mailboxes

Mailboxes will be assigned to CB3 students in the Chemistry Department mailroom. All campus mail addressed to the student will be delivered to that location. The student may also use that address for outside mail related to their student career. Students should use their home address for personal mail, bills, etc.

Office supplies

Graduate students should purchase their own office supplies for use in classes. The Chemistry and MCD Biology Department Offices do not provide those supplies. Students serving as a teaching assistant (TA) for a course may obtain supplies needed to perform their TA duties from the office of the department offering the course. Such supplies might include overhead transparencies and markers for discussion sections, pens to use in correcting papers, and paper for documentation. After students join their thesis lab, they should consult with the lab P.I. about funding for supplies.

Photocopying

There are photocopiers on the 2nd floor of the Physical Sciences Building and the 2nd and 3rd floors of Sinsheimer Laboratories for instructional and personal copying. Copy cards for each course are available in the Chemistry & Biochemistry office for use by the instructor and TA(s). After students join their thesis lab, they should consult with the lab P.I. about funding for photocopying; lab accounts need to be set up on the copier. For personal copying, students may purchase copy cards at the Science or McHenry Library.

TA assignments

Faculty are surveyed in summer about their grad student support needs for the following year. TA appointments are made on a quarterly basis. Students submit TA applications in mid-quarter for the following quarter. Teaching assignments are made by balancing students' past TA performance and assignments, instructor requests and departmental needs. Every effort is made to accommodate preferences. Students rank their teaching preferences on the TA application submitted to the Graduate Coordinator (Janet Jones). TA applications are due 6-8 weeks before the beginning of the quarter. In addition to attending and assisting in lectures, TAs are generally expected to lead discussion or lab sections, hold weekly office hours, attend weekly TA meetings and grade homework and exams.

Financial support

The CB3 Program is committed to supporting graduate students for up to five years. Support is provided in the form of Graduate Student Researchships (GSR), Teaching Assistantships (TA) and a limited number of campus fellowships. Students are also encouraged to apply for external fellowships (e.g. NIH and NSF Pre-Doctoral Fellowships). Faculty graduate advisors support their students during the summer as GSRs.

Ph.D. Program

Timetable for the first 3 years of the Ph.D. degree. Students must take the three required CB3 core courses (*), plus three electives.

Year 1

<u>Fall</u>	Advisory meeting with MSCB Advising Committee *Biol200B Advanced Molecular Biology *Chem200A Biophysical Methods Chem291 Chemistry Research Seminar Faculty Evening Research Presentations (FERPs) Biol297 or Chem297 Independent Study (contact Sarah Amador for details) Elective course (see website for list of offerings)
<u>Winter</u>	*Chem200B Advanced Protein Structure and Function Chem291 Chemistry Research Seminar Biol297 or Chem297 Independent Study (contact Sarah Amador for details) Elective course (see website for list of offerings)
<u>Spring</u>	Chem291 Chemistry Research Seminar

Biol297 or Chem297 Independent Study (contact Sarah Amador for details)
Elective course (see website for list of offerings)
Selection of thesis laboratory
Academic progress report

Year 2

Fall

Advisory meeting with Graduate Affairs Committee
Chem291 Chemistry Research Seminar
Biol297 or Chem297 Thesis Research (contact Janet Jones for details)
Selection of orals committee
Selection of orals outside topic and abstract submission

Winter

Biol289 Practice of Science
Chem291 Chemistry Research Seminar
Biol297 or Chem297 Thesis Research (contact Janet Jones for details)
Preparation of orals proposal

Spring

Chem291 Chemistry Research Seminar
Biol297 or Chem297 Thesis Research (contact Janet Jones for details)
Submission of orals proposal to committee
Oral examination

Summer

Academic progress report

Year 3

Fall

Chem291 Chemistry Research Seminar
Biol297 or Chem297 Thesis Research (contact Janet Jones for details)

Winter

Chem291 Chemistry Research Seminar
Biol297 or Chem297 Thesis Research (contact Janet Jones for details)

Spring

Chem291 Chemistry Research Seminar
Biol297 or Chem297 Thesis Research (contact Janet Jones for details)
Third Year Research Seminar and meeting with Research Committee
Must have completed required coursework before advancing to candidacy
Advancement to candidacy effective Fall quarter of the next academic year

Summer

Academic progress report

1st-year student orientation

Newly admitted students are expected to arrive early in the week before classes begin to participate in orientation. The campus provides a general orientation for new graduate students. It is not required by CB3 but is strongly recommended, as it provides useful general information that would be difficult to acquire elsewhere. The PBSE program provides an in-house orientation that includes bio-safety training, computer resource orientation, and introduction to the Science and Engineering library. A PBSE research conference and welcome dinner at the beginning of the quarter provides a great opportunity to meet faculty and continuing graduate students.

Advising interviews

Students accepted into the Ph.D. program meet individually with members of the CB3 advising committee during the first week of Fall quarter (typically on orientation day) to review their academic background and plan a course plan for first year. In addition, students may meet individually with the CB3 advising committee during Winter and Spring quarters of their first year for informal feedback on their progress.

Language requirement

Proficiency in a foreign or computer language is not a requirement for the CB3 program.

Teaching requirement

Students are required to serve as teaching assistants (TAs) for at least two quarters by the end of the second year, in two different courses, to obtain more experience and knowledge. Duties require no more than 20 hours a week and will likely include weekly office hours and sections, as well as grading, proctoring exams and preparation of course material for distribution (e.g. handouts, taping lectures). Graduate students are not expected or permitted to write narrative evaluations, although their comments may be solicited and incorporated by the instructor.

Course work

All students must take the graduate core curriculum (Chem200A, Biol200B, and Chem200B) **for a letter grade**. All students must take Biol289 (Practice of Science) in their 2nd year. In addition to these courses, CB3 Ph.D. students are required to take at least three additional graduate level lecture courses by the end of the third year. A list of approved elective courses is available on the PBSE-CB3 web site (<http://pbse.ucsc.edu/MSCB-Courses.html>); the CB3 advising committee may approve other elective courses on a case-by-case basis. If a student is advised by their research advisor to take an additional undergraduate course to remedy specific deficiencies in their background, such an exception must be approved by the GAC and must also be taken for a letter grade. Lecture courses are five units each.

CB3 students must enroll in Chem 291 Research Seminar each quarter until they have advanced to candidacy. Chem 291, the Chem 280 series (lab group meetings) and Chem 299ABC (Dissertation Research) cannot be taken for a letter grade, but must be taken for a satisfactory/unsatisfactory grade (S/U).

When graduate students are evaluated on a satisfactory/unsatisfactory basis (S/U), a passing performance corresponds to the letter grade B or better, in accordance with the grading policies of the Graduate Division and the Registrar. Students must take core courses for a letter grade. While electives may be taken for S/U, the letter grade option is encouraged for students planning to apply for a NSF or other fellowship during their graduate career.

Graduate core courses

Students are expected to attend all class meetings and complete all assignments to pass.

Chem200A Biophysical Chemistry

Offered in Fall quarter. Chemistry 200A focuses on the methodologies of biophysical chemistry. Topics to be covered include: X-ray crystallography, fiber X-ray diffraction, optical spectroscopy, magnetic resonance, electron microscopy, single molecule techniques, computational techniques, elementary bioinformatics, electrophoretic and hydrodynamic methods, and mass spectrometry. It is also a pre-requisite for Chemistry 200A to have an undergraduate-level background in standard biochemistry, and a knowledge of physical chemistry, including an elementary understanding of molecular quantum mechanics, is assumed as a basis for discussing spectroscopic techniques.

Biol200B Advanced Molecular Biology

Offered in Fall quarter. This course offers in-depth coverage of the structure, function and synthesis of DNA, RNA, and proteins, the roles of macromolecules in the regulation of information flow within cells, and the key biochemical and genetic technologies utilized in the field. In general, each week, introductory lectures cover the background information for the topic, a detailed reading list is provided, and a class discussion is then held, focusing on one or two recent papers. Most weeks, students are also assigned a problem set or written paper. Discussion of problem sets between students is encouraged, although the final answers submitted must be written individually. Performance is based on participation in class discussions, performance on the written problem sets and papers, and/or exams.

Chem200B Advanced Protein Structure and Function

Offered in Winter quarter. Chemistry 200B explores various aspects of protein structure and function, as well as current tools for the analysis and prediction of protein structure. Course lectures will include but not be

limited to discussions of protein diversity in biology, protein folding principles, physical properties of common structural motifs, protein stability, methods in protein expression and purification, protein folding methods, protein folding diseases, protein representation software, etc. Friday lecture periods will be used for group discussion of primary research articles related to the material covered that week. Articles will be assigned at the start of each week, and all students will be expected to *read* and *critically evaluate* the article to prior to the group discussion period. About halfway through the course, students will select a research topic related to protein structure/folding and/or its medical technological applications. Depending upon the class size, students will make a short conference style presentation on their selected topic and/or submit a written report on the final day of class. A list of suggested research topics will be provided mid-quarter.

Rotation selection

Students do three seven-week rotations during Fall and Winter quarters. The purpose of rotations is to provide students with diverse research training in three different laboratories, and to allow students and faculty to determine whether they can establish a productive collaboration. First-year students will be asked by Teel Lopez to submit a ranked list of 3-5 faculty names and a brief explanation of why they are interested in those faculty. Before submitting their choices, students should talk to faculty regarding potential projects and whether the faculty will be taking rotation students. Rotation assignments are made by the CB3 advising committee. Students are generally assigned their first choice unless there are multiple students who list the same first choice. In that case, students are given their second choice. Faculty are not permitted to make any promises to students regarding permanent positions in their lab, officially or unofficially, during the entire year until the last week of the Spring quarter. Discussions regarding permanent positions in labs may begin after the Spring rotation talks.

Occasionally, a student may not find a suitable laboratory at the end of three rotations. They may select a fourth laboratory for a summer rotation with the permission of the MSCB advising committee and the rotation advisor. Laboratories outside the program may be selected but, in this case, the student may be considered to have left the program unless determined otherwise prior to the fourth rotation.

Summer research prior to Fall quarter enrollment

Graduate students may perform summer research prior to the start of the Fall quarter, but this is not considered a formal component of the PBSE training program. The student makes arrangements with a PI directly and no commitment regarding eventual lab affiliation is expressed or implied.

Rotation talks/poster presentations

At the end of the first two rotations, a seminar time slot is devoted to short rotation talks by the first-year students. Typically, each talk is ~eight minutes with an additional two minutes for discussion, but times may vary depending on class sizes. At the end of the third rotation, there will be a PBSE wide poster session where students will present on their projects from the final rotation.

Evaluation of rotation performance

Performance in each rotation is graded as satisfactory/unsatisfactory and summarized in a narrative evaluation by the GAC chair. Performance is evaluated on the basis of research effort and progress, intellectual mastery of the project, and performance in the talk. Faculty should submit evaluations to the GAC chair in a timely manner.

Faculty responsibility to rotation students

While rotation students may work closely with one or more members of the laboratory, the primary responsibility for supervision lies with the faculty member. Faculty are encouraged to meet regularly with the rotation student to discuss their progress. Faculty should also attend the rotation talk. If unable to do so, another CB3 faculty member should be asked to attend the talk and provide an evaluation.

Selection of a thesis laboratory

No specific discussion of thesis laboratory choice is permitted between faculty and students until notification by the CB3 advising committee at the end of Winter quarter. When notified, students may approach faculty members to discuss the possibility of joining their group. Students may elect to join a laboratory in which they have not rotated. Students who are unable to secure a thesis laboratory should contact the CB3 advising

committee to seek assistance in scheduling a possible fourth rotation. Students who are unable to secure an advisor to sponsor their thesis research are considered to be in unsatisfactory academic standing, and will not be allowed to continue in the program.

Co-sponsorship of CB3 Ph.D. students

Co-sponsorship of CB3 graduate students is not a formal option, regardless of whether one or both sponsors are members of the CB3 graduate program.

Seminars

The MCD Biology and Chemistry & Biochemistry departments sponsor several regular weekly seminar courses. All CB3 graduate students are required to register for the weekly Chemistry research seminar (Chem 291). However, students are also encouraged to stay abreast of the MCD Biology seminar schedule and may substitute specific seminars that better suit their personal interests.

Chemistry Monday Seminar (Chem 291)

These are held weekly during Fall, Winter, and Spring quarters on Mondays between 3:30 and 5:00 pm.

Chemistry Faculty Seminar (Chem 292)

Meets weekly in Fall quarter to highlight current Chemistry faculty research areas.

Failing a course and academic probation

Students who fail any course (grade C or below), including an undergraduate course or rotation assignment, must meet with the CB3 advising committee to review their progress. At that time they may be placed on academic probation. If their progress does not improve after an additional quarter, they may be asked to leave the program. All failed courses must be made up at the next available opportunity, within one year as allowed by the Registrar.

Second-year advising meeting

Early in Fall quarter, the CB3 advising committee meets with second-year students to discuss their progress, second-year coursework, and preparation for the PhD oral qualifying exam.

Selection of original research proposal topics

In preparation for the oral exam, students are asked to submit a short summary of two research proposals (as described below) for approval by their oral exam committee no later than the end of fall quarter. Approval of the outside research summary is contingent on the proposed research being sufficiently different in system and experimental approach from prior research (rotations, prior work experience, and thesis topic).

Selection of oral examination committee

The oral examination committee comprises three members of the CB3 track plus one tenured faculty from outside the CB3 track. The student's research advisor will not be a member of the exam committee. The inside members of the orals committee are selected by the student and approved by the CB3 advising committee. The outside member is chosen in consultation with the student and advisor, and must be a tenured faculty member (either an Associate or Full Professor) either from a different discipline from UCSC, or a tenured member of the same or a different discipline from another campus. Scientists from a non-academic environment (such as industry) require a petition for exception and must submit a CV showing publications. Students send their examining committee requests to the Graduate Director at the end of Fall quarter.

Avoidance of apparent conflict of interest

Formal evaluation of a student may lead to an apparent conflict of interest for a faculty member. Such situations can include, but are not limited to, serving on an oral or thesis committee for the student of a spouse or significant other. In such situations where an apparent conflict of interest could occur, the faculty should recuse him/herself. They may, however, serve as an *ad hoc* advisory member of such thesis committees, but will not participate in the formal evaluation process. Informal situations are not subject to apparent conflict of interest considerations.

Plagiarism - definition, guidelines, and consequences

The UCSC Code of Student Conduct states: "Plagiarism is defined as the use of intellectual material produced by another person without acknowledging its source. This includes, but is not limited to: 1) copying from the writings or works of another into one's academic assignment without attribution, or submitting such works as if it were one's own; 2) using the views, opinions, or insights of another without acknowledgement; or 3) paraphrasing the characteristic or original phraseology, metaphor, or other literary device of another without proper attribution." In assignments for class and when writing research articles and grants, students *must* express ideas in their own words and must give credit to the sources of the ideas.

When cases of plagiarism are discovered, the disciplinary actions are severe. After a first incident of plagiarism, the instructor will generally assign a 0 on the assignment that contained a plagiarized portion or portions, and the Program Director and the Graduate Dean will be notified of the incident. After a second incident of plagiarism, the program will recommend to the Program Director and the Graduate Dean that the student be expelled from our graduate program.

Oral Examination

Written proposals

A written proposal is required on each of two different topics, one on the student's research, and the second on a research topic not directly related to the student's past or present research but clearly under the general scope of the CB3 Program. The proposals are meant to provide practice in writing research proposals for postdoctoral fellowships or other funding opportunities, and to provide a starting point for the oral exam. Each proposal should state the question being addressed or the hypothesis being tested, summarize the factual and conceptual basis for the proposal, and briefly describe the experimental approach. Each project should address a significant research question, and the proposed work should be achievable during the course of the student's Ph.D. training. Each proposal should be 2-3 pages long. References may be included on a separate page. Plagiarism will not be tolerated (see Plagiarism section above). Students are provided with examples of written proposals by the CB3 advising committee as a guide in the Fall quarter preceding their oral exam during an informational meeting organized by the CB3 GAC chair.

Dissertation research summary

This will summarize the student's thesis research. The format should be as described above. Students may consult with faculty members or others in preparing this summary if they wish, but the writing must be entirely the student's.

Outside research proposal

This proposal will be on an area of research clearly outside the area of the student's dissertation, but within the general area of the CB3 Program. It should be an original proposal, written and conceived of independently, but students may consult with faculty, other students, and experts in the field. Faculty discussing proposals with students should promote scientific discussion, rather than coach the student. The CB3 advising committee must approve the subject of this proposal in advance. This proposal challenges the student's scientific creativity, and is designed to expand the student's area of expertise beyond the area of the dissertation research.

Oral exam timeline

Early October	Call for oral proposals
December 4	Students submit to CB3 Graduate Coordinator and Advising Committee 1-2 paragraphs describing their thesis research, and 1-2 paragraphs describing their proposed outside research proposal
December 11	Students submit to CB3 Graduate Coordinator and Advising Committee a proposed orals committee
March 1	Students schedule their oral exam for the Spring quarter
Spring quarter	Students submit their proposals to their examining committee no later than two weeks prior to the exam date
May 20	Oral exam must be completed

Oral examination format

The committee meets for 10-15 minutes prior to the start of the examination to review the student's file and discuss any specific issues relevant to the examination. Students are called in and asked to give a short (~10 minute) presentation for one proposal - they are encouraged to use the whiteboard, but are not allowed to bring prepared overheads or PowerPoint presentations. They may be interrupted at any time during this presentation and asked to elaborate on or clarify points. This process is then repeated for the second proposal. The oral exam may also cover scientific areas other than those directly concerned with the research proposals. The examination typically takes 2-3 hours, after which the student is asked to leave the room. The committee discusses the performance and comes to a consensus. The student is invited back in and informed of the outcome of the examination. Students pass or fail - there are no conditional passes. The quality of the written proposal alone is not sufficient to merit passing. A passing performance requires demonstration of the ability to design and execute an independent research project and to defend ideas. Students are generally expected to formulate and evaluate hypotheses, as well as design experiments that will test those hypotheses.

If the student passes, s/he may nevertheless be advised to take further coursework. If the student fails, s/he may be given the option of re-taking the examination with the same committee after appropriate preparation and guidance. If a student fails twice, s/he must leave the program. A terminal Master's degree may subsequently be awarded, provided that the student has satisfied the requirements for the Master's degree, including submission of a written thesis and a defense. A written summary of the oral exam outcome is prepared by the chair of the oral exam committee, and reviewed and signed by all committee members. A copy is provided to the student and a copy placed in their file.

After a successful oral exam, the student nominates their Dissertation Reading Committee on a form that can be downloaded from the Division of Graduate Studies web site.

Progress Toward a Dissertation

Selection of the Dissertation Reading Committee

After successful completion of the oral exam, the student should immediately assemble their Dissertation Reading Committee in consultation with their thesis advisor. The committee comprises the advisor plus two members of the CB3 track. A majority of the members must be members of the UCSC Academic Senate. While outside members specializing in the thesis research are permitted, they are not mandatory. Any outside member(s) must be a tenured member of an academic institution. The Dissertation Reading Committee Nomination form can be downloaded from the Graduate Division web site http://graddiv.ucsc.edu/student_affairs/forms.php#qualifying and should be turned in to the Chemistry department office before the end of Spring quarter.

Third-Year Talk

Students present a Third-Year Talk in Spring quarter of their third year. This presentation is a public seminar to which all PBSE track faculty and grad students are invited; it is advertised on the Department of Chemistry & Biochemistry's online Student Seminar calendar (Wednesday afternoons at 3:30pm in 240 PSB). The student's Dissertation Reading Committee attends and meets afterward to evaluate the student's research progress from both the talk and the dissertation prospectus the student gives the committee one week before the talk (detail below). After a successful talk, the department will submit a request to the Graduate Division that the student be advanced to candidacy (ATC). Advancement is effective the quarter after the Third-Year Talk.

Annual Progress Reviews

The student must meet with their thesis committee at least once per year until completion of the Ph.D. degree, usually in Spring quarter, to make an oral presentation and submit an updated dissertation prospectus (outline). One week before the progress meeting the student gives the Research Committee an outline of the current research projects (finished and in progress), organized as dissertation chapters. The sections of the outline should cite any published papers, target a completion date for each research project, and estimate a time of completion for the thesis. The projected finish date should allow time for the process of writing, revising, incorporating changes suggested by the Dissertation Reading Committee, obtaining signatures and submitting the dissertation in the format prescribed by the Graduate Division (see Dissertation and Thesis Preparation Guidelines at http://graddiv.ucsc.edu/student_affairs/forms.php).

The committee will provide continuing guidance throughout the development of the thesis, will provide ongoing assessment of the student's progress, and will evaluate the completed dissertation.

Graduate student academic progress reports

At the end of each year, the MSCB advising committee will meet to evaluate the academic progress of each student and set out requirements due in the coming year. A summary of this evaluation will be sent to each student and will include a statement of any deficiencies in meeting requirements. Academic progress letters are sent out in July.

Advancement to candidacy

Advancement to candidacy occurs after the end of the third year (nine quarters). Students give a research seminar ("third-year talk"). This should be attended by the thesis committee, who meet afterwards to evaluate the talk. A passing evaluation of the seminar leads to advancement to candidacy. Students have an additional three years (nine quarters) to complete their degree within normative time. (Note: International students, who retain non-CA resident status, are encouraged to give their seminar before the beginning of the third year, to minimize the fee costs to themselves and the department. In this case, students will have an additional four years (twelve quarters) to complete their degree within normative time.)

Target time and normative time

For PBSE students the target time for Ph.D. degree completion is five years. The normative time for the Ph.D. degree within the University of California is six years. Students who fail to complete their thesis within this time must request an extension from the Graduate Division. A written request signed by the student and advisor detailing the timetable to finish should be countersigned by the thesis committee chair prior to submission to the Graduate Dean. Multiple extensions may be considered. If the Ph.D. degree is not awarded within seven years from the date of advancement to candidacy, the student's candidacy shall lapse and the student will be required to pass a new oral qualifying exam prior to submitting the dissertation or undergo such other formal review as the student's department shall direct, and the result of this examination or review shall be transmitted in writing to the Graduate Council (Academic Senate Regulation 18.6).

Preparation of the thesis

When the student's advisor and thesis committee have agreed that the research is ready to be submitted, the student may proceed with "writing up" according to the guidelines prescribed by the University Library and the Graduate Division. The dissertation is of critical importance, because it reflects the candidate's ability to do independent research at a high level of scholarship and creativity. The dissertation should make clear that the candidate is familiar with and able to criticize and evaluate previous work done in his or her specialty field, and that the candidate has made a significant contribution to knowledge, at least part of which is of a quality and quantity worthy of at least two publications. The outline of the thesis should be approved by the thesis committee prior to preparation of the thesis. The thesis should be provided to the committee no less than one month prior to the thesis defense date. The thesis defense is an open, public seminar. The Graduate Coordinator - can assist in coordinating thesis defense dates with the thesis committee. After the seminar, the thesis committee will meet with the student to discuss any changes to the thesis required for completion. Upon submission of the final thesis, the committee will sign the cover page and grant the Ph.D. Formal awarding of the Ph.D. is made by the Graduate Division. Summer thesis defenses are discouraged, since many faculty are absent and no formal seminar series is in place during the summer.

Granting of the Ph.D.

The PBSE graduate program is not a degree-granting entity, but rather a collection of individual degree-granting departments. Therefore, the policy for Ph.D. granting for PBSE students is as follows. All CB3 students who successfully fulfill all of the requirements for the Ph.D. will be awarded a Ph.D. degree in Chemistry from the Department of Chemistry & Biochemistry. In certain cases, a student may issue a request to the advising committee that their degree be granted by an alternative department (ie. MCD Biology) provided all of the requirements have been met for a Ph.D. in that department.

Summary of Formal Ph.D. Requirements

1. All students must enroll in the core curriculum (Chem200A, Biol200B, and Chem200B for a letter grade).
2. Students must take three additional approved graduate courses by the end of the third year. Students must also complete the Practice of Science course (Biol289) in the second year. A list of approved graduate courses, appears on the PBSE- CB3 program website (<http://pbse.ucsc.edu/CB3-Courses.html>) Students may petition the CB3 GAC for approval of courses not included on this site.
3. All students rotate in at least three different research laboratories for six weeks each during Fall and Winter quarters of their first year (enroll in Bio297/Chem297). This does not apply to direct-admitted Ph.D. students.
4. All students present a rotation talk at the end of each seven-week rotation.
5. Because teaching experience is a requirement of the Ph.D., all students serve as teaching assistants for a minimum of two quarters in two different courses during the course of their graduate studies, as part of their academic training. This may include one or more quarters of TAs during the first and second years.
6. In order to remain in good academic standing, students must maintain a normal course load. MSCB students are expected to work full time toward their degrees. This means enrollment in at least 15 units of credit each quarter.
7. Students must enroll in Chem 291 each quarter until advancing to candidacy.
8. Annual academic progress reports on each graduate student are made by the MSCB Advising Committee with academic progress to be reported to the Graduate Division as required. Failure to maintain satisfactory status may result in a recommendation from the CB3 Program to the Dean of the Graduate Division for dismissal from the program.
8. Students take the Oral Qualifying Examination at the end of their second year. Upon passing that exam, the Dissertation Reading Committee (DRC) is formed.
9. If a student does not pass the Oral Qualifying Examination, the examination must be rescheduled within one academic quarter. A student may retake the examination only once and may not change the composition of the examining committee. A second failure will result in dismissal from the program.
10. All students give a full research seminar in their third year ("third-year talk").
11. Students advance to candidacy the quarter after passing the Oral Qualifying Examination and giving a public seminar on their research work.
12. All students must meet with their DRC each year until completion of the thesis.
13. A formal thesis defense is required, and must be scheduled so the department is able to attend.
14. Students must submit the doctoral thesis to the DRC for tentative approval at least one month before presenting a defense seminar. All members of the DRC should be in attendance at the seminar. The candidate must be prepared to defend the work to the satisfaction of the Committee before the thesis can be approved for submission to the Graduate Division..
15. Before the dissertation is accepted for signature by the DRC, at least one chapter should be submitted as a paper (not an abstract) to a refereed journal for publication. Delays in refereeing, acceptance, and printing may delay actual publication of the paper until after the doctoral degree has been granted.

Other CB3 Biology Program Policies

Graduate Division forms are available from <http://graddiv.ucsc.edu/>. All forms, applications, etc. in connection with the Graduate Division must be routed through the CB3 Graduate Coordinator.

Completion of previous degrees

1. No student may enroll as a graduate student at UCSC until a bachelor's degree has been completed. Conditional admission is not possible.
2. Newly accepted students who are currently completing another graduate degree normally will not be permitted to enroll in the PBSE Graduate Program until the previous degree has been completed (or abandoned).
3. (1) and (2) notwithstanding, under special circumstances, the MSCB advising committee may permit a student to complete a previous degree after entering the Ph.D. Program. Approval must be obtained from the CB3 advising committee before enrolling for the first time, along with a timetable for completion. Failure to

follow that timetable may be grounds for dismissal from the Ph.D. Program on the basis of inadequate progress.

Leaves of absence

1. Students are expected to engage in their graduate student activities continuously (including the summer) from the time of admission until completion of the Ph.D. thesis. Any leave of absence must be authorized in advance. Part-time attendance is not possible.
2. Approval for a leave of absence will be recommended to the Graduate Dean only under unusual or exceptional circumstances. Requests for leave must be submitted in writing to the CB3 advising committee and must include justifications and the consent of the student's advisor or the CB3 advising committee, whichever applies to the individual student.
3. Time spent on leave continues to count toward all departmental and university time requirements, including, but not limited to, passing the qualifying exam, the three-year limit after advancement to candidacy, and the six-year limit on normative time for completion of graduate work at UCSC.
4. Making use of an approved leave of absence will not jeopardize maintaining the satisfactory academic progress that must be reported annually to the Graduate Dean.
5. If a leave of absence is granted, it is the responsibility of the student to be familiar with all relevant departmental and university regulations, and to file any necessary paperwork both with the MSCB Program and the Graduate Division. Please consult with the CB3 Graduate Coordinator.
6. International students have additional responsibilities to meet restrictions imposed by their visas, and must also have approval from International Scholar and Student Services (ieo@ucsc.edu).
7. Re-admission to the program after a leave is contingent upon satisfying any conditions set by the department or the Graduate Dean.

Normal course loads

1. CB3 graduate students are expected to work full-time towards their degrees and, therefore, students should enroll for 15 units of credit each quarter.
2. Once formal upper-division and graduate courses recommended by the student's advisory committee have been completed, it is expected that the student will normally enroll in 15 units of Chem299 Thesis Research (contact Janet Jones for details) or or Biol299, Thesis Research (contact Teel Lopez), each quarter (unless taking a 5 unit graduate elective).
3. Lighter or heavier course loads must be approved in advance by the MSCB advising committee.

Ph.D. thesis defense

The CB3 Program requires a dissertation seminar before awarding the Ph.D. degree. The dissertation seminar must be a public seminar, attended by a majority of the candidate's Dissertation Reading Committee, in which the candidate formally presents the substance of the thesis. After the seminar, the public must have sufficient opportunity to question the candidate. The DRC may then meet in private with the candidate for further questions, before determining whether the candidate's thesis is accepted or rejected, or whether any problems need to be resolved. If both the thesis and the defense are acceptable, the cover page and necessary forms will be signed by the committee members, and all departmental requirements pertaining to the Ph.D. dissertation seminar will have been satisfied.

Expected timetable for the Ph.D. degree

The CB3 program was conceived as a five-year program. Under normal circumstances, students should plan to follow this timetable:

1. Enter at the beginning of Fall quarter of the first year.
2. Complete core and background courses in the first three years.
3. Take qualifying examination and submit Dissertation Reading Committee nominations in Spring quarter of the second year.
4. Present third-year talk and advance to candidacy by Spring quarter of the third year (international students advance before the beginning of the third year).
5. Meet with Dissertation Reading Committee in Spring quarter of the fourth year to review progress.
6. Complete research and finish writing thesis by end of the fifth year, or meet with the Dissertation Reading Committee to review progress.

Deviations from this pattern require good justification. Deviations must be approved by the student's advisory committee and by the CB3 advising committee. Approval is not automatic and should be sought as soon as the need is anticipated.

Leaves and qualifying examinations

1. Students must obtain **written** permission first from their advisor, then from the MSCB advising committee for **all** leaves.
2. Students **not registered** or **not on leave** for any given quarter must turn in the required paperwork the following quarter (summer excepted) or they will be dismissed from the program.
3. Students who formally withdraw from the program without the successful completion of either a thesis or the qualifying examination must submit formal notification to the CB3 advising committee.
4. Students **must take the qualifying examination before the beginning of Fall quarter of their third year** or they will not be allowed to register for courses or serve as a TA or RA. The Graduate Division will be notified, and course enrollment will be denied. Any exceptions to this policy must be made in writing by the student's faculty sponsor (or CB3 committee member) **prior to the beginning of the Fall quarter**.
5. **If explicitly invited** to do so by the examination committee, students who fail the qualifying examination have **one quarter** to produce a Master's thesis (on current research) or retake the examination. Preparation of the Master's thesis cannot extend past the Fall quarter of the third year in residence without written permission from the CB3 advising committee.

Direct Admission into the CB3 Graduate Program

The direct admit program is designed to allow direct admission of qualified students into faculty labs. Students who qualify for direct admission are those who have already completed a Master's degree or who have extensive research experience. In addition, highly qualified international students who cannot be supported by the rotation program can be admitted by investigators with sufficient financial resources. All decisions regarding direct admits are made by the Graduate Admissions Committee; individual faculty may not make offers of admission to applicants without first consulting with the Admissions Committee.

Direct admits have all of the same requirements as other students, with the exception of rotations. *In lieu* of the rotation requirement, direct admit students are required to complete **one extra graduate course** to ensure that they are exposed to diverse areas of research. At the discretion of the Graduate Program Committee, the graduate core courses may be waived if it is determined that the student has already passed equivalent graduate level courses.

Faculty sponsors will be allowed to accept Ph.D. students directly into their labs if CB3 Admissions and Program Committees are satisfied that the candidate's file has sufficient academic merit for admission. All direct admits must apply via the usual application procedures.

The faculty sponsor (not the department) will be responsible for full support of the directly admitted student in all cases.

Direct admit students must fulfill all other Ph.D. requirements (core courses, elective courses, two quarters of teaching assistantships, and qualifying exam).

In the event a directly admitted student needs to find a different lab, the student will be responsible for finding a new faculty sponsor in order to remain in the program. The new faculty sponsor will assume responsibility for funding the student.

Appendix: UCSC APPEALING ACADEMIC JUDGMENTS

Revisions approved by Graduate Council on April 24, 2008 and effective July 1, 2008

Students have the right to appeal various institutional judgments concerning their academic standing at UC Santa Cruz including dismissal from graduate standing, placement on probationary status, narrative evaluation or grade notation, and their academic progress. This appeal procedure applies only to current graduate students at UC Santa Cruz and is not available to appeal denial of admission or readmission to any program.

The scope of this procedure is limited to the matters listed above, and excludes complaints regarding student employment as a Teaching Assistant, student discipline, auxiliary student services (such as housing, child care, etc.), and sexual harassment, which are covered by other policies and procedures.

This document outlines the four levels of complaint resolution available to graduate students at UC Santa Cruz:

1. Instructor appeal
2. Departmental appeal
3. Graduate Dean appeal
4. Graduate Council appeal

Throughout all stages of the appeal process, both parties are strongly encouraged to seek informal resolution. The Dean of the Division of Graduate Studies may be consulted for informal resolution at any stage of the process. In addition graduate students may contact the Office of the Ombudsman for assistance with informal complaint resolution. Working toward informal resolution does not preclude continuation of a formal appeal. However, unless a request for extension of a deadline is granted as provided below, informal resolution efforts shall not serve in any way to stay or extend an applicable filing deadline.

Requests for Extension of Filing Deadlines

Except as otherwise provided in this policy, any party may for good cause seek an extension of a deadline by filing a request with the Dean of the Division of Graduate Studies. Such request must be submitted in writing prior to the deadline for which an extension is sought, and must explain the reason(s) why an extension is necessary. The decision to grant or deny a request is within the discretion of the Dean and shall be final and binding.

Basis for Appeals

An appeal may be filed based upon one or more of the following grounds, provided that the action complained of has had a material impact on the student's academic standing:

1. Procedural error or violation of official policy by academic or administrative personnel;
2. Judgments improperly based upon non-academic criteria including, but not limited to, discrimination or harassment on the basis of race, color, national origin, religion, sex, disability, age, medical condition, ancestry, marital status, citizenship, sexual orientation, or status as a veteran or special disabled veteran, or any personal or arbitrary reasons;
3. Special mitigating circumstances beyond the student's control not properly taken into account in a decision affecting the student's academic progress;
4. Capricious or arbitrary application of appropriate criteria in a manner not reflective of the student's performance in relation to a course or program requirement.

Procedure for Appeals

Throughout the appeals process all time periods refer to working days¹ within the academic term or during the normal working days of summer. Students should be aware that appeals begun late in spring or in summer may be delayed by the unavailability of specific faculty and/or the Graduate Council.

A written appeal must be initiated within thirty (30) working days of the action being appealed. The student must seek resolution of the action sequentially as described below, unless the action complained of is not an evaluation or grade notation. In that instance, the student would begin the appeal with Step II below.

- Step I. If the student is appealing an evaluation or grade notation, the appeal must be submitted to the instructor who provided the evaluation or grade notation.
- Step II. For all other appeals, or if the student is continuing the appeal of an evaluation or grade notation, the appeal must be submitted to the student's major department;

¹ The term "working days" means Monday through Friday, excluding University holidays.

Step III. The Dean of Graduate Studies;
Step IV. The Graduate Council.

In all cases (Step I through IV), the appeal should indicate the action(s) being appealed, the date(s) the action(s) occurred, the grounds upon which the appeal is based, and the outcome desired.

Step I. Instructor Appeal

If a student is appealing a narrative evaluation or grade notation, the student must submit a written appeal to the instructor of the course within thirty (30) working days of the deadline contained in the campus Academic and Administrative Calendar for submittal of narrative evaluations or grade notation or, if that deadline has passed, of the actual date when the faculty member filed the narrative evaluation or grade notation. The faculty member's Department Chair should be copied on the appeal, in order to inform the student if the faculty member is unavailable.

The faculty member may elect to meet with the student to discuss the appeal and determine if a reasonable compromise can be reached that is acceptable to both parties. The faculty member must submit a written response to the student with a copy to the student's Department Chair within thirty (30) working days of receipt of the Step I appeal.

This deadline may be extended by the Department Chair or his/her designate should the faculty member be away from campus for research, administrative duties, sabbatical time, or personal leave.

If the course in question was sponsored by a unit other than the student's home department, the appeal should be addressed to the instructor of the course and copied to the two Chairs jointly.

Step II. Department Appeal

The student may continue the appeal of an evaluation or grade notation with the Department. In addition, a student may begin the appeal of any other action at this level. Students continuing the appeal of an evaluation or grade notation must submit a written appeal to the Department Chair of the faculty instructor of the course. If the course in question was sponsored by a unit other than the student's home department, the student's home Department Chair should be copied.

Review of the appeal at the departmental level should be conducted by the departmental graduate affairs committee or analogous group. This group should minimally include two or more faculty members. If a faculty member's action(s) is the subject of the appeal, s/he must recuse him or herself from the committee. Departments may also elect to establish an ad hoc committee to handle appeals filed in a given academic year. The committee will initiate a review process within ten (10) working days of receipt of the appeal.

The committee will receive the written appeal from the student, all pertinent material from the faculty member and student, and any additional material considered germane to the appeal either by the student or the faculty member. The committee may request additional information, as it deems necessary. The committee or its designated members may elect to interview the faculty member and/or student involved in the appeal.

The committee will render its decision in written form within seven (7) working days of the conclusion of the review process.

If the action being appealed, such as probation or dismissal, was initiated by the department, the review process remains the same.

Step III. Dean of Graduate Studies

The student may elect to submit a written appeal of the department's decision to the Graduate Dean. The decision must be appealed within thirty (30) working days from the date the departmental decision was transmitted to the student.

At the discretion of the Graduate Dean, the appeal may be assigned to the Associate Graduate Dean. Additionally if the Dean determines that the appeal should be submitted directly to the Graduate Council (for example, if the Dean determines that a fair and impartial hearing may be jeopardized by conflicts within the Graduate Division or other extenuating circumstances), the Dean may refer the appeal directly to the Graduate Council.

The Graduate Dean will review all documents and records submitted in the departmental review. In addition the Graduate Dean may meet with the student, faculty member(s), and/or graduate affairs committee, where appropriate, and may consider additional materials as s/he deems appropriate. In most cases the Graduate Dean will seek resolution within one academic term.

The Graduate Dean may suggest a resolution of the appeal in written form within seven (7) working days of completion of his/her review. After fourteen (14) working days, the suggested resolution, if not accepted, becomes null and void.

Step IV. Graduate Council

The student may submit a final appeal to the Graduate Council. The Graduate Council is a committee of the Academic Senate. There are ten Santa Cruz faculty members, plus the Dean of Graduate Studies serving ex officio. In addition, there are one Library representative nominated by the UCSC Librarians Association, no more than three Graduate Student Association representatives, and one Postdoctoral Scholars Association Representative.

The student will submit a written appeal to the Graduate Council through the Academic Senate Office. The Dean of Graduate Studies will forward all pertinent documents to the Graduate Council for evaluation. The Chair may request additional information, as s/he deems necessary.

The Graduate Council Chair in consultation with the Graduate Council will review the file and determine whether sufficient cause exists to justify a formal hearing. If the Council declines to hear the case, the Council will issue a written statement to that effect. This would be the final conclusion of the appeals process.

If the Council determines that a hearing is to be held, the student and instructor or department Chair will be notified in writing at least thirty (30) calendar days in advance of the hearing date. The Graduate Council Chair may at his/her discretion constitute a subcommittee of at least four members, including at least one student representative, to hear the appeal, or s/he may convene the Graduate Council as a whole, as appropriate to the case and circumstances. At least seven (7) calendar days prior to the hearing date, each party shall provide the other with all relevant materials, including: names of all witnesses and any and all written materials to be introduced at the hearing. Copies of this material must also be submitted to the Graduate Council at least fourteen (14) calendar days prior to the hearing.

During the appeal, the Graduate Council shall review the charges. At the hearing, the Graduate Council may interview such witnesses as are brought to the hearing by either party or such other witnesses as the hearing committee considers relevant.

During the procedure, the graduate student members of the Graduate Council participate fully and equally with faculty members of the Graduate Council to review the issues of the case and ensure due process for the student. The graduate students are not to be viewed as a special resource or advocate for the student to any greater degree than any individual faculty member of the Graduate Council.

A formal hearing will follow these procedures and conditions:

1. The student:

- a. shall be present throughout the hearing. If the student fails to attend the hearing, s/he shall be considered to have abandoned her/his appeal unless deferral was granted by the Graduate Council;
- b. may be accompanied by a Senate member of her/his choice, if desired and available;
- c. may be accompanied by a graduate student of her/his choice to serve in an advisory role, if desired and available;

Please note: although Graduate Council will attempt to accommodate requests, the non-availability of a requested accompanying Senate member or graduate student is not sufficient cause for delay of an appeals hearing, nor does it affect the legitimacy of the Council's findings.

- d. shall have the right to present evidence, including witnesses, first; and
- e. may cross-examine all witnesses presented by the instructor, department or dean.

If the student desires a Senate member as an advisor and is unable to secure a Senate member to serve in this role, the Graduate Council, at the student's request, will appoint a faculty member to act in this role. This advisor may or may not be a member of the Graduate Council. A Graduate Council member serving in this capacity shall be recused from the Graduate Council deliberations of the appeal.

2. The hearings will be confidential and limited to the principals (student, Senate member selected by the student, graduate student selected by the student, and instructor or department representative or relevant administrator), and members of the Graduate Council (but see 3 and 5 below).
3. By prior arrangement, witnesses may be interviewed as part of the hearing process.
4. All witnesses other than the student and the instructor (or department representative or other relevant administrator) shall be excluded from the hearing except when testifying.
5. Evidence may be oral or written, but must be limited to issues raised in the original written complaint. Formal rules of evidence shall not apply, and evidence shall be admitted if of the type upon which reasonable people are accustomed to rely in the conduct of serious affairs. The Graduate Council may, in its discretion, exclude irrelevant or unduly repetitive evidence. At its discretion the Graduate Council may agree to hear closing arguments (either oral or written at the Council's discretion) as to the correct resolution of the matter. If the Council determines to allow written closing arguments, the hearing process shall be deemed complete upon the parties' submission of their written arguments to the Council.
6. The meeting shall be tape recorded, or, at the option of the student, a stenographer may be provided at the student's expense. The student shall have access to a copy of the tape recording and may copy the tape at her/his expense. All records pertaining to the hearing shall be kept by the Graduate Council for a period of three years. Student records shall be retained beyond that time if there is an outstanding request by a principal party to the review to inspect them.
7. The Graduate Council will reach its decision subsequent to completion of the hearing. The deliberations of the Graduate Council shall be in private. The Graduate Council shall submit a written decision to the Graduate Dean, including an explanation of the basis of its decision and a written recommendation, within ten (10) working days of the date of completion of the hearing process.
8. Consistent with Senate authority, the Graduate Dean will make the final decision on all cases involving probation and dismissal. The Graduate Council will have final decision-making authority in all other cases.
9. The Graduate Dean will have the administrative responsibility to implement the elements of the final decision and to ensure that the instructor involved and/or Department abide by the terms of the final resolution of the appeal. In addition the Graduate Dean will take reasonable steps to ensure that the student is not subject to any form of retaliation and is further restored to good standing with the Department if so determined by the decision of the review. This may include the provision of lost wages or fellowship funds if so determined by the decision of the review.

V. Financial Support

Financial support will continue for the student for the term in which the appeal is submitted. Support beyond this term will be contingent upon approval of the Department and the Graduate Dean, and determined on a case-by-case basis.

VI. Ramifications of Appeal Process

A faculty member may request his or her name be removed from the course in the final academic transcript.

No punitive actions may be taken against the instructor on the basis of these procedures. Neither the filing of an appeal by a student nor the final disposition of the appeal shall, under any circumstances, become a part of the personnel file of the instructor. The use of non-academic criteria in assigning a grade is a violation of the Faculty Code of Conduct. Sanctions against an instructor for violation of the Faculty Code may be sought by filing a complaint in accordance with

CAPPM 002.015 or the relevant collective bargaining agreement. A complaint may be filed by the student or by others consistent with CAPPM 002.015.

No punitive action may be taken against the complainant on the basis of these procedures. Neither the filing of an appeal by a student nor the final disposition of the appeal shall, under any circumstances, become a part of the complainant's file. The instructor may, if he or she feels that his or her record has been impugned by false and malicious allegations, file charges against the complainant through the office of the Vice Chancellor for Student Affairs.