Guidelines and Procedures for Graduate Students

Fall, 2012

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Contents:

Applying to Berkeley 3
Advising 4

Coursework & Requirements 4

International Students
English Language Proficiency

Degree Requirements 6

Master of Science (M.S.) Plan I Requirements
Master of Science (M.S.) Plan II Requirements
Master of Engineering (M.Eng.)
Doctor of Philosophy (Ph.D.)
Departmental Exams Required
  Screening Exam
  Oral Qualifying Exam
  Advancement to Candidacy
  Ph.D. Dissertation

Grading & Evaluation 12

Appeals Procedure 12

Time to Degree and Residence Requirements

  Academic Residence Requirement
  California Residency
  Filing Fee

Financial Assistance 14

Graduate Student Researcher Policy 16
The graduate program in nuclear engineering at Berkeley offers instruction, research, and professional education in nuclear energy (fission and fusion), nuclear waste and materials management, and biomedical, bionuclear and radiological science. Established in 1958, the Department provides a graduate program consisting of the principal fields of reactor theory, reactor engineering, including thermal hydraulics and safety; nuclear materials; nuclear reactions and instrumentation; thermonuclear fusion; nuclear waste management; risk and systems analysis; biomedical imaging; and radiation physics and dosimetry. There are about 65 graduate students and 65 undergraduate majors in the Department. Graduates find opportunities for employment and professional careers in the United States and abroad. Recent graduates are employed in academia, industry, national laboratories, and state and federal agencies.

The Department has strong relations with the nearby Ernest Orlando Lawrence Berkeley National Laboratory, Lawrence Livermore National Laboratory and Los Alamos National Laboratory. A number of faculty and students collaborate with researchers in these laboratories, and use the facilities of these laboratories in their research projects.

Applying to Berkeley

The application deadline for the M.S. M.Eng. and Ph.D. program is December 15 for fellowships and for general admission. Applications received after this deadline will also be considered for admission and fellowship monies if resources are still available but students are advised to submit applications by the December 15 deadline.

GRE scores are required of all applicants and international students must submit TOEFL scores dated no earlier than June, 2010 (the TOEFL requirement may be waived for international students who have studied for a minimum of one year at an English speaking institution and will have a graded transcript showing this coursework). Complete applications must include official transcripts from all institutions attended, three letters of reference and the completed pages of the on-line application (including a statement of purpose).

All material, including letters of reference must be submitted electronically. Students will be requested to submit electronic transcripts from all institutions: if you are offered admission to the department, you will then be required to submit official (paper) transcripts from each institution you have attended. When you submit your on-line application form, you will receive instructions for on-line submission of supplemental documents (transcripts, resumes, papers, etc.) Please carefully fill out the requested information for your letters of reference (referee's
name, institution, e-mail address) so that your referee may submit an electronic letter.

For additional information e-mail Lisa Zemelman (lisaz@nuc.berkeley.edu) or phone 510-642-5760, or by fax 510-643-9685.

**Electronic Submission: Graduate Student Application**

Prospective students applying for graduate study in the Department of Nuclear Engineering should complete and electronically submit a University of California at Berkeley Graduate Student Application.

Please note: The application is only considered submitted when you press the submit button.

The University of California will supply you with a unique ID number when you complete and submit your on-line application. Please write this ID number down. You will need to refer to this number when you make inquiries.

Reactivation: If you submitted an application within the past two years, but did not register, you will need to re-apply.

Your previous application file will remain in the department you applied to for two years. If you are applying to the same program we will have your file; if you are applying to a different program you will need to arrange the transfer of your documents from the original program to the program you want to apply to now. You will be required to create and submit a new application, pay the application fee and submit updated transcripts reflecting any academic work completed since last time you applied. You may also wish to discuss ways of improving your application with the department to which you are applying (contact information is available at [http://www.grad.berkeley.edu/programs/](http://www.grad.berkeley.edu/programs/), and (based on such a discussion) to submit new GRE scores, letters of recommendation, or a new statement of purpose.

If you have any questions about admissions procedures, please contact Lisa Zemelman at lisaz@nuc.berkeley.edu or 510/642-5760.

Departmental fellowships are awarded on a competitive basis. Awards usually include out-of-state fees (when necessary) and in-state fees plus a stipend of $27,500 for the academic year. By applying for admission, students also are applying for fellowship money. Need-based financial aid, including grants, loans, and work-study, is awarded by the Office of Financial Aid. Unfortunately, need-based aid is only available to US citizens. For 2011-12 in-state fees are $11,454 per year. Non-resident students paid a total of $26,500 for the year. We are expecting an increase for 2012-13.

For additional application information contact the Student Affairs Officer by e-mail at gradinfo@nuc.berkeley.edu, by phone 510-642-5760, or by fax at 510-643-9685.
Advising

The department’s Student Affairs Officer (SAO), Lisa Zemelman, counsels students on campus policies, regulations and procedures, helps monitor students' degree progress, and assists students with administrative problems related to the completion of degree requirements. The SAO also maintains graduate student records, schedules examinations, and assists students with finding funding and jobs.

Each student has an academic adviser who takes responsibility for general academic counseling, offers suggestions on programs of study and degree committees, and monitors the student's overall academic progress. Each academic adviser meets with a student at least once a semester to review and approve the student's proposed course of study for the next semester, sign the student's program card and discuss the student's general progress through the program. Each term, after meeting with the adviser, the student should obtain from the SAO the adviser code needed in order to enroll on-line or via Telebears (enrollment by phone system—642-3400) for the next semester.

The Graduate Adviser Chair, Per F. Peterson, is authorized to sign most of the forms and petitions submitted by or for NE students to the Graduate Division. New graduate students should first pick up their enrollment forms from the SAO and then consult with the Graduate Adviser as soon as possible after arrival on campus.

Direct supervision of each student's research is the responsibility of a research adviser selected by the student in accordance with his or her areas of interest. This adviser will become the chair of a student’s 3 person MS or Ph.D. thesis committee; the chair takes primary responsibility for directing the student's work. The research adviser will meet with the student to help determine his or her major and minor fields, and to recommend a suitable program of study leading to the MS or Ph.D. degree. In most cases, the research adviser and academic adviser will be the same person.

Coursework and Requirements

Students are required to update each semester a program card giving a list of courses which they propose to take to complete their degree requirements. The program card is available from the SAO. The list must be approved and signed by the student’s academic adviser and Graduate Adviser Chair, and then returned to the SAO for placement in the student’s file.

There is no prescribed course of study for the NE program. Recommendations for specific course work are generally made by the student's academic adviser. Students are expected to enroll in courses and seminars relevant to their major and minor fields. Before being advanced to candidacy for the Ph.D., students must fulfill all course requirements.
The Schedule of Classes and a separate departmental list indicate which courses are offered in a given term. The General Catalog lists all courses offered on campus; it is available online at http://www.berkeley.edu/catalog/. Links to NE graduate courses and undergraduate courses:

http://www.nuc.berkeley.edu/courses/grad_courses.htm

http://www.nuc.berkeley.edu/courses/undergrad_courses.htm

All students must take at least 2 letter-graded NE courses during the first year as a graduate student.

The University expects graduate students to register continuously for courses except when officially withdrawn or on Filing Fee status. The Department expects students to register for 13 units each semester—these normally include a combination of coursework and independent study (NE 299) units and a one-unit NE 298 research seminar. Students who have advanced to Ph.D. candidacy usually enroll in 12 units of NE 299, and 1 unit of NE 298 with their research adviser. Additionally, all students are asked to enroll in NE 295, the department colloquium. Students are required to attend the weekly colloquium meetings held on Monday afternoons during their first year to acquaint them with the various research topics in nuclear engineering.

Graduate students who have not advanced to candidacy must enroll for a minimum of 12 units, including Graduate Student Instructors (GSIs) and Graduate Student Researchers (GSRs). Students on filing fee do not enroll in coursework. Graduate students must enroll for a minimum of 4 units in the 100 or 200 series of courses for the semester to count toward academic residence (see below).

International Students

The University defines full-time study for international students (required to meet the terms of a student visa) as 8-9 units if at least one unit is in a graduate course (200 or 600-level), or 12 units if no graduate course is included (all courses below 200-level). Generally, international students must take a full program of 12 units to meet the terms of their visas.

International students should consult the Berkeley International Office (BIO) (642-2818, http://www.ias.berkeley.edu/siss/) for further information on academic issues or personal counseling.

Graduate students who have advanced to candidacy for the doctorate are eligible for a full reduction of the annual nonresident tuition fee, subject to the understanding that: (a) a doctoral student may receive the zero nonresident tuition rate for a maximum calendar period of three years; and (b) any such
student who continues to be enrolled or who re-enrolls after the three-year period will be charged the full nonresident tuition rate that is in effect at the time.

English Language Proficiency

Prospective Graduate Student Instructors (GSIs) who do not speak English as a native language must demonstrate oral English proficiency in order to teach at Berkeley. In those countries where the TOEFL Internet-based Test (TOEFL iBT, also referred to as the "Next Generation TOEFL") has been introduced, English language proficiency is determined by the speaking section score of the TOEFL iBT. In those countries where the new TOEFL iBT has not yet been introduced, students can demonstrate their proficiency by taking and passing the Test of Spoken English (TSE) before enrolling in Berkeley or the Speaking Proficiency English Assessment Kit (SPEAK) or the Oral Proficiency Test (OPT) on the UC Berkeley campus. A passing score on any of these tests must be obtained before a student who does not speak English as a native language can be appointed as a GSI.

The Department strongly recommends that all international students who do not pass the SPEAK or OPT test take an English Proficiency course. Whether or not a student will be working as a teaching assistant, these courses will improve the student’s ability to discuss his or her work in class and oral exams and will improve the student’s confidence in presenting work in English. It is required that students take the SPEAK test before enrolling in a language course. Arrangements must be made in advance with the GSI Training Office (langpro@uclink.berkeley.edu). Further information may be found at http://gsi.berkeley.edu/lpp/index.html (information about GSI testing and the SPEAK practice test).

Prospective international GSI’s who have not passed the SPEAK or OPT tests, and who want to enroll in the Language Proficiency Program course, LANGPRO 100A or 100B for Fall, must pre-register for placement into the appropriate level. Placement is determined by SPEAK and OPT scores and previous enrollment in LANGPRO courses.

Degree Requirements:

Master’s students may pursue Plan I or Plan II.

Plan I requires at least 20 semester units of upper division and graduate courses, plus a thesis. At least 8 of these units must be in 200 series courses in the student’s major subject.

Plan II requires at least 24 semester units of upper division and graduate courses, followed by a comprehensive final examination administered by the department. At least 12 units must be in graduate courses in the student’s major subject. In
Nuclear Engineering, the “examination” takes the form of a project and presentation.

Master of Science (M.S.) Plan I Requirements

A total of 20 units are required for the M.S. Plan I. An overall GPA of 3.0 is required at the time of graduation.

I. 8 Graduate course units in major field (Nuclear Engineering) subject to the following:
   
   i) No more than 2 units in 299 courses.
   
   ii) All courses in the major must be letter graded, except for the 299 units.

II. 12 units of graduate or upper division undergraduate courses from NE or other majors may be used subject to the following:

   i) A maximum of 2 units of 299 courses.
   
   ii) Two thirds of the total 20 units must be letter graded.
   
   iii) Units for 298 (seminar) courses are not allowed.
   
   iv) Study list approval by the major field adviser is required each semester.
   
   iv) Four units from another academic institutions may be used, provided the course was taken while the student was in graduate standing and meets departmental approval.
   
   Or 4 units of coursework from approved non-academic institutions.
   
   v) Units for graduate courses taken by the students as an undergraduate are allowed if the courses were in excess of units required to satisfy the BS degree requirements.

Thesis Requirement: A thesis which meets Graduate Division guidelines is required. Students should consult “Guidelines for Submitting a Doctoral Dissertation or a Master's Thesis” at http://www.grad.berkeley.edu/publications/GUIDELINES/. Three NE faculty members on the thesis committee are required. Members from other departments or LBL or LLNL are allowable but also subject to Graduate Division approval. (See the Student Affairs Officer for instructions.)

Master of Science (M.S.) Plan II Requirements

A total of 24 units for the M.S. Plan II are required. An overall GPA of 3.0 is required at the time of graduation.

I. 12 Graduate course units in major field (Nuclear Engineering) are required subject to the following:
i) A maximum of 2 units of 299 courses.

ii) All courses in the major must be letter graded except for the 299 units.

II. 12 units of graduate or undergraduate courses from NE or other majors may be used subject to the following:

i) A maximum of 2 units of 299 courses.

ii) Two thirds of the 24 units must be letter graded.

iii) Units for 298 (seminar) courses are not allowed.

iv) Students may transfer four units from other academic institutions, provided the course was taken while the student held graduate standing and meets departmental approval. Or the transfer of 4 units of coursework from approved non-academic institutions (e.g., General Electric's Advanced Engineering Program) is permitted.

v) Units for graduate courses taken by the students as an undergraduate are allowed if the courses were in excess of units required to satisfy the BS degree requirements.

Project requirement: Completion of a project culminating in a written report and an oral presentation before a committee of three faculty members or two faculty members and one approved non-university person. Approval by the professor in charge of the research project and the Chair of the Graduate Advisers is required.

Master of Engineering (M.Eng.)

The M.Eng. program consists of three major components, comprising a technical specialization in NE (minimum 12 units), a “breadth” curriculum of engineering leadership courses (7 units), and an integrative capstone project (5 units). Thus, a minimum of 24 units is required.

i) All courses in the major must be letter graded.

ii) Units for 298 (seminar) courses do not count for the degree.

iii) Study list approval by the academic adviser is required each semester.

I. 12 Graduate course units as technical depth component in major field
These units must be devoted to strictly 200-level graduate units in the major subject

II. The following 7 units in breadth courses must be taken:
E 270 “Engineering Entrepreneurship” (3 units)
Perspectives on product management: Opportunity recognition, with success
and failure cases; Entrepreneurial marketing, business models, positioning, segmentation channels, promotion, selling; Finance, CFO-style interpretation of financial statements, funding sources (banks, private equity, IPOs, money markets); Budgeting and forecasting, financial aspects of mergers and acquisitions.

E 271 “Engineering Enterprise Strategy” (3 units)
Meeting the challenges of growth: Leadership – managing talent, managing design and innovation, organizational structures and roles; Strategy – S-curve, disruption, industry structure, value net, portfolio analysis, businesses in transition; Bench-marketing for productivity metrics, production and supply chain decisions.

E 298 “A. Richard Newton Distinguished Innovator Lecture Series” (1 unit)
Experiential learning: Life lessons, future opportunities, perspectives on innovation, risk taking, new economy.

III. 5 unit Integrative Capstone
Students must fulfill a 5-unit “integrative capstone” requirement by performing individual or group study (NE 296) about the design and operation of nuclear engineering devices, systems, and organizations, which encompasses both technical and related environmental, economic, and social issues. Upon admission to the program, students will identify a project, in conjunction with the faculty advisor for the Capstone Project. By the end of the first (fall) semester, students will present a short outline of the scope of the project, the goals, expected outcomes and methodology. Students will be required to complete both a written project report and an oral presentation by the end of the spring semester that they are resident.
Doctor of Philosophy (Ph.D.)

Major Requirements:

The Major is defined as "Nuclear Engineering", not the student's thesis specialty.

The Major consists of at least six courses in the field of Nuclear Engineering taken while in graduate standing either at UCB or at another institution.

At least four 200-level Nuclear Engineering courses taken at UCB must be included in the Major, totaling a minimum of 12 units.

A 3.5 GPA in the Major is required.

Minor Requirements: (Two minors required)

Each Minor should be in a distinct technical area and named (e.g., "Numerical Analysis", "Heat Transfer", "Plasma Physics"). Each minor must total a minimum of 6 units.

At least one Minor (the “outside minor”) should consist principally of non-Nuclear Engineering courses; this Minor may consist of three upper division courses. If at least one graduate course is part of this Minor, two courses are sufficient.

If a minor in Nuclear Engineering is selected, it must contain at least two courses, one of which must be a 200-level course.

A 3.0 GPA minimum is required in both Minors.

All courses taken to fulfill the Ph.D. course requirements must be letter-graded.

Departmental Exams Required for the Ph.D

Screening Exam

Students must attempt a written screening exam in four subject areas during the first year in graduate study. This exam is based on undergraduate radiation detection, nuclear materials, heat transfer and fluid mechanics, nuclear physics, neutronics, radioactive waste management and fusion theory. Four of the seven areas must be passed in order to pass the exam. There are two chances to pass. All students, whether MS or Ph.D. students, must attempt to pass the screening exam during their first year of study if they wish to be admitted to the Ph.D. program. Students who have missed the opportunity to take all portions of the exam during their first year may petition for an exception to this rule but they may be allowed only one chance to pass.
The exam is offered twice a year during the third week of January and the last week of May or first week of June. Towards the end of each semester, the Student Affairs Officer will e-mail all eligible students and ask them to sign up for the sections they wish to take. Students choose four of seven sections and have two opportunities to pass the four. The exam is closed book, each section lasting 75 minutes. Sample exams are on file in 4149 Etcheverry. The following table shows the undergraduate courses relevant to each section of the exam:

<table>
<thead>
<tr>
<th>SECTION</th>
<th>SUBJECT</th>
<th>RELEVANT COURSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Radiological Sciences &amp; Radiation Detection</td>
<td>NE 104</td>
</tr>
<tr>
<td>2</td>
<td>Heat Transfer &amp; Fluid Dynamics</td>
<td>ME 106, 109</td>
</tr>
<tr>
<td>3</td>
<td>Nuclear Physics</td>
<td>NE 101</td>
</tr>
<tr>
<td>4</td>
<td>Neutronics</td>
<td>NE 150</td>
</tr>
<tr>
<td>5</td>
<td>Fusion</td>
<td>NE 180</td>
</tr>
<tr>
<td>6</td>
<td>Nuclear Materials</td>
<td>NE 120</td>
</tr>
<tr>
<td>7</td>
<td>Radioactive Waste Management</td>
<td>NE 124</td>
</tr>
</tbody>
</table>

Oral Qualifying Exam

After completing the required coursework for the Ph.D. the student takes the oral qualifying exam.

Students must apply to the Graduate Division to take the qualifying exam no later than three weeks before the exam date, and they are required to list on their petition at least three subject areas to be covered during the examination, as well as the members of their exam committee. Petitions are available from the Student Affairs Officer or from Graduate Degrees. Students may not take the exam before the Graduate Division notifies them that admission to the exam has been approved. The student must be registered for the semester in which the exam is taken (or, during winter or summer break, be registered in either the preceding or following semester); have completed at least one semester of academic residence; and must have no more than two courses on his or her record graded Incomplete. Eligibility to take the qualifying exam is valid for 18 months.

The oral exam is conducted by a four-member committee that must be approved by the Dean of the Graduate Division. The student determines the personnel of his or her exam committee in accordance with the examination fields. The exam committee is usually composed of three members from the department, and a non-departmental faculty member who represents an outside minor. The chair of the committee and the outside member must be members of the Berkeley Division of the Academic Senate. Under certain circumstances, a non-Senate member may be appointed to a qualifying if he or she offers expertise not otherwise available among the regular faculty. Students should request a c.v. from a non-Senate member to submit with their petition to form a committee and the Graduate Adviser must write a memo explaining why a non-Senate member
has been requested. Note: the chair of the oral qualifying exam committee cannot also serve as chair of the student's dissertation committee. The oral exam should be held with the entire committee present for the entire exam.

The examination usually lasts three hours. A student should consult with his or her adviser about the form and content of the examination, which is usually a presentation of the student's research and questions relating to coursework in the outside minors. The intent of the oral examinations is to ascertain the breadth of a student's knowledge and preparation for writing his or her thesis. Students should be able to exhibit their knowledge and understanding of the fundamental facts and principles that apply to their work. The faculty examiners judge whether students have the ability to think incisively and critically about both the theoretical and the practical aspects of their subject areas, and whether students can, in all likelihood, design and produce acceptable dissertations.

Advancement to Candidacy

After passing the oral examination, the student submits an application for advancement to candidacy to the doctorate to Graduate Division. The application is available from the SAO or Graduate Degrees. It must be signed by the Graduate Adviser and the chair of the dissertation committee and be accompanied by the appropriate fee. The advancement form should be filed no later than the end of the semester following the one in which the student passed the qualifying examination.

Nonresident students who have been advanced to candidacy are eligible for a waiver of the annual nonresident tuition fee for a maximum calendar period of three years.

Candidacy for the doctorate is only valid for a limited time. When students advance to candidacy, Graduate Division informs them of the number of semesters they are eligible to be Ph.D. candidates. Students who do not complete the dissertation within that time, plus a two-year grace period, will have their candidacy lapsed. Also, Graduate Division usually will not accept qualifying examinations more than five years old as representing current knowledge unless the student gives other evidence of continuing scholarly activity besides research for the dissertation.

Doctoral degrees are awarded in December and May. Graduate Division's deadline to file a dissertation is the last working day of the semester. However, the student should submit the dissertation to his or her committee members at least two months before the Graduate Division deadline. In order to receive a degree in any given term, all work for the degree must be completed by the last day of the term. Students must be registered or on Filing Fee status the semester they receive their degree. Students who file dissertations during the summer must register or be on Filing Fee status for the fall semester.
Ph.D. Dissertation

A dissertation on a subject chosen by the candidate, bearing on the principal subject of the student’s major study and demonstrating the candidate’s ability to carry out independent investigation, must be completed and receive the approval of the dissertation committee and the dean of the Graduate Division. The committee consists of three members, including the instructor in charge of the dissertation and one member outside the candidate’s department. This committee shall guide the candidate’s research and shall arrange for such conferences as may be necessary for the complete elucidation of the subject treated in the dissertation. Students should consult “Guidelines for Submitting a Doctoral Dissertation or a Master’s Thesis” at http://www.grad.berkeley.edu/publications/GUIDELINES/ for formatting requirements.

Grading and Evaluation

Grades are awarded for courses at the discretion of the professor responsible for the course. Graduate students are required by University regulation to maintain at least a 3.0 (B) grade point average. Students who fail to meet this standard, or who in other respects do not make normal progress toward the degree, are subject to dismissal after the first year or at the MS level.

Graduate students have no time limit for replacing Incomplete ("I") grades. Students must replace Incompletes with letter grades or S/U before they are advanced to candidacy, unless the Graduate Adviser specifies in writing for each Incomplete that (1) the course work is neither necessary nor closely related to the degree and (2) removal of the I grade would only delay completion of the degree. Students are permitted a maximum of two "forgiven" incompletes at the time they apply for Ph.D. candidacy; any other incompletes must have been replaced by letter grades at that time.

Appeals Procedure

The Nuclear Engineering Department handles problems of an academic nature through a process of discussion and decision-making identical to that followed in the discussion and settlement of any aspect of a given student’s program. Should a problem develop, the student arranges to meet with his or her adviser to discuss the matter. Failing a resolution of the problem, the matter is referred to the Graduate Adviser. If the situation remains unresolved, it is then passed to the NE Chair for discussion. If the student is not satisfied with the outcome of this appeals procedure, he or she may consult with the Associate Dean for Graduate Degrees in the Graduate Division, 424 Sproul. The student may also seek the advice of the Student Ombudsperson (642-5754).
### Time to Degree and Residence Requirements

Students in Nuclear Engineering are subject to the University's Normative Time Policy and are required to (a) be registered each semester, and (b) satisfy all requirements for the Ph.D., from entrance with either a BS or an MS to completion of the dissertation, within a period of five years. An additional two semesters of "withdrawal" (i.e., semesters in which the student is not registered) may be added. The University defines Normative Time as "the elapsed time, calculated to the nearest semester, that students would need to complete all requirements for the doctorate, assuming that they are engaged in full-time study and making adequate progress toward their degrees".

Students are considered as making satisfactory progress if they complete the MS degree within two years after admission and complete all Ph.D. requirements except the dissertation within five years after admission. This allows for two years, plus two semesters' non-registered (withdrawn) status, for the writing of the dissertation.

If a student withdraws, he or she must apply for readmission in order to register (contact Graduate Degrees, 642-7330). Applications for readmission are considered petitions that must be approved by the Graduate Adviser; approval of the petition is not necessarily automatic. The dissertation should be completed no more than five years after completion of the oral comprehensive exam.

### Academic Residence Requirement

Graduate Division defines academic residence as enrollment in at least 4 units of 100 or 200 series courses per required semester of academic residence. MS students must complete a minimum of two semesters of academic residence at Berkeley. Doctoral students must complete a minimum of four semesters of academic residence at Berkeley. To complete both an MS and a Ph.D., graduate students must complete six semesters of academic residence at Berkeley.

### California Residency

All non-resident students who are U.S. citizens or permanent residents should plan on becoming legal California residents as soon as possible, if they wish financial aid for non-resident tuition. Most University fellowships and awards will pay nonresident tuition for the first year of graduate study only.

Eligible students should begin the process, not always simple and straightforward, of establishing California residency as soon as they arrive on campus. See the Graduate Application for Admission and Fellowships for further information. Students should apply for residency through Residence Affairs, 39 Sproul Hall, 642-1614. See: (http://registrar.berkeley.edu/Residency/legalinfo.html).
Filing Fee

The Filing Fee permits eligible doctoral or master’s students to pay only a small portion of the university registration fee instead of full in-state registration fees the semester they file their theses or dissertations or take a final examination required for the degree. International students are also eligible for the Filing Fee. Filing Fee status is approved only once per degree for eligible students. If the student does not complete the degree requirements during the Filing Fee eligibility period, the fee is forfeited and students must pay regular registration fees during the semester when the degree requirements are completed.

Students must apply to the Graduate Division for Filing Fee status. Applications are available in 4149 Etcheverry. Filing Fee status is not equivalent to registration, and students on Filing Fee status may not take courses or use any University facilities not available to the general public. The most important factor the Graduate Division considers in determining Filing Fee eligibility is the student's registration history: The Graduate Division expects students to have met the University’s requirement for continuous registration (which includes a maximum of two semesters of approved withdrawal). If a student has more than two semesters of approved withdrawal, he or she is usually not eligible for Filing Fee status. Students on Filing Fee may not hold positions as GSR’s, GSI’s or readers.

Doctoral students may apply for the Filing Fee when all degree requirements have been completed except for the final reading and the filing of the dissertation. If students have not been registered while carrying out research and writing on the dissertation (except for the two semesters of approved withdrawal), detailed written justification from the dissertation chair, endorsed by the Graduate Adviser, must accompany the application.

Financial Assistance

The Nuclear Engineering Department makes every effort to fully support students during their first year of study by offering a financial package that covers tuition and fees and employment as a teaching or research assistant. The department has a limited amount of fellowship funding available to students. This is usually used to supplement teaching assistantships and pay tuition and fees for incoming students. It is the student’s responsibility to find a research position with one of the faculty to cover his or her financial support at Berkeley for subsequent years. Nuclear Engineering generally reserves teaching (GSI) positions for first year students but often hires advanced students with specific expertise for some courses. Students may also teach in other departments.

The Graduate Division provides information on graduate student support at http://www.grad.berkeley.edu:80/grad/finance/. A listing of selected non-university fellowships directly related to Nuclear Engineering is also available on our web site at http://www.nuc.berkeley.edu/graduate/fellowships.html.
The Graduate Division also has a handout entitled "What You Need to Know About Being a Graduate Student Instructor (GSI), Graduate Student Researcher (GSR), Reader, or Tutor;" found at www.grad.berkeley.edu/grad/. GSI’s and GSR’s must be registered for a minimum of 8 units and may not be appointed for more than 50 percent time during academic semesters. They must meet minimum GPA requirements (3.0) and may have no more than two Incomplete grades in upper division or graduate level courses. They are expected to make satisfactory progress toward their degrees within the Normative Time framework. Students may not serve as GSIs in courses for which they are enrolled, and only graduate students who are advanced to candidacy may evaluate the work of or offer formal instruction to other graduate students. There is a limit of eight semesters of service as a GSI. By exception a student may be appointed beyond the eighth semester if he or she has been advanced to candidacy for the Ph.D.; under NO circumstances may a student serve more as a GSI for more than six years. A student may not hold concurrent appointments as a GSI and Reader for the same course, nor may a student serve as a Reader in a course in which he or she is enrolled. Readers must be advanced to doctoral candidacy to be appointed to a graduate course.

GSI positions are covered by a collective bargaining agreement between the University and the United Automobile Workers. Graduate students who are registered, enrolled, and in good academic standing are entitled to a GSHIP Premium Remission, a partial remission of the Educational Fee and the Registration Fee, and other applicable benefits as set forth in the Agreement. As of October 1, 2011, salary levels for GSIs/Readers were as follows:

- GSI I $3278.20/mo.  (at 25% = $4160/semester)
- GSI II $3455.70/mo.  (at 25% = $4320/semester) (must have 4 semesters of teaching experience as a GSI at Berkeley)
- Readers $12.42/hr = about $2500/sem
Graduate Student Researcher Policy

Graduate Student minimum salary level: $26,967 / yr plus full payment of tuition and fees

This salary level is a commitment made by the department to the students of the incoming class. As most students advance, their funding will be provided through the mechanism of research appointments and their Research Advisor’s resources. It is expected that future appointments will adhere to these minimum stipend/fee guidelines.

Appointment guidelines for Graduate Student Researchers (GSRs) are listed below. Note that students with other primary funding sources, such as fellowships, will not require appointment at the percentage listed below. In fact, the terms and conditions of some fellowship and traineeship awards may limit and/or prohibit a student from holding a payroll appointment or receiving a supplement. However, when a student’s monthly fellowship stipend is less than $2000/mo, the Research Advisor should supplement this amount through an appointment with a small percentage or a short duration of time, i.e., a 50-100% appointment for one month over winter break or during the summer, or a 10% appointment during the academic year.

Appointment Requirements

Under this new policy, students should be hired at the following rate year-round with the expectation that they will work up to 20 hours/week during the semester and up to 40 hours/week during the summer. GSR salary rates are periodically raised in October. When this happens, we will adjust the percentage keeping in mind that levels cannot fall below 45% for students to receive full fee remissions.

**Academic Year Research Appointment**

<table>
<thead>
<tr>
<th>Title code:</th>
<th>3282 (CA residents, full in state fee remission); 3284 (Non-residents, full fee remission and non-resident tuition)</th>
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</thead>
<tbody>
<tr>
<td>Step:</td>
<td>VIII ($4676/mo at 100%)</td>
</tr>
<tr>
<td>%</td>
<td>49.5%</td>
</tr>
<tr>
<td>Monthly compensation: $2314.62</td>
<td></td>
</tr>
</tbody>
</table>

Students who have advanced to Ph.D. Candidacy:

| Step:       | IX ($5052/mo at 100%)                                                                                           |
| %           | 49.5%                                                                                                             |
| Monthly compensation: $2500.74 |

**Summer Research Appointment**

<table>
<thead>
<tr>
<th>Title code:</th>
<th>3266 (no fee remission)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step:</td>
<td>VIII ($4676/mo at 100%)</td>
</tr>
<tr>
<td>%</td>
<td>49.5%</td>
</tr>
<tr>
<td>Monthly compensation: $2314.62</td>
<td></td>
</tr>
</tbody>
</table>

Students who have advanced to Ph.D. Candidacy:

| Step:       | IX ($5052/mo at 100%)                                                                                           |
| %           | 49.5%                                                                                                             |
| Monthly compensation: $2500.74 |