

*Chemistry Graduate Program
Handbook 2011-2013*



UC DAVIS

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Graduate Program in Chemistry (GPC)

Introduction

The information in this booklet has been gathered from available sources and prepared for students and faculty as a reference guide to explain policies and procedures governing graduate work in the Chemistry Graduate Program (GPC). A guide that covers graduate policies governed by the Graduate Division can be found at the following url: <http://gradstudies.ucdavis.edu/students/handbook>

Together, these publications provide guidelines, requirements and regulations that students must be aware of and follow in order to complete the graduate degree. We recommend that students refer to them often.

Information and Requirements for International Student

There are some special rules and regulations that apply to international students with regard to enrollment, finances, visas, employment, travel, and other academic and personal matters.

If you are a new international student, you will have an immigration hold that must be released by SISS before you can complete registration. Therefore, the first place you should go upon arriving at UC Davis is Services for International Students and Scholars (SISS). There you can find answers to almost any question you might have regarding your status as a member of the international community on campus and in the city of Davis. The staff is very knowledgeable and can put you in touch with other students and scholars from your home country. They are available to help you as you adjust to graduate life at UC Davis.

SISS Contact Information:
University House
Email: sisss@ucdavis.edu
Website: <http://sisss.ucdavis.edu>
Phone: 530-752-0864
Fax: 530-752-5822

Required English Exams for International Students

Prior to your first quarter of enrollment, if your native language is not English and you have an undergraduate degree from an institution at which English is not the primary language of instruction, you are required to take the English examination given by the English as a Second Language (ESL) office on campus. The test is given during orientation week at the start of each quarter. Scores from the examination are forwarded to the graduate program office to ensure that new graduate students enroll in English language courses during their first quarter here, if their scores warrant it.

Graduate Studies will monitor ESL class enrollment quarter by quarter. If you are required to take the English exam and fail to do so, you will have a "HOLD" placed on your registration for the next quarter. In addition, if your score on the exam indicates that English courses are needed, but you do not enroll in such courses, you will find a "HOLD" on your next quarter registration.

ESL Program contact Information
<http://esl.ucdavis.edu/graduate-esl>
Phone: 530-752-9933
Fax: 530-752-3156



The SPEAK Test is also required. The Chemistry Graduate Affairs Committee has established that domestic ESL and international students must have a score of 45 or above on the SPEAK test in order to serve as a TA in the Department. New Chemistry graduate students who are non-native speakers are required to take the SPEAK test when they first enter the graduate program. Students who were offered a TA as part of their acceptance package will be employed as a TA through the end of their first year in residence independent of their initial score on the SPEAK Test. However, students who score less than 45 are required to enroll in Linguistics 25 and, if offered, a special section of Chemistry 298 for non-native speakers during the Fall Quarter. They are required to take Linguistics 391 in Winter or Spring quarter. In order to be eligible to receive support as a TA after the third quarter in residence, students must retake the SPEAK test and score 45 or above. The SPEAK test is administered by the Center for Excellence in Teaching and Learning (CETL).

CETL contact information:

Surge III, Suite 1350

Web: <http://cetl.ucdavis.edu/egw/speak-tests/>

Email: cetl@ucdavis.edu

Phone: 530 752-6050

Students are only allowed to take the SPEAK Test every 6 months. Hence, for students who fail the SPEAK Test in Fall, the first opportunity to retake the test is at the end of Winter quarter or the beginning of Spring quarter.

Program Requirements

Placement Examinations

All students take placement exams in analytical, biological, inorganic, organic and physical chemistry upon entering the program. The purpose of the placement examinations is to test the student's mastery of the content of undergraduate courses in all of the areas of chemistry. The examinations are largely based on the material contained in standard undergraduate textbooks. A list of suggested texts for review is available upon request from the graduate student affairs officer.

The examinations are given prior to the beginning of Fall quarter. Performance scores on placement examinations are based on national norms for each examination. Students must pass four of the five placement exams at the 50th-percentile level or above. Failure to pass the exam at the required level constitutes a deficiency. Students who do not pass a placement exam are required to retake the exam or complete specific deficiency course work. All students must pass the placement exam or successfully complete the required deficiency course work in their area of specialization. Failure to meet the placement/deficiency requirements in the student's major area will result in the student being dropped from the Ph.D. program in that area. A failure in a minor area may be remedied by taking an upper division undergraduate course for credit as determined by the graduate advisor.

MS students are only required to take the ACS placement exam in their area of specialization and, if necessary, must remove that deficiency in their first quarter of residence if the deficiency course is available (if not available until later, the MS student must remove the deficiency by exam retake offered the 1st week of their 2nd quarter). M.S. students wishing to transfer into the Ph.D. program must satisfy the placement examination requirements for the Ph.D. program.

"Deficiency courses are not the end of the world. However, be prepared to work a lot harder than your classmates that do not have deficiencies" – Chem.

Registration

University policy requires continuous registration for graduate students until completion of the degree. This means that a student must be fully registered for a minimum of 12 units each and every quarter. All students in the Chemistry Graduate Program must satisfy course requirements that are specified for each area of specialization. Registration for graduate courses must begin at entry regardless of deficiencies identified by the placement examinations. Under-enrollment could lead to a rating of Unsatisfactory Progress and/or a failure to meet residency requirements.

Selection of a Research Director

All new students entering in the Fall quarter must enroll in Chem 293, an introduction to research activities

in the department. In this seminar students are introduced to the graduate program faculty and their specific areas of research. Students must attend all sessions and fulfill the class requirements. During the first class, each student will be instructed on the specific procedures to be followed and informed when a research director may be selected. Students must complete the requirements of the seminar and be accepted into a research group by the end of the first quarter in residence. Failure to identify a research director and to participate in research activities will lead to a grade of U in the class and a rating of Unsatisfactory Progress for the quarter. All students, once they have been accepted into a research group, must register for and participate in Chem 261 (group meeting) and 263 or 264 (research) each quarter in residence.

Guidelines for Choosing a Mentor

The following items are examples of things that should be considered when you talk to faculty about joining their lab.

1. Both the recent research history and future prospects of a mentor should be considered.

– If the past research history is different from what is currently being investigated, is it reasonable to expect change?

"Make sure you have a successful rapport with your Research Director."

–Chem. Grad Student

– It is understood that for Junior Faculty (Assistant Professors) there may be little history as a mentor, so the present and future prospects must play a more important role in the decision.

2. What is the record for graduate students in the research group in successfully completing the Ph.D. program?

– Remember that these records can vary significantly.

3. How long does it typically take to complete the Ph.D. (or M.S.) degree research thesis in the research group?

– Consider how this is affected by the availability of research assistantships versus teaching assistantships.

4. Effective research requires financial support for salary, chemicals, access to sophisticated instrumentation, attendance at scientific meetings, etc.

–What financial support is available?

5. The prospects for a good post-doctoral or industrial position are markedly enhanced for students when research results have been published in peer-reviewed scientific journals by the time they complete the degree.

– What are the records of recent students (last 3-5 years) in the research group?

6. The graduate research experience is considerably improved by having to organize and successfully present research results at a major scientific meeting (i.e., ACS).

– What is the record in the research group and what are the prospects (financial support) for being able to present results at such a meeting?



Mentoring Guidelines

Mentoring of graduate students by faculty is an integral part of the graduate experience. It is broader than simply advising a student as to the coursework requirements to fulfill a program of study. It is distinct from formal instruction in a given discipline and encompasses more than serving as a role model. Because of the uncertainty as to the nature of mentoring, the UC Davis Graduate Council has outlined the following mentoring roles to guide the relationship between faculty and graduate students.

Faculty are responsible for:

I. Guiding students through degree requirements. This means:

1. Providing a clear map of program requirements from the beginning, making clear the nature of the coursework requirements and qualifying examination, and defining a time line for their completion.

2. Providing clear guidelines for starting and finishing dissertation or thesis work, including encouraging

the timely initiation of the dissertation or thesis research.

II. Guiding students through thesis or dissertation research. This means:

1. Evaluating clearly the strengths and weaknesses of the student's research.

2. Encouraging an open exchange of ideas, including pursuit of the student's ideas.

3. Checking regularly on progress.

4. Critiquing written work.

5. Providing and discussing clear criteria for authorship of collaborative research.

6. Assisting in finding sources to support dissertation research; such as, teaching assistantships, research assistantships, fellowships, etc.

7. Being aware of student's research needs and providing assistance in obtaining required resources. For example, serve as the student's advocate for necessary desk and/or laboratory space.

III. Guiding students through professional development. This means:

1. Providing guidance and serving as a role model for upholding the highest ethical standards.

2. Treating students respectfully.

3. Encouraging and critiquing oral and written presentations.

4. Encouraging participation in professional meetings of regional groups as well as of learned societies.

5. Facilitating interactions with other scholars, on campus and in the wider professional community.

6. Assisting with applications for research funding, fellowships, and others applications as appropriate for the respective discipline.

7. Being the student's advocate in academic and professional communities.

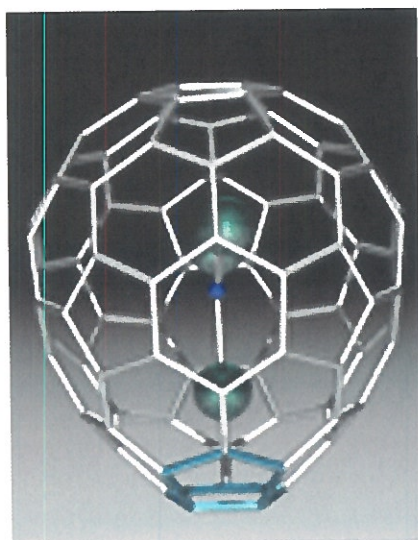
8. Providing career guidance, specifically assistance in preparation of CV and job interviews, and writing letters of recommendation in a timely manner.

9. Recognizing and giving value to the idea that there are a variety of career options available to the student in her/his/your field of interest and accepting that the student's choice of career options is worthy of your support. For example, guiding the student to teaching opportunities when appropriate for the student's goals.

As partners in the mentoring relationship, graduate students have responsibilities. As mentees, students should:

I. Be aware of their own mentoring needs and how they change through their graduate tenure. Graduate students should discuss these changing needs with their mentors.

II. Recognize that one faculty member may not be able to satisfy all of a student's mentoring needs. Seek



"Force yourself to chat with your professor everytime you see him/her. Especially if you are an international student."

- Chem. Grad Student

assistance from multiple individuals/organizations to fulfill the mentoring roles described above.

III. Recognize that their mentoring needs must respect their mentor's other responsibilities and time commitments.

IV. Maintain and seek regular communication with their mentors, especially their major professor.

V. Be responsive to the time line for their completion of laboratory and written work as well as critiques of oral and written presentations.

VI. Treat the faculty mentor and other students respectfully.

VII. Take responsibility in finding resources to support dissertation research; e.g., fellowships, grants, etc.

VIII. Take responsibility for preparation of CV and job interviews, and making requests for letters of recommendation in a timely manner.

Adequate/Satisfactory Progress

There are a number of ways to assess a student's movement through the program; the two major methods are through assessment of progress and completion of specific milestone requirements.

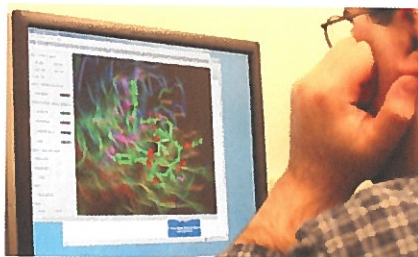
Although progress and milestone requirements overlap, as used here they specify different accomplish-

ments. "Progress" requirements refer primarily to time and course completion requirements and "milestone" requirements to examinations or equivalent requirements and to thesis/dissertation quality requirements.

The completion of progress and milestone requirements are the basis for determining whether a student is in good standing. The Chemistry Graduate program has specific requirements of progress for each degree program. These requirements are specified in detail below under Chemistry Graduate Program Requirements for Master's Degree and Chemistry Graduate Program Requirement for the Ph.D. Degree.

Progress / Milestone Requirements for Completion of Degree

All students meet with an academic advisor prior to the first week of school. Program course requirements are reviewed and specified on an advising worksheet. Students must complete the courses as outlined on this worksheet. Variance from the prescribed courses listed on the worksheet and approval of all courses outside the Department must be obtained from the student's academic advisor (Please note: this is usually NOT the research director.) Ph.D. students must complete all course work and remove any deficiencies no later than the fourth (4th) quarter of residence. Qualifying Examinations are sched-



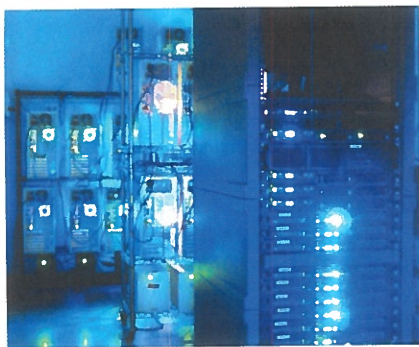
uled during the fifth (5th) quarter of residence. Normative time to degree for the doctoral degree in the Chemistry Graduate Program is five (5) years although some students may finish earlier or later. Normative time for the completion of the M.S. degree in the Chemistry Graduate Program is 2.5 years. Please note that students whose time to degree is one year beyond the normal time to degree for that program will be ranked as making marginal progress. Those students whose time to degree is more than one year beyond the normal time to degree will be issued an official report stating that they are making unsatisfactory progress.

Student Evaluation

A student's progress in the program is evaluated on an ongoing basis. Evaluations are made by the student's Research Director, an assigned Academic Advisor, and Faculty. Such evaluations provide the student with timely advice and procedures to avoid or rectify marginal or unsatisfactory progress.

Annual Evaluations of Progress

Campus policy requires that each graduate student be informed of his/her progress every year. The graduate adviser completes an annual report for each advisee under his/her area of responsibility. Students are counseled regarding their progress by their research director, sign the annual evaluation form and are given a copy of the report. If a student is ranked marginal or unsatisfactory a letter from the Dean of Graduate Studies will be issued and the report will be placed in the students file.



Other Periodic Evaluations

A student's academic progress is reviewed quarterly to assure that no student falls below the required 3.0 GPA requirement. If it is determined that the student's progress is below the required level the student will be informed in writing. A copy of the rating is sent to Graduate Studies and a letter addressing the areas of concern will be sent by the Dean. A Marginal or Unsatisfactory Progress Report may be issued at any time.

A student whose progress is unsatisfactory is regarded as a student on probation. This includes the student whose annual evaluation indicates unsatisfactory progress or the student who receives written notice from the graduate adviser that progress is unsatisfactory. If the student fails to meet the requirements specified in the notices sent by the Dean of Graduate Studies or by the Advisory/Guidance Committee, the student will be subject to disqualification from further study in the graduate program.

Refer to the section on Scholarship Warnings And Disqualification in the Graduate Studies Guide <http://gradstudies.ucdavis.edu/students/handbook>

Requirements for the Master's Degree in Chemistry

Course Requirements

All chemistry graduate students take American Chemical Society (ACS) placement exams upon entering the program. A passing score is set by ACS for each exam. Deficiencies identified by the ACS exams can be cleared by retaking an equivalent exam at the beginning of the student's second quarter in residence or by taking a prescribed course (or series of courses depending on the subject area) and passing each with a grade of 3.0 or better.

MS students are only required to take the ACS placement exam in their area of specialization and, if necessary, must remove that deficiency in their first quarter of residence if the deficiency course is available (if not available until later, the MS student must remove the deficiency by exam retake offered the 1st week of their 2nd quarter).

This plan requires a minimum of 30 units of graduate-level courses and a thesis. All 30 units must be in Chemistry or in other programs approved by the graduate adviser.

Chemistry has areas of specialization in Analytical, Biological, Inorganic, Organic, and Physical Chemistry. Each area has different required core classes. Neither courses taken to clear a deficiency, nor CHE 261, 263, 264, 280, 290, 293, 294, 295, 299, 390 can be used to satisfy the core class requirement.

MS students must take 9-12 units of core coursework, a minimum 18 units of additional required courses, and enough CHE 299 units to meet the total 30 unit minimum requirement. Full-time students must enroll for 12

units per quarter including research, academic and seminar units. Courses that fulfill any of the program course requirements may not be taken S/U unless the course is normally graded S/U. Once the total minimum course requirements are completed, students take additional classes as needed, although the 12 units per quarter are generally fulfilled with a group meeting (261) and research units (263/264 and 299). Per UC regulations, students cannot enroll in more than 12 units of graduate level coursework (200) or more than 16 units of combined upper division and graduate level coursework (100,200,300) per quarter. Each core course and any deficiency course must be passed with a grade of 3.0 or higher.

Each candidate for the MS degree must serve the equivalent of three academic quarters in a minimum of 25% appointment as a teaching assistant. A student serving in a 50% appointment/quarter (the maximum allowed) will satisfy the requirement in two quarters. Stipends for students serving in a 25% appointment as a TA may be supplemented by fellowships or research assistantships.

Residence Requirement

Candidates for the Master's degree must be in residence at least three academic quarters in full-time standing (12 units per quarter). Two six-week summer sessions may be counted as the equivalent of one regular quarter for purposes of satisfying the residence requirement for the Master's degree. A minimum of two units must be taken in each summer session.

Advancement to Candidacy

Every student must file an official application for Candidacy for the

Degree of Master of Science after completing all of their course requirements, their residency requirement and at least one quarter before completing all degree requirements; this is typically in the 3rd or 4th quarter. The candidacy form for the Master's Degree – Thesis Plan I can be found online at: <http://www.gradstudies.ucdavis.edu/forms/>. A completed form includes a list of courses the student has taken or will take to complete degree requirements. If changes must be made to the student's course plan after s/he has advanced to candidacy, the Graduate Adviser must recommend these changes to Graduate Studies. Students must have their Graduate Adviser and committee Chair sign the candidacy form before it can be submitted to Graduate Studies. If the candidacy is approved, the Office of Graduate Studies will send a copy to: the GPC Student Affairs Officer, the student, and the Thesis Committee Chair. If the Office of Graduate Studies determines that a student is not eligible for advancement, the GPC Thesis Committee Chair and the student will be told the reasons for the application's deferral. Some reasons for deferring an application include: grade point average below 3.0, outstanding "I" grades in required courses, or insufficient units.

Thesis Requirement

Students must complete an acceptable research thesis. Research for the Master's thesis is to be carried out under the supervision of a GPC faculty member (Research Director/Major Professor) and must represent an original contribution to knowledge in the field. The thesis research must be conducted while the student is enrolled in the program. The thesis must be submitted to the thesis committee at

least one month before the student plans to make requested revisions. All committee members must approve the thesis and sign the title page before the thesis is submitted to Graduate Studies for final approval. Should the committee determine that the thesis is unacceptable, even with substantial revisions, the GPC will recommend to the Dean of Graduate Studies that the student be disqualified from the program.

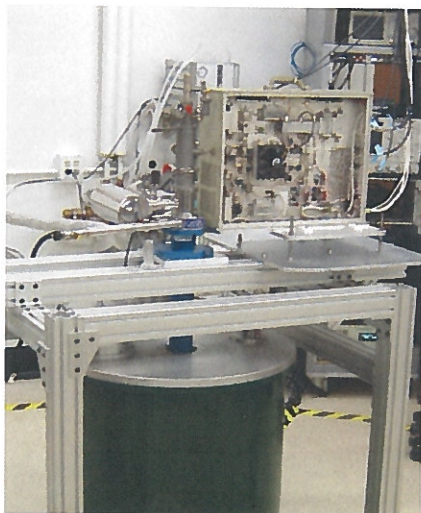
The thesis must be filed in a quarter in which the student is registered or on filing fee. Instructions on preparation of the thesis and a schedule of dates for filing the thesis in final form are available from Graduate Studies; the dates are also printed in the UC Davis General Catalog and in the Class Schedule and Registration Guide issued each quarter. A student must have a minimum GPA of 3.0 for the M.S. degree to be awarded.

The candidate and research director/major professor should meet at least once a year with the other members of the thesis committee to discuss progress and any changes in research objectives.

Requirements for the Doctoral Degree in Chemistry

Significance

The Doctor of Philosophy degree is not granted by the University of California merely for the fulfillment of technical requirements, such as residence or the completion of fundamental courses. The recipient of a Ph.D. degree is understood to possess thorough knowledge of a broad field of learning and to have given evidence of distinguished accomplishment in that field; the degree is a warrant of critical ability



and powers of imaginative synthesis. The degree also signifies that the recipient has presented a doctoral dissertation containing an original contribution to knowledge in her or his chosen field of study.

Residence Requirement

Students working toward a doctorate must be registered and in University residence for a minimum of six regular quarters of full-time enrollment; 12 units minimum. Two consecutive regular Summer Sessions may be counted as the equivalent of one regular quarter if at least two units are taken in each Summer Session.

Course Requirements

All chemistry graduate students take American Chemical Society (ACS) placement exams upon entering the program. These exams establish any knowledge deficiencies that the student may possess in the five designated areas of chemistry. A passing score is set for each exam by the ACS. Deficiencies identified by the ACS exams can be cleared by

retaking an equivalent exam at the beginning of the student's second quarter in residence or by taking a prescribed course (or series of courses depending on the subject area) and passing each with a grade of 3.0 or better.

Each candidate for the Ph.D. degree must clear all deficiencies that are identified by the placement exams taken upon entering the program. Deficiencies must be cleared by the end of Spring quarter in the first year either by passing the ACS standardized exam or by taking the appropriate undergraduate course and receiving a grade of 3.0 or higher. Each candidate must complete a total of six graduate-level courses, exclusive of Chemistry 261, 263, 264, 280, 290, 293, 294, 295, 298, 299, and 390. These six courses consist of a set of specified core courses and a specific number of elective and special topic courses, as given below for the five areas (particular fields of interest). Elective courses may be taken from the Chemistry curricula or from other approved departments with prior approval from their academic adviser, depending on the area. Students should complete all required course work early in their second year in residence. Each core course, and any deficiency course, must be passed with a grade of 3.0 or higher. In addition, candidates must enroll and participate in Chemistry 290, Seminar, during each quarter in residence, until they advance to candidacy. Enrollment in Chemistry 290 is highly recommended thereafter to stay abreast of innovations in the field. Candidates must be fully registered (12 units) every quarter in residence and maintain a 3.0 or better overall GPA.

Nine-twelve units of core courses are required. See listing of core classes for each area of specialization listed on the previous page.

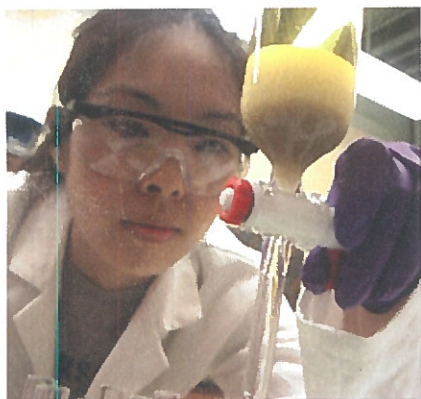
Elective courses may be taken from the Chemistry curricula or from other approved departments, depending on the area. A minimum of 2-3 elective classes (4-12 units) is required depending upon which area of specialization a student is pursuing.

Additional courses including CHE 290, CHE 293, CHE 261, CHE 263, CHE 264, CHE 294 and CHE 299 are required. See previous page for exact quarter/year requirement and units.

Students should complete all required course work early in their second year in residence. A full-time student must enroll for 12 units per quarter including research, academic and seminar units. Per UC regulations, students cannot enroll in more than 12 units of graduate level coursework (200) or more than 16 units of combined upper division and graduate level coursework (100, 200, 300) per quarter. Courses that fulfill any of the GPC course requirements may not be taken S/U unless the course is normally graded S/U.

Teaching Requirement

Each candidate for the Ph.D. degree must serve the equivalent



Analytical Chemistry—(1) Chemistry 205 and 240; (2) two graduate-level special-topics courses (241A-E) in analytical chemistry; and (3) two graduate-level courses in areas outside of analytical chemistry, either in Chemistry or in other approved departments.

Biological Chemistry (2 tracks)—
(1) BioOrganic: Chemistry 219, 233, and 238 or MCB 211.
BioPhysical: Chemistry 205 and 210A and MCB 211.
(2) three additional graduate-level courses either in Chemistry or in other approved departments.

Inorganic Chemistry—(1) Chemistry 205 and 226; (2) two graduate-level special-topics courses (228 A-D) in inorganic chemistry; and (3) two graduate-level courses in areas outside of inorganic chemistry, either in Chemistry or in other approved departments.

Organic Chemistry—(1) Chemistry 219, 231A, and 233; and (2) three additional graduate-level courses either in Chemistry or in other approved departments.

Physical Chemistry—(1) Chemistry 211A, 210A, and 210B; and (2) 3 graduate-level courses either in Chemistry or in other approved departments.

of three academic quarters in a 25% appointment as a teaching assistant (TA). A student serving in a 50% TA appointment (the maximum allowed) will satisfy the requirement in two quarters. Stipends for students serving at one-fourth time as a TA may be supplemented by fellowships or research assistantships.

Qualifying Examination

Students must clear any deficiencies and complete all of the TA and course requirements before they are eligible to take the oral qualifying examination. For each area, the chemistry graduate adviser notifies students when they have satisfied these requirements.

The qualifying examination committee, which is appointed by the Dean of Graduate Studies in consultation with the graduate adviser for the area, consists of four GPC faculty members (excluding the research director/major professor) and one non-GPC faculty member. The qualifying examination is normally scheduled in the student's fifth quarter in residence.

The primary purpose of the Qualifying Examination (QE) is to validate that the student is academically qualified to conceptualize a research topic, undertake scholarly research and successfully produce the dissertation required for a doctoral degree. The QE must evaluate the student's command of the field, ensuring that the student has both breadth and depth of knowledge, and must not focus solely on the proposed dissertation research. In addition, the QE provides an opportunity for the committee to provide important guidance to the student regarding his or her chosen research topic.

The Qualifying Examination will be scheduled by the department as early as the beginning of the fifth quarter of

residence (summer excluded). The Qualifying Examination will consist of written and oral components.

Guidelines for the Oral Qualifying Examination

1. The student should meet with their qualifying examination chair once the committee has been formed.

2. In consultation with their Research Director/Major Professor and with the concurrence of the Graduate Advisor, the student should make a recommendation to the Student Affairs Officer for appointment of the fifth member of the qualifying exam committee.

3. The student may request that any one member of the qualifying exam committee be changed. Such a request should be made within three days of the student being informed of the composition of the proposed committee.

4. The student should meet with the chair of the qualifying exam committee at least two weeks prior to the qualifying examination to discuss any concerns or questions about the examination and to deliver the doctoral research abstract (signed by the Research Director/Major Professor).

The doctoral research abstract provides the qualifying exam committee with:

- a. background,
- b. research plan,
- c. significance of research,
- d. status of research progress, and
- e. expected future directions.

That description should be in the form of a Journal of the American Chemical Society communication having a three-page limit, as formatted for journal publication using the journal template

for communications (references are required and are not counted in the page limit). The document should utilize color-coding as appropriate: black = introduction and work done by others; blue = accomplishments of the student; red = planned work and expectations; green (if applicable) = work to be done by collaborators.

The doctoral research abstract should be approved and signed by the Research Director as valid and representative. The qualifying exam committee chair should review the doctoral research abstract for clarity and completeness, and return it to the student within three days with suggestions for appropriate modification.

At least one week prior to the qualifying examination, the student should submit (preferably in PDF format) the following documents to the qualifying exam committee members: (i) the approved doctoral research abstract; (ii) copies of any publications or manuscripts submitted or in press that have resulted from their research at UC Davis.

5. In Part I of the qualifying examination, the student should present a description of their research project(s). The research presentation style and scope should be similar to the brief presentations given at ACS meetings. The objective of the research presentation is to clearly explain the broad importance of the scientific work, with particular emphasis on communicating the big picture to a non-specialist audience, rather than providing detailed descriptions of experimental procedures and methods.

The presentation should define the main scientific questions being

addressed and explain how answers to these questions will be relevant to the field of study. The overall goal is to communicate the research results in a concise fashion, as well as to demonstrate the broader impact and significance of the work. *Note, however, that during questioning, members of the qualifying exam committee may ask about specific details of the experimental procedures and the student should be prepared to explain the rationale behind the experimental design.*

6. The student may use up to five PowerPoint™ (or equivalent) slides to present complex formulas, graphical material, and other details that would be difficult to reproduce by hand on the blackboard. Normally, no other materials are allowed as this is Qualifying Examination, not a seminar.

7. In Part II of the qualifying examination, the questions will broadly address the student's area of specialization (analytical, biological, inorganic, organic, physical). Also, areas of weakness evident from Part I of the examination may be addressed.

Discuss with your advisor how much time you should spend preparing for your exams vs. doing research. You should have an idea of how your advisor feels about your progress. Feel free to ask him/her for feedback

— PSA Research Guide



The oral portion of the qualifying exam is intended to demonstrate the student's critical thinking ability, powers of imagination and synthesis, and broad knowledge of the field of study.

The committee will evaluate the student's general qualifications for a respected position as an educator or leader as well as the student's preparation in their chemical area of specialization based upon relevant portions of the student's previous academic record, performance on specific parts of the examination, and the student's potential for scholarly research as indicated during the examination.

Outcome of the Oral Qualifying Exam

At the conclusion of the qualifying examination, the chair will assist the discussions by the committee members to reach a final recommendation. In reaching their decision, members of the committee will consider all areas of the student's progress including the graduate academic record, performance on specific parts of the qualifying examination, and an overall evaluation of the student's performance and potential for scholarly research.

The chair must inform the student of the decision – Pass, Not Pass, or Fail

– immediately at the conclusion of the committee discussion and voting. The chair must complete the qualifying examination report and return it to the Student Affairs Officer within 72 hours of the examination so it can be forwarded to the Office of Graduate Studies. The chair will inform the Research Director/Major Professor of the decision, preferably in writing. In the case of a Pass, the chair must sign the Advancement to Candidacy form and refer the student to the Student Affairs Officer for additional instructions. In the case of a Not Pass, the chair must clarify for the student and the Research Director/Major Professor the nature of the deficiencies identified, and must provide a written description of the requirements that should be met, and the time line for meeting them. This must be done within 72 hours of the examination. In the case of a Fail, the student cannot remain in the Ph.D. program; the qualifying exam committee has the option of recommending in the report that the student be allowed to pursue an M.S. degree in chemistry if the performance on the exam was sufficient to establish competence at the Masters level. In the case of a Not Pass or Fail the Chair of the Committee shall inform the student of the right to appeal the committee's decision for cause as delineated by The Dean of Graduate Studies.

Advancement to Candidacy

Upon successful completion of the examination, the student is given an application for advancement to candidacy by the examining committee chair. When it is filled out and signed by the graduate adviser and the major professor, the student pays the candidacy fee at the Cashier's office and submits the

form to Graduate Studies. Students admitted to a Designated Emphasis (DE) must have the candidacy application approved by the director of the DE as well. Upon advancement to candidacy for the degree, a committee is appointed to direct the student in his/her research problem and to guide in the preparation of the dissertation. For information on who is eligible to serve on dissertation committees, please consult the Graduate Studies : <http://gradstudies.ucdavis.edu>.

Note: International students must process their advancement to candidacy immediately after they pass their QE in order to qualify for the Nonresident Tuition Reduction Fee Program. In this program NRT is reduced for a total of 3 calendar years from the time the QE was passed and advancement paperwork was completed.

Third -Year PhD Graduate Student Seminar

A 3rd-year seminar presentation is required of all Ph.D. students to demonstrate that the candidate is making research and dissertation progress.

Purpose of Seminar

- a. Give the graduate student formal cause to evaluate his/her research progress.
- b. Give the graduate student valuable experience in organizing and presenting his/her science.
- c. Calibrate 1st and 2nd year graduate students as to expectations placed on a 3rd year graduate student.
- d. Allow the graduate student's Dissertation Committee to monitor and evaluate his/her progress.

Format of the Seminar

- e. Each graduate student speaker should deliver a 25 minute lecture and expect to entertain~5 minutes of questions. There will be no break between talks.
- f. In general, the speaker should state the research problem, discuss the importance or relevance of the research, present and analyze the research data, and conclude with a statement about future research plans.
- g. Speakers are encouraged to read pertinent information in the ACS Style Guide (by J. S. Dodd).
- h. Graduate students are encouraged to meet with the individual members of their Dissertation Committee prior to giving their 3rd Year Graduate Student Seminar in order to foster interaction with and contribution by the Dissertation Committee.

Evaluation of the Seminar

- i. The graduate student's Dissertation Committee will receive a specific invitation to attend the seminar.
- j. The graduate student and his/her Dissertation Committee will meet within two weeks of the seminar to evaluate the graduate student's seminar. The student (with, as necessary, the assistance of the student's research director) is charged with scheduling this meeting. The purpose of this evaluation will be two-fold:
 - (1) to critique the delivery and
 - (2) to critique the research progress.
- k. If the graduate student's Dissertation Committee decides that either poor delivery or insufficient science warrant a repeat seminar, the Seminar Committee will reschedule the graduate student's seminar for a date ~6 months later. Each graduate

student is strongly encouraged to schedule future meetings (perhaps every six months) with his/her Dissertation Committee.

The Doctoral Dissertation

A dissertation on a subject chosen by the candidate, bearing on the principal subject of study and of such character as to show ability to pursue independent investigation, must receive the approval of the dissertation committee. As part of the dissertation process, the student will present his/her research to the dissertation committee in a 3rd Year Graduate Student Seminar (please see above for complete instructions).

The research conducted by the student must be of such character as to show ability to pursue independent research. The dissertation reports a scholarly piece of work of publishable quality that solves a significant scientific problem in the field and is carried out under the supervision of the student's Research Director/Major Professor, while the student is enrolled in the program. The chair of the dissertation committee must be a GPC member and must be immediately involved with the planning and execution of the experimental work done to formulate the dissertation. The research director/major professor's laboratory is the setting for most of the student's research activities, unless an alternative site and immediate supervisor are approved in advance by the Graduate Affairs Committee.

Students should meet regularly with their dissertation committee. The dissertation must be submitted to each member of the dissertation committee at least one month before the student expects to make requested revisions; committee members are expected to respond within 4 weeks, not including

summer months for nine month faculty. Informing committee members of progress as writing proceeds helps the members to plan to read the dissertation and provide feedback within this time frame. The dissertation must be approved and signed by the dissertation committee before it is submitted to Graduate

Please refer to the Graduate Studies web site at http://www.gradstudies.ucdavis.edu/students/qualifying_exam.html for particulars on how to prepare and file the dissertation.

California Residency

In order to be considered a resident for tuition purposes, you must have come here with the intent to make California your home as opposed to coming to this state to go to school. You must demonstrate your intention to make California your home by severing your legal ties with your former state of residence and establishing those ties with California as soon as possible after your date of entry into the State. If these steps are delayed, the one year duration period will be extended until you have demonstrated both presence and intent for one full year.

Students must meet the deadline and complete the process prior to the beginning of their second year in residence or bear the cost of out-of-state tuition themselves.

Please go to the following web site <http://registrar.ucdavis.edu/html/slr.html#WhoResident> or refer to the section on California Residency for Tuition Purposes in the Graduate Student Guide at the following url: <http://gradstudies.ucdavis.edu/students/handbook>

Students complete the online application at the Registrar's website <http://registrar.ucdavis.edu/html/>

[slr.html#petition](#) the quarter prior to submitting the application for reclassification. Please see deadline schedule on the reclassification request.

The Residence Deputy is the only person authorized to provide information on residency regulations at UC Davis. Written information is available in the UCD General Catalog and in publications available from the Residence Deputy, Office of the Registrar, 12 Mrak Hall, One Shields Avenue, UCD, Davis, CA 95616; (530) 752-5029 or (530) 752-4749.

Withdrawals, Leaves, Exchanges

At any point in your graduate education, you may find that you need to take a break in your course of study. This might include withdrawal from the university through PELP (Planned Educational Leave Program), going on Filing Fee status in the last stages of your degree, or doing an exchange program with another university. This section gives you basic information on each of these options.

WARNING: If you withdraw or break registration without filing for PELP you are not guaranteed readmission - an application for readmission will be subject to the same review as a new application. If readmitted, you must fulfill all programmatic degree requirements in existence at the quarter of readmission.

Withdrawal

Leaving the university during a quarter entails obtaining a withdrawal petition from the Registrar's Office, having it approved as directed, and filing it with the Registrar's Office. Failure to follow this procedure may result in an "F" grade for each course in which you are enrolled.

Readmission

If you drop out of your graduate program but wish to return, you must file an Application for Readmission. Readmission is not automatic; your application is considered along with those of first-time and other readmission applicants.

You may download an Application for Readmission at <http://www.gradstudies.ucdavis.edu/forms/>. File the application with Graduate Studies at least six weeks prior to the beginning of the quarter in which you plan to enroll. There is a processing fee.

You must obtain the endorsement of your Graduate Adviser, who indicates to the Dean that you are guaranteed a place in the program. Official transcripts covering all work completed since last attending UC Davis as a graduate student must also be provided before the application will be processed. At your request, Graduate Studies will forward your application to your Graduate Adviser to obtain review copies of your transcripts already on file. It is your responsibility to provide any supporting documents that may be required by the program (e.g., new statement of purpose, letters of recommendation, GRE scores, etc.).

International students who are on an F-1 visa must also submit a properly completed Certification of Finances form showing that they have the required amount of funds to cover fees and living expenses for their first year before an I-20 can be issued. The form is available at <http://siss.ucdavis.edu/students.cfm>.

After the Graduate Adviser has made a recommendation, the application will be returned to Graduate Studies recommending acceptance or denial. The Dean of Graduate Studies will

make a decision based on these materials.

Planned Educational Leave Program (PELP)

The Planned Educational Leave Program (PELP) status is available to graduate students who need to take a leave from their academic program for various reasons, including health-related issues, family crises or to clarify educational goals. PELP may be approved for a maximum of three quarters over the entire time a graduate student is at UC Davis. An extension can be requested, pending approval from the Dean.

International students must have their PELP status approved by the Services for International Students and Scholars office prior to submission of the PELP application to the Office of Graduate Studies.

PELP applications must be submitted to Graduate Studies no later than the first day of the quarter in which the PELP status is to begin. Students who have begun the registration process and then withdraw from registration after the first day of the quarter may be billed for fees owed or have to repay funding, including federal financial aid.

Students on PELP may hold a teaching appointment for one quarter only. Students on PELP may not hold an appointment as a Graduate Student Researcher (GSR).

Graduate students who are appealing disqualification from graduate study due to failing the Qualifying Examination may request to be placed on PELP status while their appeal is being considered by the Administrative Committee of Graduate Council. The student should contact the appropriate Student Affairs Officer in the Office of

Graduate Studies assigned to his/her program and request to be placed on PELP status pending the outcome of the appeal of the fail decision on her/his Qualifying Examination.

The Graduate Adviser's approval on the PELP advising form guarantees you readmission for the quarter specified. In giving approval for the leave, advisers are certifying that there will be space available for you when you return. For more information on PELP, contact your graduate program coordinator who will help you initiate the application process. PELP time extension forms are available in the Office of Graduate Studies in 250 Mrak Hall, or online at <http://gradstudies.ucdavis.edu/forms>.

Filing Fee Status

Filing Fee is a non-registered status available to graduate students who have advanced to candidacy for their degree. Filing Fee status maintains your eligibility to complete your degree while not registered, and within your approved time limitations. You can use this option when all of your courses and research have been completed; your thesis or dissertation is in final draft form or you are ready to take the Master's Comprehensive Examination; and you no longer need to use campus facilities. Forms are available in Graduate Studies or online at <http://www.gradstudies.ucdavis.edu/forms>.

Students on Filing Fee status may hold an academic appointment for one quarter only.

Graduate Studies may approve a maximum of two quarters of Filing Fee status (for students in graduate programs that allow more than one

quarter on Filing Fee status). Requests for extension will be considered, for one quarter only, on a case-by-case basis. Requests for more than three quarters in Filing Fee status will not be approved.

In Absentia Registration

The Fee Policy for Graduate Student In Absentia Registration promotes continuous enrollment of graduate and professional degree students by providing an appropriate enrollment incentive. The policy recognizes that these students may need to perform work away from the university but seeks to minimize the number of students who allow their registration status to lapse. Both the eligibility criteria and reduced fee level are predicated on the fact that students undertaking approve coursework or research outside of California have access to substantially fewer instructional resources and student services than do students who reside within the state, and should therefore qualify for a meaningful fee reduction.

All students pursuing doctoral or master's degrees in academic disciplines as well as those pursuing professional master's or doctoral degrees are eligible for the fee reduction. Students in self-supporting graduate programs are not covered by this policy.

For more information, go online to http://gradstudies.ucdavis.edu/students/in_absentiaFAQs.html.

Graduate Student Health Insurance Plan (GSHIP)

The University of California requires that all registered students have health

insurance. The Graduate Student Health Insurance Plan (GSHIP) is designed specifically for UC Davis students, offering both Davis-area and worldwide coverage. The GSHIP plan includes medical and dental benefits for undergraduate, graduate, and professional students.

Students who are enrolled in GSHIP have the option to enroll eligible dependents in a voluntary plan. The plan provides medical insurance and the option to purchase dental/vision benefits. Enrollment in the dependent plan is managed by Wells Fargo (on behalf of Anthem Blue Cross) and the cost of insurance (premium) for dependents is paid directly to Wells Fargo. Student Health Services (SHS) does NOT manage the enrollment or collect payments for the dependent plan. See <http://healthcenter.ucdavis.edu/insurance/gship>.

Registered students are automatically enrolled in GSHIP. Students with comparable health insurance who want to waive participation in GSHIP may complete the waiver application online by going to <http://healthcenter.ucdavis.edu/insurance/gship>. Students must file a waiver application each year.

The services at SHS are supported by student fees to provide low student rates for primary health care services. All registered students may use SHS health care services whether or not they are enrolled in GSHIP. GSHIP members receive primary care services at SHS and are covered by GSHIP for referral care when referred by a SHS provider.

Graduate Courses In Chemistry

201. Chemical Uses of Symmetry and Group Theory (3 hrs). Symmetry elements and operations, point group, representations of groups. Applications to molecular orbitals, ligand field theory, molecular vibrations and angular momentum. Crystallographic symmetry.

204. Mathematical Methods in Chemistry (3 hrs). Introduction to mathematical and numerical methods in chemistry. Real and complex functions. Methods of integration. Differential equations. Linear algebra and matrices. Special functions. Integral transforms. Statistics.

205. Symmetry, Spectroscopy and Structure (3 hrs). Vibrational and rotational spectra; electronic spectra and photoelectron spectroscopy; magnetism; electron spin and nuclear-quadrupole resonance spectroscopy; nuclear magnetic resonance spectroscopy; other spectroscopic methods.

209. Special Topics in Physical Chemistry (3 hrs). Advanced topics in physical chemistry, biophysical chemistry or chemical physics chosen from areas of current research interest.

210A. Quantum Chemistry: Introduction and Stationary-State Properties (3 hrs). Stationary-state quantum chemistry; postulates of quantum mechanics, simple solutions, central field problems and angular momenta, hydrogen atom, perturbation theory, variational theory, atoms and molecules.

210B. Quantum Chemistry: Time-Dependent Systems (3 hrs). Matrix mechanics and time-dependent quantum chemistry: matrix formulation of quantum mechanics, Heisenberg representation, time-dependent

perturbation theory, selection rules, density matrices and miscellaneous molecular properties.

210C. Quantum Chemistry: Molecular Spectroscopy (3 hrs). Molecular spectroscopy: Born-Oppenheimer approximation, rotational, vibrational and electronic spectroscopy, spin systems and molecular photophysics.

211A. Advanced Physical Chemistry: Statistical Thermodynamics (3 hrs). Principles and applications of statistical mechanics; ensemble theory; statistical thermodynamics of gases, solids, liquids, electrolyte solutions and polymers; chemical equilibrium.

211B. Statistical Mechanics (3 hrs). Statistical mechanics of nonequilibrium systems, including the rigorous kinetic theory of gases, continuum mechanics transport in dense fluids, stochastic processes, Brownian motion and linear response theory.

212. Chemical Dynamics (3 hrs). Introduction to modern concepts in chemical reaction dynamics for graduate students in chemistry. Emphasis will be placed on experimental techniques as well as emerging physical models for characterizing chemical reactivity at a microscopic level.

215. Theoretical and Computational Chemistry (3 hrs). Mathematics of wide utility in chemistry, computational methods for guidance or alternative to experiment, and modern formulations of chemical theory. Emphasis will vary in successive years. May be repeated for credit when topic differs.

216. Magnetic Resonance Spectroscopy (3 hrs). Quantum mechanics of spin and orbital angular momentum, nuclear magnetic resonance, theory of chemical shift

and multiplet structures, electron spin resonance, theory of g-tensor in organic and transition ions, spin Hamiltonians, nuclear quadrupole resonance, spin relaxation processes.

217. X-Ray Structure Determination (3 hrs). Introduction to X-ray structure determination; crystals, symmetry, diffraction, geometry, sample preparation and handling, diffraction apparatus and data collection, methods of structure solution and refinement, presentation of results, text, tables and graphics, crystallographic literature.

218. Physical Principles of Macromolecular Structure (3 hrs). Relationship of higher order macromolecular structure to subunit composition; equilibrium properties and macromolecular dynamics, physical chemical determination of macromolecular structure.

219. Spectroscopy of Organic Compounds (4 hrs). Identification of organic compounds and investigation of stereochemical and reaction mechanism phenomena using spectroscopic methods—principally NMR, IR and M.S..

221A-H. Special Topics in Organic Chemistry (3 hrs). Selected topics of current interest in organic chemistry. Topics will vary each time course is offered and, in general, will emphasize the research interests of the faculty member giving the course.

222. Chemistry of Nanoparticles Chemical and physical aspects of inorganic nanoparticles, including synthesis, purification, reactivity, characterization, and applications for technology. Emphasis is on problems from the current literature. Not open for credit to students who have taken course 122.

226. Transition Metal Chemistry (3 hrs). Electronic structures, bonding, and reactivity of transition metal compounds.

228A. Bioinorganic Chemistry (3 hrs). Defines role of inorganic chemistry in the functioning of biological systems by identifying the functions of metal ions and main group compounds in biological systems and discussing the chemistry of model and isolated biological compounds.

228B. Main Group Chemistry (3 hrs). The synthesis, physical properties, reactions and bonding of main group compounds. Concepts of electron deficiency, hypervalency and non-classical bonding. Chemistry of the main group elements will be treated systematically.

228C. Solid State Chemistry (3 hrs). Design and synthesis, structure and bonding of solid state compounds; physical properties and characterization of solids; topics of current interest such as low-dimensional materials, inorganic polymers, materials for catalysis.

228D. Homogeneous Catalysis (3 hrs). Overview of homogeneous catalysis and related methods, with emphasis on kinetics, mechanisms, and applications for organic synthesis. The related methods may include cluster, colloid, phase transfer, enzymatic, heterogeneous and polymer-supported catalysis.

231A. Organic Synthesis: Methods and Strategies (4 hrs). Current strategies and methods in synthetic organic chemistry. Focus on construction of carbon frameworks, control of relative and absolute stereochemistry and retrosynthetic strategies.

231B. Advanced Organic Synthesis (3 hrs). Organic synthesis of complex target molecules. Stereochemical considerations and asymmetric synthesis. Organometallics for selective transformations. Carbocyclic and heterocyclic ring formation.

233. Physical Organic Chemistry (3 hrs). Elementary concepts in physical-organic chemistry including the application of simple numerical techniques in characterizing and modeling organic reactions.

235. Organometallic Chemistry in Organic Synthesis (3 hrs). Current trends in the use of organometallics for organic synthesis; preparations, properties, applications, and limitations of organometallic reagents derived from transition and/or main group metals.

236. Chemistry of Natural Products (3 hrs). An advanced treatment of naturally occurring compounds isolated from a variety of sources. Isolation, structure determination, transformations, total synthesis, biological activity and biosynthesis. Biosynthetic origin will be used as a unifying theme.

237. Bioorganic Chemistry (3 hrs). Structure and function of biomolecules; molecular recognition; enzyme reaction mechanisms; design of suicide substrates for enzymes; enzyme engineering; design of artificial enzymes and application of enzymes in organic synthesis.

238. Introduction to Chemical Biology Synthesis of complex molecules in nature. Use of biosynthetic pathways in synthesis of new chemical entities. Applications of small molecules in chemical genetics and structural biology. Solving biological problems using synthetic biomolecules.

240. Advanced Analytical Chemistry (3 hrs). Numerical treatment of experimental data; thermodynamics of electrolyte and non-electrolyte solutions; complex equilibria in aqueous and non-aqueous solutions; potentiometry and specific ion electrodes; mass transfer in liquid solutions; fundamentals of separation science, including column, gas and liquid chromatography.

241A. Surface Analytical Chemistry (3 hrs). Concepts of surfaces and interfaces: physical properties, unique chemistry and electronic effects. Focus on gas-solid interfaces, with some discussion of liquid-solid interfaces.

241B. Laser and X-ray Spectroscopy (3 hrs). Concepts and mechanisms of light-matter interactions. Chemical applications of modern spectroscopic methods, including multiphoton spectroscopy, time-resolved laser and x-ray photolysis, and phase-contrast x-ray imaging.

241C. Mass Spectrometry (3 hrs). Mass spectrometry and related methods with emphasis on ionization methods, mass analyzers, and detectors. May include ion-molecule reactions, unimolecular dissociation of organic and bio-organic compounds, and applications in biological and environmental analysis.

241D. Electroanalytical Chemistry (3 hrs). Consideration of mass transfer and electrode kinetics for polarizable electrodes. Current-potential curves for a variety of conditions, including both potentiostatic and galvanostatic control, and their application in chemical analysis.

241E. Microscopy and Imaging Techniques (3 hrs). Introduction to modern microscopy and imaging

techniques: scanning tunneling, atomic force, far-field optical, fluorescence, scanning near-field optical, and scanning electron microscopy. Application to nanoscience and analytical and bioanalytical chemistry.

261. Current Topics in Chemical Research (2 hrs). Designed to help chemistry graduate students develop and maintain familiarity with the current and past literature in their immediate field of research and related areas. May be repeated for credit.

263. Introduction to Chemical Research Methodology (3 hrs). Introduction to identification, formulation and solution of meaningful scientific problems including experimental design and/or theoretical analyses of new and prevailing techniques, theories and hypotheses. May be repeated for credit. (S/U grading.)

264. Advanced Chemical Research Methodology (6 hrs). Applications of the methodology developed in Chemistry 263 to experimental and theoretical studies. Advanced methods of interpretation of results are developed. Includes the preparation of manuscripts for publication. May be repeated for credit (S/U grading.)

280. Seminar In Ethics for Scientists (2 hrs). (S/U grading.) Studies of topical and historical issues in science ethics, possibly including issues such as proper authorship, peer review, fraud, plagiarism, responsible collaboration, and conflict of interest.

290. Seminar (2 hrs). (S/U grading.)

293. Introduction to Chemistry Research (2 hrs). Designed for incoming graduate students preparing for higher degrees in chemistry. Group and individual discussion of research activities in the department and research topic selection. (S/U grading.)

294. Presentation of Chemistry Research (1 hr). Introduces first- and second-year Chemistry graduate students to the process of giving an effective research presentation. Advanced Ph.D. students give formal seminars describing the design and execution of their research projects. May be repeated three times for credit. (S/U grading.)

295. Careers in Chemistry (2 hrs). Gives Chemistry graduate students an in-depth appreciation of career opportunities with a M.S. or Ph.D. degree. Professional chemists (and allied professionals) will give seminars describing both research and career insights. May be repeated for credit. (S/U grading.)

298. Group Study (1-5).

299. Research (1-12) (S/U grading.)

Professional Courses

390. Methods of Teaching Chemistry (2 hrs). Practical experience in methods and problems of teaching chemistry. Includes analyses of texts and supporting material, discussion of teaching techniques, preparing for and conducting discussion sessions and observing and guiding student laboratory work. Participation in the teaching program required for Ph.D. in Chemistry. May be repeated for credit. (S/U grading.)

392. Advanced Methods of Teaching Chemistry (2 hrs). Advanced topics in teaching chemistry. Analysis and discussion of curricular design, curriculum materials, teaching methods and evaluation. For students who are planning a career in teaching chemistry. (P/NP grading only.)

Student Conduct and Discipline

All members of the academic community are responsible for the academic integrity of the Davis campus. Existing policies forbid cheating on examinations, plagiarism and other forms of academic dishonesty. Academic dishonesty is contrary to the purposes of the University and is not to be tolerated. See the UC "Policy on Student Conduct and Discipline," revised May 17, 2002, Sections 101.00 and 102.00 (<http://www.ucop.edu/ucophome/coordrev/ucpolicies/aos/toc.html>).

A standard for student conduct is outlined in several publications. Also available are the university's Principles of Community and information about academic ethical issues. These policies and regulations are available from the Office of the Vice Chancellor—Student Affairs, 476 Mrak Hall and the Director of Student Judicial Affairs, 3200 Dutton Hall, (530) 752-1128, FAX (530) 752-6195, <http://sja.ucdavis.edu/admin-student-discipline>.

Alleged violations of campus or University standards will be investigated by the coordinator of Student Judicial Affairs. If complaints cannot be resolved informally between the coordinator, the accused student, and the referring party, the case may be referred to a hearing before the Student Conduct Committee, Campus Judicial Board, a hearing officer, or another appropriate officer.

Compliance Statement on Campus Policy of Nondiscrimination

The University of California, in accordance with applicable Federal and State law and University policy, does not discriminate on the basis of race, color, national origin, religion, sex, gender identity, pregnancy*, disability, age, medical condition (cancer-related), ancestry, marital status, citizenship, sexual orientation, or status as a Vietnam-era veteran or special disabled veteran. The University also prohibits sexual harassment. This nondiscrimination policy covers admission, access, and treatment in University programs and activities. Inquiries regarding the University's student-related nondiscrimination policies may be directed to Margaret Heisel, (510) 987-9572.

*Pregnancy includes pregnancy, childbirth, and medical conditions related to pregnancy or childbirth..

Notice of Availability of the UC Davis Campus Security Report

As provided by the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act of 1998, you are entitled to request and receive a copy of the Security Report for the University of California, Davis, campus. The report includes statistics for the past three years concerning crimes and incidents reported to campus security authorities (whether the crime occurred on campus, in off-campus buildings or property owned or controlled by the University, or on public property adjacent to campus). The report also provides campus policies and practices concerning security-how to report sexual assault and other crimes, crime prevention efforts, policies/laws governing alcohol and drugs, victims' assistance programs, student discipline, campus resources, and other matters. You may obtain a copy of this report online by accessing the UC Davis Police Department web page or by submitting a request to the UC Davis Information Practices Officer: Information Practices Officer, Offices Of The Chancellor And Provost, University Of California, Davis. 1 Shields Avenue, Davis, CA 95616



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