Dear Graduate Students,

I would like to welcome all of our new and continuing graduate students. The NPRE Faculty and Staff are very proud of the program we offer, which is ranked in the top U.S. Nuclear Engineering Graduate Programs.

One of the main strengths of our program is the quality of both our undergraduate and graduate students. Admission into our program is very competitive and we admit the very best students. Our students not only come from the U.S. but from many nations of the world making for additional strength in the diversity of international experience.

Another positive of our program is the accessibility of our faculty and staff. If you have questions or concerns during your study, please feel welcome to talk with me, other faculty, or staff. We are here to help you succeed in your educational and professional development. We are proud of graduating students who go on professionally to research in national laboratories, design and operate power plants, work in governmental agencies such as the NRC and DOE, teach as university faculty, attend medical school, become health physicists, pass the Bar Exam, open consulting businesses, serve as officers in the armed forces, and return to their home countries to contribute in their field.

I wish you the best in this upcoming academic year and I look forward to seeing you in the classroom and halls of the Department.

Sincerely yours,

James F. Stubbins
Professor and Department Head
This document describes the Nuclear, Plasma, and Radiological Engineering graduate program and summarizes some of the policies and procedures of the NPRE Department and the Graduate College that pertain to graduate students. It is not intended to be a complete description of the policies and procedures of the Graduate College or the University, both of which take precedence over this manual. Students are advised to consult *The Graduate College Handbook for Students, Faculty and Staff*, for complete descriptions of the following topics and more:

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<td>Credit/No Credit Grade Option</td>
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<td>General Degree Requirements</td>
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<td>Time Limits for M.S. and Ph.D. Degrees</td>
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<td>Fellowships and Assistantships</td>
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<td>Health Services and Insurance</td>
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<td>Vacation and Sick Leave</td>
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<td>Resources for Teaching Assistants</td>
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<td>Supervisors and TAs/RAs</td>
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<td>Graduate College Petitions</td>
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<td>Resources and Procedures for</td>
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<td>Ethics:</td>
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<tr>
<td>Academic Integrity</td>
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<tr>
<td>Intellectual Property</td>
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<tr>
<td>Professional Conduct</td>
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<tr>
<td>Misconduct Policies (plagiarism, discrimination, harassment)</td>
<td></td>
</tr>
</tbody>
</table>

*The Graduate College Handbook for Students, Faculty and Staff* explains the privileges and responsibilities of a graduate student, describes many of the services provided by the University, and summarizes the Graduate College regulations that apply to all graduate students. Much of *The Graduate College Handbook for Students, Faculty and Staff* deals with rules and regulations, but it also suggests ways in which exceptions can be requested for good reason. *The Graduate College Handbook for Students, Faculty and Staff* can be accessed at [http://www.grad.illinois.edu/gradhandbook/](http://www.grad.illinois.edu/gradhandbook/). Another useful reference is the *Student Code*, [http://www.admin.illinois.edu/policy/code/](http://www.admin.illinois.edu/policy/code/).
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Recently Implemented University Changes

The University recently implemented several major changes across campus including course renumbering, a switch to using credit hours for all students, and replacement of the UI Direct system with UI-Integrate Self Service. In addition, the Engineering College moved from using their customized degree audit system to the DARWIN system already used by the rest of the campus. For incoming students with no source of reference, these changes won’t mean much. But for continuing students, faculty, and staff, these changes may understandably lead to some temporary confusion, which with patience will be overcome.

a. Course Renumbering: In the previous course numbering system, NPRE courses were 100 to 400 level with 300 meant for upper-class undergraduates and graduate students and 400 for strictly graduate students. In the new course renumbering beginning Fall 2004, 400 level courses are for upper-class undergraduate and graduate students, 500 level courses are strictly for graduate students. Most courses simply had 100 added to them, i.e. 302 became 402, however there are some courses that don’t fit this formula, i.e. 497 Seminar became 596. To help, the University created an on-line Course Number Crosswalk Table at http://www.provost.illinois.edu/departments/cps/Renumber/crosswalk.asp. This crosswalk table can be used to look up course numbers using the old UI Direct or new Banner numbering system.

b. Credit Units to Hours: Previously, undergraduate credit was counted in hours and graduate credit in units with 4 hours equaling a unit, 3 hours equaling three-quarters unit, etc. Starting Fall 2004, all credit, undergraduate and graduate will be counted in hours.

c. Students previously used UI Direct to register for courses. Starting Fall 2004, students use UI-Integrate Self Service to access their registration and additional information not available on the old UI Direct system. UI-Integrate Self Service is found at https://apps.uillinois.edu/selfservice/ and requires an Enterprise I.D.
II. Nuclear, Plasma, and Radiological Engineering Prerequisites for Admission

1. All Students
   
   NPRE graduate program entrance requirements:
   
   a. A course in ordinary differential equations plus one other mathematics course beyond calculus;
   b. An intermediate-level course in atomic and nuclear physics;
   c. A course in electrical circuit theory;
   d. A course in thermodynamics;
   e. A course in fluid mechanics or a course in continuum mechanics;
   f. A course in introduction to nuclear engineering (e.g. NPRE 247)

   Lack of one or more of these prerequisites is not intended to exclude a student otherwise qualified, but the deficiency(ies) must be made up by taking courses that will not count as graduate degree credit.

   The atomic and nuclear physics prerequisite does not necessarily demand completion of a course specifically called “Atomic and Nuclear Physics”. It does require that the student should have taken a course(s) leading to some understanding of atomic structure and spectra; nuclear structure, models, and reactors; and the use of quantum mechanics in understanding the basic principles of the subject. This material is often covered in courses titled “Modern Physics”, but at a level beyond Freshman-Sophomore introductory physics.

2. International Students

   International students must meet the Graduate College’s minimum requirement on the Test of English as a Foreign Language (TOEFL): 550 on the paper-based or 213 on the computer-based or 79 on the internet-based test. The student should have the Educational Testing Service report the score directly to the University’s Office of Admissions. In certain circumstances a student may be exempt from the TOEFL. Further, in select cases when other admission qualifications are exceptionally strong, the Department may request a TOEFL waiver.

   Students who scored lower than 611 on the paper-based, 254 on the computer-based, or 103 on the internet-based test, or those who did not provide an official score report, or those who did not take the test, must take the English Placement Test (EPT) once on campus. The results of the EPT will determine if the student will be required or recommended to take ESL (English as a Second Language) courses on campus. Required ESL courses must be begun within the student’s first two semesters, and the student will be placed on limited status until all required ESL courses are completed. Students cannot graduate while on limited status.
III. M.S. Degree Program

1. Course Requirements

Programs of advanced study that lead to an M.S. degree in Nuclear Engineering are designed according to the student’s individual interests and prior experience. The M.S. degree requires a total of thirty two credit hours.

a. Prerequisites: Students are expected to enter the program with a foundation of courses that prepares them for advanced study in nuclear engineering. Students should be familiar with the material in:

NPRE 247 Modeling Nuclear Energy Systems
or
NPRE 402 Nuclear Power Engineering
and
NPRE 446 Principles of Radiation Interactions with Matter, I

Descriptions of these courses can be found in the Course Catalog, [http://courses.illinois.edu/cis/2009/fall/schedule/index.html](http://courses.illinois.edu/cis/2009/fall/schedule/index.html) Students need to consult their advisor to determine if they have the prerequisite equivalent. A student who lacks the background of these courses should plan to take NPRE 247 and/or NPRE 446. NPRE 402 is not normally recommended for NPRE students but is intended for students from outside the Department who have subject interest. NPRE 247 is typically offered in the spring and NPRE 446 in the fall. NPRE 402 can be taken in cases where a student needs the material covered in NPRE 247 but cannot wait until spring. Credit from NPRE 247, 402, and 446 does not apply towards the graduate degree.

b. Required NPRE Courses: The Department offers two courses, which provide fundamental technical content that is the basis of the entire field of nuclear, plasma, and radiological engineering. These courses are required of all students:

NPRE 501 Fundamentals of Nuclear Engineering
NPRE 521 Interaction of Radiation with Matter

NPRE 501 is offered fall semester and NPRE 521 spring semester. Students whose prior experience includes the equivalent of these core courses may elect, with advisor and department approval, to take alternative courses.

c. Elective NPRE Courses: At least eight hours of graduate level (400 and above) NPRE courses, not including 402, 446, 596, or 599.
d. **500-Level Courses:** At least eight hours of 500-level courses beyond the required NPRE 501 and 521, not including 596 and 599.

   i. **NPRE 554 Nuclear Engineering Lab Investigations and NPRE 597 Independent Study:** Degree credit for these courses is permitted only with prior departmental approval and with a student written report upon completion to be included in the student’s file. Typically **students cannot receive degree credit for NPRE 554 or 597 when taken from their research advisor.**

e. **Technical Concentration:** Two or more courses should be in a related concentration, which allows some depth of study in a technical area appropriate to the nuclear, plasma, and radiological engineering field. Selection should be made in consultation with the student’s advisor. Examples:


f. **NPRE 596:** Seminar in Nuclear Science and Engineering is offered both fall and spring semesters for 0 or 1 hours. It is a **required course that all graduate students must register for each semester.** Only the Department Head can excuse a student if there is a valid course conflict.

g. **Thesis Research:** Up to eight hours of NPRE 599 Thesis Research can be applied toward the M.S. degree.

h. **Minimum GPA:** A minimum 2.75 GPA is required to receive a graduate degree. This is interpreted to mean that a student must also have a minimum 2.75 GPA in the major courses taken towards the degree.

**M.S. degree audit:**

<p>| | |</p>
<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Hours</td>
<td>32.00</td>
</tr>
<tr>
<td>Total Hours Coursework</td>
<td>24.00</td>
</tr>
<tr>
<td>NPRE 501</td>
<td>4.00</td>
</tr>
<tr>
<td>NPRE 521</td>
<td>4.00</td>
</tr>
<tr>
<td>NPRE Courses</td>
<td>8.00</td>
</tr>
<tr>
<td>500 Level Courses</td>
<td>8.00</td>
</tr>
<tr>
<td>Total Units Thesis</td>
<td>2.00</td>
</tr>
</tbody>
</table>

Students should work closely with their advisor to ensure that they are taking the proper courses to complete the M.S. degree and to prepare for the Ph.D. Qualifying Examination if they intend to continue beyond the M.S.
2. Thesis Requirements

The Department requires a written thesis for the M.S. degree. The thesis should be a creative work of potential use to the nuclear, plasma, and radiological engineering community. The scope should permit completion within a reasonable time frame. The thesis must be deposited with the Graduate College Thesis Office. Publication is encouraged.

3. Thesis Topic and Committee

Early into the program, the student should work with his/her research advisor to identify a tentative thesis topic. The student, with the advisor’s recommendation, should choose another faculty member to serve as the second reader. The student’s advisor and the second reader will act as the M.S. thesis committee. The Department Head must approve the proposed thesis topic and committee by signing the M.S. Thesis Committee Proposal form, available in the Student Services Office.

The student should work closely with the thesis committee while writing the thesis. Both the student’s advisor and second reader will review the completed thesis and may make requirements and recommendations for changes. When the student and the committee have determined that the thesis is ready to submit, the student will prepare a final draft including a title page, table of contents, abstract, text's body, bibliography, and vita.

Both the signatures of the research advisor and second reader along with the Department Head’s are required on the Certificate of Committee Approval. “Red Border Forms”, before the thesis can be deposited. Students can obtain the Certificate of Committee Approval from the Thesis Office Website or from the Student Services Office.

4. Thesis Format Check, Department Head Approval, and Deposit

The thesis must follow the Thesis Office’s format guidelines available at http://www.grad.illinois.edu/thesis/thesishandbook/chapterIII.asp. This website has useful information on depositing, including checklists and deadlines. The Thesis Office generally holds several workshops each semester on depositing a thesis, and students may find these useful.

The student will bring the final draft approved by the thesis committee to the Student Services Office for a format check. The Student Services Office may request format changes. After the format is approved, the student will be given a signed Departmental Format Approval form to take to the Thesis Office when depositing.
After the thesis has been approved by the thesis committee and format checked, the student will submit a copy to the Department Head for final reading and approval. The Department Head may require or suggest changes to the thesis. After any changes have been made, his approval will be given by his signing the Certificate of Committee Approval form.

At this point, final copies of the thesis may be made for distribution. When color printing is required, the department’s color copier may be used for the final copies only. Advance approval must be obtained for the use of this printer. Ordinarily, only the color pages can be printed on this printer.

Many difficulties surrounding the thesis deposit can be eliminated by starting early and allowing enough time at each stage. Procrastinating until the last minute is discouraged, as the process usually takes longer than expected.

• The student should allow at least two weeks for the advisor and second reader to check the completed thesis, recommend any changes, and check revisions.

• The student should allow several days for the Student Services Office to format check the thesis, recommend any changes, and check revisions.

• The student should allow two weeks for the Department Head to read and give final approval of the thesis. Remember that he generally has several theses to read before the deadline and that yours is not the only one.

• Therefore, the student should plan on approximately a month from when the advisor and second reader see the “final” copy until the time the thesis is deposited.

• Further, the Thesis Office strongly discourages waiting until the final week of the deposit deadline. Large numbers of students depositing in the last week leads to long lines. They do not take appointments. Students are seen first come, first served.

Domestic students do not need to be registered for the semester in which they deposit. International students are required to maintain registration for both fall and spring semesters up to the completion of their studies. In addition, international students who deposit in the summer must register for the summer term.

It is strongly recommended that a student not leave campus until the thesis is deposited. If this is unavoidable, a responsible person should be found to finish the deposit process. Department staff members are not available for this.
Example of Timeline for M.S. Thesis Deposit:

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>Tuesday, Sept. 8</td>
<td>Last day to add name to October degree list.</td>
</tr>
<tr>
<td>By Friday, Aug. 28</td>
<td>4 weeks prior to deposit deadline: Make committee’s suggested revisions. Show and get approval of revisions by committee.</td>
</tr>
<tr>
<td>By Friday, Sept. 4</td>
<td>3 weeks prior to deposit deadline: Take thesis to Student Services Office for format check. Make any changes and have revised thesis format checked again.</td>
</tr>
<tr>
<td>By Friday, Sept. 11</td>
<td>2 weeks prior to deposit deadline: Turn thesis in to Department Head. Allow two weeks for him to read. Make any recommended changes and review revisions with Department Head. Have Certificate of Committee Approval signed by Advisor, Second Reader, and Department Head. Make necessary copies. Deposit at the Thesis Office by deadline.</td>
</tr>
<tr>
<td>Friday, Sept. 25</td>
<td>Last day to deposit October M.S. thesis at Graduate College Thesis Office.</td>
</tr>
</tbody>
</table>

5. Degree Conferral

M.S. degrees are conferred in May, August, October, and December. Students must place their names on the degree list in order to graduate. Students can do this through UI-Integrate Student Self Service at the beginning of the semester before the end of the tenth day of classes. After that, they must fill out a paper form available in the Student Services Office.
6. Thesis Publication Costs

The student is responsible for the cost of preparing the final original copy, unless it can be paid for through a research contract of which it is a part. When the final original is approved, seven copies should be made. Either a research contract or the department will pay for the reproduction, but the student is responsible for making the copies. Department staff are not available for this. The student must deposit:

- 2 unbound copies to the Graduate College Thesis Office, in pocket folders with extra title pages attached to the outside of the folders
- 1 unbound copy to the Student Services Office
- 1 bound copy to the Department’s thesis bookshelves
- 1 copy to the thesis advisor
- 1 copy to the second reader
- 1 copy to the student
- 1 electronic copy to the Student Services Office (Word or Adobe Acrobat)

Copies should include signed Certificate of Committee Approval forms.

The diploma will be mailed to the PERMANENT address in UI-Integrate Self Service. The student is responsible for keeping their address information current. Before leaving campus the student must return any department keys to the Department Head’s Secretary. The student should also report their new address and job information to the Student Services Office.

7. Time Limits

A Handbook for Graduate Students and Advisors states, “A master’s degree candidate must complete all degree requirements, under normal circumstances, within five years of first registering in the Graduate College.” This does not mean that it should necessarily take five years to complete an M.S., but this is the maximum time allowed. The time it takes to complete the degree will vary depending on the student’s background and the scope of the research work being done for the M.S. thesis. Typically the target time is two years.

Students continuing on for a Ph.D. should remember the Ph.D. time limit of within seven years of first registering. A student who takes 5 years to finish their M.S. degree may run into difficulty if they try to finish their Ph.D. in the remaining 2 years. Students earning an M.S. and continuing on for their Ph.D. will need to pace themselves appropriately.
IV. Ph.D. Degree Program

1. General Requirements

The *Handbook for Graduate Students and Advisers* goes into further explanation of the general Ph.D. requirements and should be referred to, but they are summarized here.

There are three stages towards the doctoral degree. A minimum of **96 hours of credit** is required: 32 hours from the M.S., 32 hours coursework beyond the M.S., and 32 hours thesis research (NPRE 599). If the M.S. has been completed elsewhere, then a minimum 64 hours is required.

**Stage I** is considered the M.S. or its equivalent from another university. An M.S. degree and the passing of the Department’s Qualifying Examination mark the completion of Stage I.

**Stage II** is devoted to coursework and preparation for the Preliminary Exam. Finishing the coursework and passing the Preliminary Exam mark the completion of Stage II. The Preliminary Exam is usually taken in the last semester of required course work, or immediately thereafter.

**Stage III** is comprised of research that ends with the Final Exam where the student orally defends his/her dissertation in front of a Final Exam Committee. The Final Exam Committee should normally be made up of the same members as the Preliminary Committee to ensure continuity in the oversight of the dissertation work. The successful defense of the dissertation and the deposit at the Graduate College Thesis Office completes the Ph.D. degree requirements.

2. Course Requirements

A doctoral student entering with a Bachelors degree in Nuclear Engineering should expect to take **7 to 9 NPRE courses**. They should expect to take additional courses outside the Department to fulfill the Department’s minor requirement, which is defined later. The courses taken for the minor should support a specialized research area and/or provide a background in mathematics and science.

A doctoral student entering with a Bachelors degree in a non-nuclear engineering area should expect to take **9 to 11 NPRE courses** plus additional courses necessary to complete the minor requirement.
NPRE 596: Seminar in Nuclear Science and Engineering is offered both fall and spring semesters for 0 or 1 hours. It is a required course that all graduate students must register for each semester. Only the Department Head can excuse a student if there is a valid course conflict.

3. Qualifying Examination

The purpose of the Qualifying Examination, the “Qual”, is to assess the student’s potential for success in the doctoral program. The exam is planned to test the student’s understanding of the fundamental concepts of nuclear, plasma, and radiological engineering and his/her ability to reason on the basis of these principles.

a. Subject areas covered by the qualifying exam

The qualifying exam covers the basic concepts of the areas listed below with courses whose content indicates the level of preparation expected. The exam is not intended as a test on the specific content of these courses. Students are advised to refer to questions from previous qualifying exams for an indication of the level of competency expected. Topics and courses covered:

<table>
<thead>
<tr>
<th>AREA</th>
<th>COURSES</th>
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<tbody>
<tr>
<td>(1) General Physics</td>
<td>PHYCS 211, 212, 213 and 214</td>
</tr>
<tr>
<td>(2) Atomic and Nuclear Physics</td>
<td>NPRE 446, NPRE 521</td>
</tr>
<tr>
<td>(3) General Nuclear Engineering</td>
<td>NPRE 247, NPRE 402</td>
</tr>
<tr>
<td>(3) Engineering Fundamentals of Heat, Mass, and Momentum Transfer, Thermodynamics</td>
<td>TAM 210, AAE 252, ME 300, ME 310, and ME 320 or NPRE 501</td>
</tr>
<tr>
<td>(5) Radiation Protection and Environmental Aspects</td>
<td>NPRE 441</td>
</tr>
<tr>
<td>(6) a) Fission Systems</td>
<td>NPRE 455</td>
</tr>
<tr>
<td>b) Fusion Systems</td>
<td>NPRE 421</td>
</tr>
<tr>
<td>c) Radiation Biophysics</td>
<td>NPRE 435</td>
</tr>
</tbody>
</table>

The written portion of the exam is six hours long; two 3-hour sessions on one day. The student chooses one of the three options in question six. The student is required to select the area for question six prior to the exam. Previous qualifying exams without their solutions can be
found in the Student Services Office and should be reviewed prior to the exam.

b. Evaluation of the Written Qualifying Examination

The Qualifying Exam Committee is made up of three NPRE faculty members, one of who serves as chair, but questions may be submitted by any NPRE faculty member. After the written exam, questions are graded by the faculty members who wrote them. The Qualifying Exam Committee will evaluate the overall exam results and assign one of the following categories of performance: Pass, Marginal Pass, Marginal Fail, or Fail.

c. Oral Qualifying Examination

Students receiving a Marginal Pass or Marginal Fail on the written exam will have an oral exam scheduled for them within two weeks following the written exam.

Students with a Fail grade on their first exam attempt will not have an oral exam automatically scheduled for them. However, they may request one by petitioning the Qualifying Exam Committee. The petition must be submitted immediately following the notification of the written exam grade and should have approval of the student’s advisor.

An oral exam will be scheduled for all second attempt students, unless exempted by the Qualifying Examination Committee because of high performance on their written exam portion.

Students with a Pass on the written exam may be exempt from an oral exam.

If it is the student’s first attempt at the Qual, the Oral Exam Committee will be made up of three NPRE faculty selected by the Qualifying Exam Committee. If it is the student’s second (last) attempt, four faculty will serve. If the student previously had an oral exam, no more than two faculty from the first Oral Exam Committee may serve on the second. In all cases, a member of the Qualifying Exam Committee will chair the Oral Exam Committee.

Each student shall be informed, in writing, of the members of his/her oral exam committee at least two days prior to the date it is scheduled. A student may submit in writing any objection as to the membership of the committee to the Chair of the Qualifying Exam Committee within 24 hours of receiving this notification. If the student is not satisfied with the response to his/her objection, the student may pursue the matter through formal petition process prior to the time of the exam.
d. Final Qualifying Examination Results

Following the completion of the written and oral exams, the Qualifying Exam Committee will decide on a recommendation. If they cannot reach a clear-cut recommendation in the case of a particular student, that student’s advisor shall be requested to submit a written statement, giving an evaluation of the student’s performance and potential to succeed in the program. That statement shall become part of the Qualifying Exam Committee’s file.

The Committee shall call a meeting of all NPRE faculty and present their recommendations, which must be accepted by a majority two-thirds of the faculty present.

The final results shall be submitted to the Department Head, and letters informing the students shall be sent out.

e. Scheduling of the Qualifying Examination

It is important for the Department and the student that an early decision is made on admission to the doctoral program. For this reason, the exam will be given prior to the beginning of classes each semester (August and January). The following schedule for taking the exam is to be followed:

(1) Students entering with a B.S. degree in Nuclear Engineering will take the exam no later than the beginning of the fourth semester in residence.

(2) Students entering with a B.S. degree in areas other than Nuclear Engineering will take the exam no later than the beginning of the fifth semester in residence.

(3) Students entering with an M.S. degree in Nuclear Engineering will take the exam no later than the beginning of the third semester in residence.

(4) Students entering with an M.S. degree in areas other than Nuclear Engineering will take the exam no later than the beginning of the fourth semester in residence.

For example, a student entering with a B.S. in Nuclear Engineering in Fall 2008 must first take the exam in January, Spring 2010. A student entering with a B.S. in an area other than Nuclear Engineering must first take the exam in August, Fall 2010. A student entering with an M.S. in Nuclear Engineering must first take the exam in August, Fall 2010. A student entering with an M.S. in an area other than Nuclear Engineering must first take the exam in Spring 2010.
Students may elect to take the exam earlier than normally scheduled. This is encouraged for students who are sufficiently prepared. First semester students must have approval of their advisor or the Chair of the Qualifying Examination Committee. A failing grade will be recorded if the exam is not taken by a student in accordance with the schedule. Exemption from the schedule may be requested by petition on the basis of reasonable grounds, such as situations beyond the student’s control. Extensions on the basis of time-consuming tasks, such as thesis writing, will not be granted. Petitions must have approval of the student’s advisor before being submitted to the Qualifying Examination Committee.

In order to take the exam, students must sign up by the date stated in their exam invitation letter. A sign up sheet will be posted on the door of the Student Services Office.

f. Retaking the Qualifying Examination

A student will be given two opportunities to pass the Qualifying Examination. If a student fails on his/her first attempt, he/she may retake the exam when it is next offered. If the first attempt was taken earlier than the regularly scheduled time, the second attempt may be postponed an additional semester. For example, a student required to take the exam Fall 2009 who fails must retake the exam when it is next offered in Spring 2010. A student who takes the exam early Fall 2009 and fails may wait until Fall 2010 to retake.

4. Department Minor Requirement

The department requires doctoral students to complete a minor outside of NPRE. Courses to meet the minor requirement may be taken from various departments, but should all fall within the same minor discipline area, or areas if a split minor. This requirement can be satisfied by a minimum of:

a. Twelve hours of 500-level course work in one discipline related to career objectives in nuclear, plasma, and radiological engineering.

b. Eight hours of 500-level course work and eight hours of 400-level course work, all in one discipline that is related to career objectives in nuclear, plasma, and radiological engineering.

c. Split minor: eight hours of course work in each of two separate disciplines both related to career objectives in nuclear, plasma, and radiological engineering. Eight hours must be at the 500-level and eight at the 400-level or higher. Each separate discipline must have four 500-level hours.
5. Dissertation Advisor

A doctoral student must select an advisor as soon as possible in order to begin their research in a timely manner. Normally, the student will have selected a research advisor prior to attempting the Qualifying Exam.

Many graduate students are admitted to NPRE with an offer of financial support. This support offer is normally limited to the first two semesters. Students may be assigned to teaching, research, or graduate appointments. In all cases, the student should make every effort to find a research advisor as soon as possible after entering. The dissertation-advising relationship between a student and a faculty member is voluntary on both sides. As long as this relationship exists, the advisor must accept a reasonable degree of responsibility for necessary financial support. This responsibility is shared with the Department.

The advisor’s responsibility for financial support may include:

a. Providing support from a research program in which the faculty member is engaged;
b. Negotiating with the NPRE Department Head (or another department which may have an interest in the proposed research) for support;
c. Submitting proposals to appropriate funding agencies;
d. Assisting the student in selecting a suitable research topic that is likely to be achieved within the limits of the support available.

It is highly desirable that the faculty member and student explore the question of support needed and its availability before the assignment of the faculty member as the dissertation advisor and before a decision is made as to the dissertation topic. Close communication between the faculty member and the Department Head is mandatory to conclude these negotiations.

The NPRE Department has the responsibility for trying to obtain general support for student and faculty research to whatever extent seems necessary to supplement funds already available from outside research sponsors. This includes consideration of state funding, omnibus proposals, and other reasonable means of support.

6. Preliminary and Final Examination Committee

The student shall work closely with his/her advisor to decide who should serve on the Preliminary Examination Committee. The student must fill out the PhD Preliminary and Final Exam Proposal form available from the Student Services Office. The student’s advisor, the Chair of the Preliminary Examination Committee, and the Department Head, must approve the committee. The student must return the signed form to the Student Services
Office. The recommendation shall be forwarded to the Graduate College for final approval no later than 3 weeks before the prelim date.

The committee must include at least four voting members, three of which must be current members of the Graduate Faculty and two of which must be tenured. At least half of the committee members must be NPRE faculty. One member must be from outside of NPRE and represent the student’s minor. The student’s advisor typically serves as the chair. Members can also be appointed from distinguished scientists outside of UIUC. These members must be approved by the Graduate College. The approval is normally based on a compelling case for the expertise of the person in the area of research.

The members who serve on the Preliminary Exam Committee are expected to be the same as those who will serve on the Final Exam Committee. The Department does not recommend changes in the Final Exam Committee from the Preliminary Exam Committee and permits them only under special circumstances.

7. Preliminary Examination

The oral preliminary exam tests the readiness of the candidate to undertake specific dissertation research. Consequently, the exam should be scheduled before a significant amount of dissertation research is completed. The normal timing is during or immediately after the semester in which the student is completing the Stage II course requirements. At the exam, the student should demonstrate a clear understanding of the fundamentals of the engineering and science disciplines relevant to both his/her major and minor fields, and particularly his/her dissertation.

All committee members must be present at the Preliminary Examination. Once the student has finalized the date and time the exam will be held with his/her committee members, he/she should inform the Student Services Office and arrange for a room where the exam will be held.

In the exam, the student will be asked to begin by giving a brief (10-15 minute) presentation of his/her proposed research area. A written proposal no longer than 20 pages should be distributed to the committee members at least one week prior to the exam. This proposal will be placed in the student’s permanent file at the conclusion of the exam following committee approval. As part of the exam, the student’s advisor (normally the committee chair) will review for the committee the candidate’s background preparation. The committee’s decision must be unanimous. They may recommend a Pass, Fail, or Decision Deferred. At the conclusion of the exam, the committee may recommend additional course work if needed. It is assumed that students having passed the preliminary examination will audit such course work, unless the committee requires the work be taken for credit.
8. Dissertation Research

The goals and desired level of Ph.D. dissertation research are:

a. A dissertation should contribute new knowledge.
b. The results of a dissertation should be definable and sound.
c. A dissertation should contain material that has applications in nuclear, plasma, and radiological engineering.
d. A dissertation should be an entity in itself and its essential parts should be publishable in a refereed journal.
e. A Ph.D. candidate should have demonstrated the ability to carry out independent research work.

Off-Campus Ph.D. research is not encouraged, but may be approved by petition under unusual circumstances. The minimum requirements for off-campus research include:

a. Completion of all formal course requirements and the Preliminary Exam,
b. Identification of special facilities that make such off-campus research necessary, and
c. Identification of a qualified individual at the off-campus site who agrees to serve, in collaboration with the campus advisor, as the daily advisor for the research.
d. Financial arrangements for off-campus research should be consistent with campus policies. Salary levels should be based on standard assistantship scales, with the possible addition of a cost-of-living adjustment, to be agreed upon in advance. Since the campus advisor is still responsible for guidance of the work, and this requires staff-time, the student must register in absentia each semester. In addition, the Graduate College requires registration in the semester the final examination (dissertation defense) is taken.

9. Dissertation Format Check, Department Head Approval, and Deposit

The thesis must follow the Thesis Office’s format guidelines available at http://www.grad.illinois.edu/thesis/thesishandbook/. This website has useful information on depositing, including checklists and deadlines. The Thesis Office generally holds several workshops each semester on depositing a thesis, and students may find these useful.

The student should work closely with his/her research advisor while writing the thesis. The student’s advisor will review the completed thesis and may make requirements and recommendations for changes. When the student and advisor have determined that the thesis is ready to submit, the student will prepare a final draft including a title page, table of contents, abstract, text’s body, bibliography, and vita. The student will submit a copy of this final draft to each member of his/her doctoral committee at least two full weeks before
the final examination. Any committee member has the right to refuse to attend
the exam until he/she has had the final draft copy of the dissertation for at
least one full week.

Following the final examination, the student should incorporate into the
dissertation any changes suggested by committee members. When any
changes have been reviewed, the final exam committee will show approval by
signing the Certificate of Committee Approval, “Red Border Forms”. Students
can obtain the Certificate of Committee Approval forms from the Thesis
Office Website or from the Student Services Office.

The committee approved dissertation should be submitted to the Student
Services Office for a format check. The Student Services Office may request
format changes. After the Student Services Office approves the format, the
student will be given a signed departmental format approval form, which they
should take to the Thesis Office when depositing.

After the format is approved, the student will submit a copy to the Department
Head for reading and approval. The Department Head may suggest changes to
the dissertation. After the recommended changes have been made, final
approval will be given and the Certificate of Committee Approval forms
signed. At this point, final copies may be made for distribution. When color
printing is required, the department’s color copier may be used for the final
copies only. Approval must be obtained, in advance, for the use of this printer.
Ordinarily, only the color pages can be printed on this printer.

- The student should allow several days for the Student Services Office
to format check the thesis, recommend any changes, and check
revisions.

- The student should allow two weeks for the Department Head to read
and give final approval of the dissertation. Remember that he may
have several dissertations to read before the deadline and that yours is
not the only one.

- Therefore, after the final exam, the student should allow an
approximate additional three weeks before the deposit deadline.

- Further, the Thesis Office strongly discourages waiting until the final
week of the deposit deadline. Large numbers of students depositing in
the last week leads to long lines. They do not take appointments.
Students are seen first come, first served.
Example of Timeline for Dissertation Deposit:

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday, Sept. 8</td>
<td>Last day to add name to October degree list.</td>
</tr>
<tr>
<td>Two weeks prior to</td>
<td>Take a dissertation copy to each committee member to allow sufficient time to read it before the exam.</td>
</tr>
<tr>
<td>Final Exam</td>
<td>4 weeks prior to deposit deadline: Department recommended deadline to take Final Exam.</td>
</tr>
<tr>
<td>By Friday, Sept. 4</td>
<td>Department recommended deadline to take Final Exam.</td>
</tr>
<tr>
<td>Friday, Sept. 18</td>
<td>Graduate College deadline to take final exam.</td>
</tr>
<tr>
<td>By Friday, Sept. 11</td>
<td>3 weeks prior to deposit deadline: Make committee suggested revisions. Show and get approval of revisions by committee. Certificate of Committee Approval forms are signed by committee. Take dissertation to Student Services Office for format check. Make any changes and have revised dissertation checked again.</td>
</tr>
<tr>
<td>By Friday, Sept. 18</td>
<td>2 weeks prior to deposit deadline: Turn thesis in to Department Head. Allow two weeks for him to read. Make any recommended changes and review revisions with Department Head who will give his approval and sign the Certificate of Committee Approval forms. Make necessary copies. Deposit at the Thesis Office by deadline.</td>
</tr>
<tr>
<td>Friday, Oct. 2</td>
<td>Last day to deposit October doctoral dissertation with Graduate College Thesis Office.</td>
</tr>
</tbody>
</table>

10. Final Examination

Students must communicate with the Student Services Office regarding the scheduling of the Final Exam. The Student Services Office must send in a Request for Appointment of Doctoral Examination Committee form to the Graduate College at least six weeks before the exam is to be held. Changes in
members from the Preliminary to the Final Exam Committee are discouraged. Requests for changes must go through the Department Head to the Graduate College for approval. Once the date and time of the Final Exam has been set, students should work with the Student Services Office to arrange for a room for the exam.

Final examinations are oral and public. The location and time of the exam must be posted in advance by the Student Services Office. The committee chair, normally the same as the student’s research advisor, will conduct the exam. All voting members of the committee must be present. Decisions must be unanimous. At the successful end of the exam, the committee members indicate that they’ve read and approved the student’s dissertation by signing the Certificate of Committee Approval. The Committee may defer a decision and the signing of the forms until requested changes are made to the dissertation.

Students must be registered in NPRE 599 for the semester in which they defend. There are two exceptions. A student registered for the spring semester need not register for summer term I if the final exam will take place before the first day of summer term II. A student registered for summer term II need not register for the fall semester if the final exam will take place on or before the last day to take the final exam for the doctoral degree in October. Students may register for 0 units 599 for the semester in which they defend.

11. Dissertation Publication Costs

The student is financially responsible for the costs of preparing the final original, unless it can be paid for through a research contract of which it is a part. The Department will pay for producing the required number of copies of the final dissertation. Cost of production will be defrayed by contracts whenever possible. When color printing is required, the Department’s color copier may be used for the final copies only. Approval must be obtained, in advance, for the use of this printer and ordinarily only the color pages can be printed. The student is responsible for getting the reproductions made. There are no department staff available for this.

The number of Examination Committee members will determine the number of copies needed. If a contract requires additional copies, these will be produced at the contract expense. The student is responsible for depositing:

- 2 unbound copies to the Graduate College Thesis Office in pocket folders with extra title pages attached to the outside of the folders
- 1 unbound copy to the Student Services Office
- 1 bound copy to the Department’s thesis bookshelves
- 1 copy to each of the members of the examining committee
1 copy to the dissertation advisor
1 copy to the student
1 electronic copy to the Student Records Office (Word or Adobe Acrobat)

Copies should include signed Certificate of Committee Approval.

It is highly recommended that a student not leave campus until the dissertation is deposited. If this is unavoidable, a responsible person should be found to finish the deposit process. Department staff are not available to do this.

Students should remember to update their address information on UI-Integrate Self-Service. The diploma will be mailed to the PERMANENT address listed. Before leaving campus the student must return any department building keys to the Department Head’s Secretary. The student should also report their new address and job information to the Student Services Office.

12. Degree Conferral

Doctoral degrees are conferred in May, October, and December. They are not conferred in August. Students must place their names on the degree list in order to graduate. Students can do this through UI-Integrate Self Service at the beginning of the semester before the end of the tenth day of classes. After that, they must fill out a paper form available in the Student Services Office.

13. Time Limits:

A Handbook for Graduate Students and Advisors states, “A doctoral candidate normally must complete all requirements within seven years of first registering in the Graduate College. However, a candidate for the doctoral degree who has already received a master’s degree elsewhere must complete the requirements within six years of first registering in the Graduate College.
V. Advising Procedures

1. Full-Time Course of Study

The complete description of full-time course of study from the Handbook for Graduate Students and Advisors is given in the Appendix. In brief, the Graduate College has set full-time status for fall and spring semesters at 8 or more hours for students with a 25-67% assistantship, 12 or more hours for students with 1-24% or no assistantships. Departments are allowed to set higher requirements. In the case of NPRE, 14 hours, including any thesis 599 credit, is recommended. Students wishing to register below this should consult their advisor or the Department Head.

2. New Students

a. New Graduate Student Orientation

The Department Head and Student Services Office will hold an orientation for all new graduate students at the beginning of the fall semester. Students will receive information to familiarize them with the policies and procedures of the University and Department. This information will help ease the student’s life on campus and in the Department. Each student will receive a copy of the NPRE Graduate Student Manual.

b. Advising for Preliminary Course Plan

Ordinarily, the Department Head will act as the new student’s initial academic advisor. He will advise the student in developing their preliminary course plan. This plan will be determined by reviewing the student’s background prerequisites, research interests, goals, and any TA/RA appointment. The student should be prepared to suggest a tentative course schedule. This will result in the student’s first semester schedule. The student will register using the UI-Integrate Self Service.

c. Research Advisor Appointments

Choosing an advisor for thesis/dissertation research and course planning is one of the most important decisions a student will make during their graduate program. It is important that the advisor be chosen wisely and that the advisor/student commitment not be entered into without much thought. It is however, in the student’s best interest to choose an advisor as early as possible so that they can begin work on their thesis/dissertation as soon as possible.
All faculty members will submit to the Department Head a list of possible thesis/dissertation topics, the number of new students they wish to supervise, and the existing and/or future funding for student-related research (including a 2 or 3 sentence description) prior to the beginning of the semester.

The student will receive information on the Department faculty, a list of possible thesis topics, and a Preliminary Thesis/Advisor Selection form.

Students are encouraged to meet with the Department’s entire faculty and are required to meet with a minimum of three. During these meetings, the faculty will explain his research projects and the student will discuss his/her research background and current interests. These meetings can be very useful to the student in finding an advisor and a thesis/dissertation research project.

Early in the first semester, each new student should fill out the Preliminary Thesis/Advisor Selection form indicating his/her preferred thesis topic and advisor in order of preference along with a statement of whether the faculty member has or will have financial support to cover the student’s research. This should be turned in to the Department Head. If a faculty member chooses not to work with a student, the faculty member should indicate that, along with reasons, to the Department Head.

If the student does not find an advisor within a reasonable amount of time, the Department Head will pair up the student with an advisor, keeping in mind common interests, student financial support, and advisor workload. In some cases, the advisor may be determined through communication between a faculty member, the student, and the Department Head during the application process.

A student may choose to work with a faculty member from outside of the Department. In this case, the student should also seek academic advising from an NPRE faculty member, typically the Department Head. Although the research advisor may be knowledgeable on the thesis/dissertation research, an NPRE faculty member may better advise the student in the Department’s degree requirements and on courses for qualifying exam preparation. If the research advisor has a different opinion than the academic advisor as to courses the student should take, the research advisor should consult the academic advisor to make sure the degree and qualifying exam preparation needs are being met.
3. Continuing Students

a. Student Progress Review

The NPRE faculty and administration review student progress each semester. Recommendations regarding the progress of a student may be made to the student’s research advisor. The advisor will pass the recommendations along to the student for appropriate action.

b. Research Advisors

Each student is urged to review his/her objectives, area of specialization, and research interests with his/her advisor. A student who wishes to change advisors should consult the Department Head. Changing advisors is a significant action and should be made only after serious consideration.

c. Continuing Students and Advance Enrollment

During advance enrollment, students may register for the next semester’s courses using UI-Integrate Self Service. Designated dates by groups are set for advance enrollment. Generally advance enrollment for spring semester begins in November and in April for summer and fall semesters.

The Department places advising registration holds on all NPRE students. A student may not register for courses until the hold is removed. In order to get the hold removed, a student must meet with their advisor.

Each student will make an appointment with his/her advisor to review his/her course program and progress. The student and advisor will develop each semester’s course plan. It is helpful to plan several semesters into the future to account for course rotations, qualifying and preliminary exam requirements, degree time limits, and other long-term contingencies.

Once courses are agreed upon, the advisor will sign off on the Advance Enrollment form and the student will return it to the Student Services Office. The Advance Enrollment form will be placed in the student’s file. If the student later decides to change their course schedule, they should first consult their advisor.
4. Late Registration

Registration after the normal registration period is over requires the student to fill out a Late Registration form available on the Graduate College website. Students must have their advisor sign the sheet and must hand carry it over to the Records Service Center, 901 Illinois Street. A late registration fee may be charged.
VI. Academic Policies

1. Computer Programming

Students are expected to be able to program in FORTRAN or C (C++) languages. Several courses assume that students can use the computer for problem assignments. Students who do not have computer programming experience should register for CS 101 Introduction to Computing, Engineering and Science. Students who are unsure of whether they should register for this course should consult their advisor. CS 101 carries no graduate credit.

2. Credit/No Credit and Auditing

M.S. students may take one course on a credit/no-credit basis. Ph.D. candidates may take one additional course credit/no-credit. Students must have advisor approval. For details on the credit/no credit grading option and on auditing courses, see A Handbook for Graduate Students and Advisors.

3. Credit for Off-Campus Work

Ordinarily credit is not given for off-campus work, unless it is an accredited UIUC on-line course. However, under certain conditions it is possible to petition to receive credit for either NPRE 554 or NPRE 597 by registering in advance. Normally such credit would be granted for M.S. candidates only, and only for work not associated with the thesis topic.

4. Petitions

Graduate College Petitions: Graduate College petitions should be prepared by the student in consultation with his/her advisor and submitted to the Department Head for approval. The petition form and information on filing is available at http://www.grad.illinois.edu/admissions/petition_instruct.cfm. Students should fill out their portion of the form on-line and then print out for completion by the advisor and the Department Head. After advisor and Department Head approval, it should be turned in to the Student Services Office, which will forward to the Graduate College for consideration. Once the Graduate College has made a decision, they will notify the Department and the student by email.

Internal Departmental Petitions: Internal departmental petitions should be prepared by the student in consultation with his/her advisor and submitted to the Department Head for recommendation and approval. Upon request of the
student and advisor, and at the discretion of the Department Head, the student’s petition may be referred to the NPRE Student Committee for action. If the Student Committee cannot satisfactorily resolve the issue, an appeal can be made to the Department Executive Committee.

5. NPRE 596 Seminar in Nuclear Science and Engineering

NPRE 596 is a once weekly seminar that brings professionals from national laboratories and other universities to the Department to speak on current research topics relevant to NPRE. It is an opportunity for students not only to keep informed on research being done out in the field but also to make contacts with potential future employees. Weekly announcements of speakers and topics are posted in Talbot Laboratory and are distributed via student email. A schedule of the entire semester speaker and topic line-up can be found on the Department’s website under the Special Events link. **It is a required course to be taken each semester it is offered.** Only the Department Head can excuse a student from registering for NPRE 497 and only he can approve an absence.

6. International Students, SEVIS, and ISSS

The rules governing international visas can be very confusing. Students need to work closely with the International Student and Scholar Services to maintain their student status. Students should read all emails sent by ISSS and should frequently check their website, [http://www.ips.illinois.edu/issss/](http://www.ips.illinois.edu/issss/).

The following is a partial list of regulations students must follow to maintain student status. Neglecting to follow these can lead to very serious consequences.

- **Maintain a full-time course load.** In certain situations students may be able to drop below a full course load of study, but they **must** go to ISSS for advising **before** dropping courses which would bring them below full-time status. International students do not need to register for summer semester unless it is their first or last semester of study.
- **Keep your I-20 current.** Extend it **before** it expires.
- **Report all changes of address or legal name to UI-Integrate Student Self Service.** Report changes in dependent’s information to ISSS.

Students with questions about the above should make an appointment with an ISSS advisor.
7. English Proficiency

Often international students have difficulty communicating in English even if they studied the language for many years and scored well on the TOEFL. This is especially the case when students first arrive. **The Department strongly believes that verbal and written English proficiency is vital for all of our students’ academic and professional success.** Good verbal skills are important in interacting with the faculty, staff, and students. Clear communication is necessary for the Oral Qualifying Exam, Preliminary Exam, Final Defense and conference research presentations. Students wishing to be Teaching Assistants must prove sufficient spoken English proficiency by passing the SPEAK test before they can TA. Written English skills are also necessary as students not only write thesis and dissertations but also often publish their research in professional journals.

International students should take every opportunity to practice spoken English by talking in English with students, faculty, and staff. A student’s English listening and speaking skills will not improve if they only speak with students who share the same native language using that language.

The Department of English as an International Language offers five courses: ESL 500 and 501 on writing, 504 and 506 for Teaching Assistants, and 510 on pronunciation. Course information is available at, [http://www.deil.illinois.edu/](http://www.deil.illinois.edu/).

Students may be required to take the English Placement Test on campus. The results of the EPT may require or recommend a student take English courses at UIUC. Students not required by the EPT to take English courses and students exempt from taking the EPT should still consider taking some English courses. It will benefit the student most if they take any courses to improve their English early in the program, rather than later.

8. American Nuclear Society

The American Nuclear Society is an international professional and educational society focused on the field of nuclear sciences. Information about ANS can be found on their website, [http://www.new.ans.org/](http://www.new.ans.org/). NPRE has a student ANS branch, which both undergraduate and graduate students are welcome to join. The student branch generally meets bi-weekly in the NEL lounge and plans social, outreach, and professional development activities. Social activities have included intramural sports, movie nights, and meetings over pizza. Outreach activities have included nuclear science presentations at high schools and demonstrations at Engineering College Open House. Professional development activities have included tours of power plants.
plants and national labs, the Annual ANS and NPRE Awards Banquet, and peer tutoring.

9. Alpha Nu Sigma

Alpha Nu Sigma is an honorary society that is a section of the American Nuclear Society. Students are asked to join as recognition of their high scholarship and potential to contribute to the nuclear science field. Members must be in the top academic percentage of their peers.
VII. Teaching and Research Assistant Appointments

1. TA and RA Work Hours and Appointment Periods

Typical Teaching Assistant (TA) and Research Assistant (RA) assignments are for half time, 50%. In some cases, assignments may be for less than 50%. Based on a standard 40 hour workweek, a student on 50% should spend 20 hours fulfilling the TA or RA assignment and 20 hours on their studies and thesis/dissertation-related research. A student on 25% should spend 10 hours per week on their TA or RA duties and the remainder on their studies and thesis/dissertation research.

In RA assignments, the research done for the financial support is often the same as the research toward the thesis/dissertation. Thus the appointment workload also reflects research efforts toward meeting the degree thesis/dissertation requirement.

For TA assignments, the work provides professional development, and is in support of a given course(s). The student reports to the course(s) instructor(s) for supervision of the TA assignment, and to the research advisor for supervision of thesis work. It is expected that TAs dedicate the proper amount of effort toward their teaching assignments.

All RA and TA appointments extend for the full 4.5-month semester. Fall appointments run August 16th through December 31st, Spring are January 1st through May 15th. Students on appointment are expected to be available to meet the duties of their assignments during the full appointment period. Students assigned to TA positions should note that the appointment periods start before classes begin and end after classes are over. Nevertheless, the appointment and job duties extend over the entire period.

Typically the Department initially only promises support for fall and spring semesters, which equals a 9-month appointment. The Department generally does not offer summer courses other than independent study, and so there typically are no summer TA opportunities. Faculty and the Department may have limited financial resources to support summer RA appointments. Interested students should discuss the possibility with their advisor or the Department Head. Summer appointments cover 2 months for a total of 11 possible months support.
2. TA and RA Faculty Supervisors

The Department places great importance on the role of faculty as supervisors of graduate students and on the assistantship experience as part of the student’s education. Ordinarily, the professor that the TA or RA reports to determines the responsibilities of the student. The supervising professor typically is the main source of direction and feedback to the student, and to the department about the student.

3. Pay Level Increases

The Department expects Ph.D. students to make continual progress towards their degree. To acknowledge progress, the Department has a three level pay scale. As the student completes stages towards their degree, they move up in the pay level scale and are given a wage increase.

   Level One: Student begins the program
   Level Two: Student completes the M.S. and passes the Ph.D. Qualifying Exam
   Level Three: Student passes the Preliminary Exam

4. Required All-Campus TA Orientation

All first-time TAs, both domestic and international, are required by the University and Department to attend the All-Campus TA Orientation before beginning their TA appointment. TA Orientation is held twice a year in August and January, before the start of the fall and spring semesters. It covers topics that relate to good teaching practices, such as student learning styles and active learning. To register, contact the Student Services Office. For more information visit the Center for Teaching Excellence website, http://cte.illinois.edu/programs/ta_train.html.

5. International TAs – Required SPEAK test and ITA Orientation

The University is required by the State of Illinois to ensure that all TAs with student contact have English proficiency sufficient to communicate clearly and be understood.

   a. SPEAK or TSE Test: Students whose native language is not English are required by the University and the Department to pass an oral English proficiency test, the SPEAK or TSE, before they can begin a TA position. The SPEAK is administered by the Center for Teaching Excellence three times a year. Students can register in the Student Services Office. There is no fee to take the test. A score of 50 is required to pass. A student who
does not pass can retake it up to three times, but some English improvement activity is required before the retake. Valid improvement activities include registration in ESL 504, 506, or 510 or ten hours of tutoring with an approved tutor.

More information on the SPEAK can be found at the Center for Teaching Excellence website, [http://cte.illinois.edu/testing/oral_eng/main.html](http://cte.illinois.edu/testing/oral_eng/main.html).

b. International TA Orientation: All first-time International TAs are required by the University and Department to attend both the All-Campus and the International TA Orientation before they begin their TA appointment. International TAs must pass the SPEAK test before registering for TA Orientations. The All-Campus and ITA Orientations are held twice a year in August and January, before the start of the fall and spring semesters. The All-Campus TA Orientation is described above. The ITA Orientation covers subjects such as cross-cultural and language issues. More information on the ITA may be found at the Center for Teaching Excellence website, [http://cte.illinois.edu/programs/ta_train.html](http://cte.illinois.edu/programs/ta_train.html).

6. Graduate Teacher Certificate Program

To encourage graduate TAs to develop their teaching skills and to document their teaching experience, a Graduate Teacher Certificate Program has been developed by the partnership of several University offices. Any Graduate TA interested in this certification should to the Center for Teaching Excellence website, [http://cte.illinois.edu/programs/teach_cert/grad_teac.html](http://cte.illinois.edu/programs/teach_cert/grad_teac.html) for a description of the certification, its requirements, and an application.
VIII. General Department Information

1. University Research and Training Reactors Virtual Lab (VisBox)
   The NPRE Graduate Program at UIUC is a member of the Department of Energy’s Innovations in Nuclear Infrastructure and Education (INIE) program. The INIE program involves a partnership of four universities all working on reactor-based research involving the next-generation of University Research and Training Reactors (URTR). The URTR Virtual Lab facility, located in the NEL basement, is a three dimensional virtual environment used in reactor design. Students wishing access to this lab must request permission from the faculty member overseeing the INIE research or the Department Head.

2. Computer Room
   The computer rooms are located in 131 and 135 Talbot Lab and are open during building hours 7:00-7:00 Monday thru Friday. For use during other times, keys may be obtained from the Office Administrator. The student’s advisor or the Department Head must approve all key requests. Questions regarding computers and their capabilities should be referred to the Department’s Network Support Specialist.

3. CITES and Email
   Campus Information and Technology Educational Services, CITES, maintains the University’s mainframe that is accessible from all over campus. Students are given a free account on one of the CITES mainframes. For more information on CITES and its services visit http://www.cites.illinois.edu/.

   Every student is given a University email account. Please check it often. The Department and other University offices frequently send important information through email. Please delete old or unimportant email. Student email accounts are allotted limited space and once this fills up, incoming emails will bounce. If a student believes they are not receiving Department emails, please contact the Student Services Office. If a student is having other trouble with their email account, contact CITES. Most students also have non-university email accounts. It may be useful for the Student Services Office to have an alternate email address in case your University email is not working. Ordinarily though, all Department emails will be sent to the student’s University email address as their primary address.

4. Department Color Printer
   The Department owns a color printer for use by the faculty and staff. Students may use the printer for departmental purposes such as printing color slides for Department presentations or color illustrations for thesis and dissertations. Students must ask permission beforehand from either the Office Administrator or the Student Services Office.
5. Faxes
A Department FAX machine is available for departmental, not personal business. Students must request permission to use the FAX machine from the Office Administrator or the Student Services Office.

The Department maintains a collection of all M.S. and Ph.D. thesis and dissertations written by NPRE students. This is a source of useful material for faculty and students. Students wishing to check out thesis, dissertations, or books should contact the Student Services Office.

7. Keys and Office Assignments
Building, student office, computer room, and laboratory keys may be requested from the Office Administrator. Approval from the student’s advisor or Department Head is required. Students ordinarily are not assigned an office until they have located an advisor. Under no circumstances should students change office assignments without approval from the Department administration; the Department Head or the Office Administrator.

8. Mail
Every student is given a department mailbox in the Talbot Lab student lounge. The Department and the University frequently send important mail to your mailbox. Please check it regularly. Respect the privacy of other’s mail. Do not remove mail from anyone else’s mailbox or read anyone else’s mail. It is a serious offense.

The department mailboxes are for Department and University related mail only. **Do not have personal mail sent to your department address.** Scientific and professional magazines and journals may be sent to your department address, but popular magazines such as Time, Newsweek, etc. should be sent to your home address. We have had some difficulty in the past with students not following the above policy. If there are continued problems with personal mail being sent to the department address, the department may return the mail to the sender. To avoid this trouble, follow the policy.

Incoming mail should be addressed to: Student Name; University of Illinois; Department of Nuclear, Plasma, and Radiological Engineering; 216 Talbot Laboratory; 104 South Wright Street; Urbana, IL 61801.

Campus outgoing mail may be mailed from the out box in 216 Talbot. Students should not send off-campus mail from the Department.

9. Photocopying
A photocopy machine is available for Department related, not personal, use. An I.D. number is required to operate the copier and each job must be charged to a specific project for which an I.D. is assigned. If you are working on a course or research project, you may obtain the I.D. number from the Student...
Services Office. If you have questions on how the copier works, or if the copier malfunctions, please ask for assistance from the Student Services Office.

10. Student Contact Information
Please keep contact information current in UI-Integrate Self-Service. In addition, keep the Student Services Office informed of contact information changes. This includes name, address, home phone number, office assignments, and office phone numbers. The Department sometimes needs to contact students quickly for very important reasons. This is difficult to do if students do not keep contact information current.

11. Department Telephones and Office Phone Numbers
Personal use of the telephones for local calls should be kept to a minimum. Do not make personal long distance phone calls on office phones.

Students should not list the Department’s main line phone number, 333-2295, as their office phone number. The staff answering the main line will not take messages nor transfer phone calls for students.

12. Travel and Request for Campus Absence
When students go on travel, they need to fill out a Request for Campus Absence form available in the Business Office 213 Talbot or online at http://npre.illinois.edu/business_services.php. The information is necessary to verify who is not on campus at any given time. If the travel is for university-related business, liability coverage is not provided for those who have not completed a Request for Campus Absence form.

Travel requests, either for personal or University-related business must be discussed with the research advisor or supervising faculty in the case of a TA.

If you wish to be reimbursed for University-related travel, check with the Business Office and with your research advisor beforehand.

International students considering travel outside of the country, i.e. visits home, should consult with ISSS before leaving. It is also important that international students notify the Department of their travel plans outside of the country. There have been some cases of students encountering difficulty obtaining their reentry visa and of delayed returns because of failure to notify ISSS and the Department.

13. Safety
Safety is everyone’s business. Be careful in all you do. There is a special hazard if you are working alone. In an extreme emergency help may be obtained by dialing 9-911 from a campus phone. The Division of Research Safety is a resource on safety information and support. They can be contacted on their non-emergency number at 333-2755. For information view their web page at http://www.drs.illinois.edu/.
14. Laboratory Safety

Students are expected to observe safe-working conditions at all times. Special hazards related to lasers, high voltages, etc. are encountered in laboratories. Persons entering labs should first consult one of the staff or students working in the area. A notice concerning precautions in using lasers and other potentially hazardous conditions is posted and is to be read by anyone using the lab. Students should familiarize themselves with all equipment and materials with which they work and recognize and avoid hazardous situations. If any doubt exists, students should consult the faculty member in charge of the lab, their research advisor, or the Department Head. It is always important to understand safe operating procedures prior to working in a lab.

15. Security

Security in the buildings is an issue at any time. Do not leave valuables and easily stolen portable items (cameras, laptops, backpacks) where they are accessible or unattended. Report “suspicious” strangers lingering in hallways or labs to the 213 Talbot Laboratory main office at 333-2295. Always make sure that the building outside doors are locked during off-business hours. Never block a door open or defeat the door locking systems.
INTRODUCTION

All members of the University community are expected to observe high standards of professional conduct and ethical behavior in graduate education and in the supervision of graduate research and teaching, (Guiding Standards for Faculty Supervision of Graduate Students, March 31, 1997). In a large and heterogeneous scholarly community however, problems may arise. Thus the University articulates its policies and provides effective informal and formal procedures for resolving these problems involving graduate students.

The purpose of this policy is to protect the interests of graduate students in the Department of Nuclear, Plasma, and Radiological Engineering by providing informal and formal means of seeking resolution in case of an inappropriate action of a member of the faculty or administrative staff or an inappropriate application of an NPRE Department policy. Any graduate student in the NPRE Department may informally pursue or formally file a grievance when he/she believes that a decision or behavior adversely affects his/her status as a graduate student.

This Policy and Procedures on Grievances by Graduate Students in the Department of Nuclear, Plasma, and Radiological Engineering specifies the policy and describes the procedures to be employed to resolve grievances by graduate students in the NPRE Department. It was approved by the Graduate College on December 5, 2000. The policies and procedures described in this document do not override or supersede any other policies as established in the University statutes and campus policies. For more information, see the Handbook for Graduate Students and Advisors. This policy does not apply in cases of academic misconduct. Breaches of academic integrity in research and publication are handled under the campus’s Policy and Procedures on Academic Integrity in Research and Publication. Similarly, this policy does not apply to cases that arise under the Code of Policies and Regulations Applying to All Students (“Code”), such as capricious grading in a course (Section 26) or academic integrity (Section 33).

I. SCOPE AND COVERAGE

Definition of a Grievance. A grievance may arise when a graduate student believes that his/her status as a graduate student, or University appointment based on student status, has been adversely affected by an incorrect or inappropriate decision or behavior. Practices or actions by a student’s supervisor, other faculty member, or other member of the University community that seriously deviate
from ethical or responsible professional standards in the supervision of graduate student work may constitute professional misconduct in violation of University policy.

II. INFORMAL PROCEDURES

University policy strongly encourages all students who believe they have a grievance to use all appropriate avenues for informal resolution before initiating a formal grievance. Students in the NPRE Department are encouraged to discuss the issue with the faculty or staff member with whom the problem has arisen. If a satisfactory solution is not forthcoming, the student should discuss the issue with his/her or her adviser, the director of graduate studies, or the NPRE Department Head, who shall attempt to find a resolution acceptable to both parties. The student may also consult with the Graduate College, the Office of the Dean of Students, the Ombud Office, the Office of International Student Affairs, or other sources.

III. FORMAL PROCEDURES

**Identification of the Grievance Committee.** Annually three members of the faculty shall be appointed by the head and two graduate students shall be selected by the graduate students to serve on the grievance committee. The head shall appoint one of the faculty members to serve as chair of the committee. The chair is responsible for assuring that a record of the committee’s investigations, deliberations, and recommendations is forwarded to the head/chair/director.

The graduate student grievant may request that there be no graduate students on his/her grievance committee.

1. A student in the NPRE Department may file a formal grievance with either the NPRE Department Head or directly with the Graduate College, as the student elects. A formal grievance should be filed promptly and must be filed in writing within 180 calendar days of the decision or behavior resulting in the grievance, regardless of whether the NPRE Department procedure or Graduate College procedure is used. The written grievance should indicate the parties involved, the action or decision being contested, any applicable university, campus or unit policy, an explanation of why the action or decision is inappropriate, and the remedy sought.

2. The Department Head shall define the subject matter and scope of the issues related to the grievance in a written charge to the grievance committee. The primary involved parties shall receive a copy of the charge.

3. Any participant to the grievance may challenge any member of the grievance committee if there is a perceived conflict of interest. The challenge should be made in writing to the NPRE Department Head. If the objection is prompt
and reasonable, the Department Head shall replace the person with one who meets the stated criteria. The decision of the Department Head as to whether the challenge is prompt and reasonable as to the acceptability of the replacement selected may be a basis for appeal of the grievance committee’s recommendation.

4. The grievance committee’s investigation shall include a review of written materials presented and seeking information from the primary involved parties in writing or in person. During a hearing, each of the primary involved parties may make a brief opening statement, and then respond to questions from the committee. The primary involved parties may not question each other directly, but may pose questions through the committee chair. At the end of the hearing, each primary involved party may make a closing statement.

5. Within 30 calendar days of the filing of the grievance, the chair of the grievance committee shall report its recommendations in writing to the NRPE Department Head. The Department Head may grant an extension of the time limit for good cause. The grievance committee’s report shall contain:

   a) a summary of the grievant's contentions and relief sought
   b) the response of the individual or NPPE Department against whom/which the grievance was filed
   c) a general description of the investigative process
   d) a citation of relevant policies
   e) an explicit finding of fact based on the preponderance of the evidence with respect to each grievance included in the grievance committee’s charge
   f) a listing of the evidence relevant to each finding
   g) an indication of whether there was a reasonable basis in fact and honest belief for the allegations in the investigated grievance
   h) a recommendation of appropriate redress for the grievant(s) and
   i) any recommended changes in policies and procedures to minimize the probability of recurrence.

6. Within 7 calendar days of receipt of the committee’s report, the head shall determine the disposition of the case and communicate the decision to the primary involved individuals.

If the Department Head determines that the grievance has not been proved or has no merit, the Department Head will notify all involved parties and all persons who have been interviewed or otherwise informed that grievance has been dismissed.

If the Department Head concurs with the committee's conclusion that the grievance has been sustained and has merit, the Department Head will proceed in accordance with the University statutes and relevant University rules and
regulations. The head may, after consultation with appropriate campus officers, prescribe redress for the grievant. In addition, the Department Head may initiate modifications of NPRE Department policies or procedures. The Department Head shall notify the relevant primary involved individuals (grievant, respondent, grievance committee members) of actions taken.

7. Within 10 calendar days of receipt of written notification of the head’s determination, appeals may be made to the Graduate College as specified in the Graduate College grievance policy. This appeal can be based only upon demonstrated specific deficiencies in the application of this NPRE Department grievance procedure to the student’s grievance.

8. After completion of a grievance review and all ensuing related actions, the head shall return all original documents and materials to the persons who furnished them. The Department of Nuclear, Plasma, and Radiological Engineering shall destroy the grievance file on a date 5 years beyond the grievant’s time limit for completion of the degree. A report of the nature of the grievance and the primary involved parties shall be forwarded to the Graduate College.

IV. GENERAL PROVISIONS

a. Coverage

This policy and these procedures apply to all graduate students and members of the academic and administrative staffs in the NPRE Department. This policy also applies to former graduate students, provided they meet the timeliness requirements specified in the procedures above.

b. Oversight Authority and Responsibility

1. The Department Head has responsibility, under the policies and procedures of the Graduate College, for the management of NPRE Department graduate programs and related policies and procedures.

2. The Department Head shall have the primary responsibility for administering campus procedures detailed herein. All information and items furnished will be made available to the grievance committee. During the course of an investigation, the Department Head will provide information about the status of the proceedings to the primary involved individuals. Subsequent to the grievance committee’s reporting, the head will maintain a file of all documents and evidence, and is responsible for the confidentiality and the security of the file. The Department Head shall make the complete file available to the
Associate Dean of the Graduate College on the appeal of a grievance outcome to the Graduate College.

3. Confidentiality. All persons involved in administering these procedures will make diligent efforts to protect the reputations, privacy, and positions of all involved persons. These persons include those who file grievances, persons who are alleged in a grievance to have taken inappropriate actions or activities, and NPRE Department administrators. All of the procedures and the identity of those involved should be kept confidential to the extent permitted by law. However, confidentiality regarding information other than the identity of the grievant need not be maintained if the grievance is found to be false and in particular if dissemination is necessary to protect the reputation of individuals or units falsely accused. Making public the fact that a grievance has been deemed false or unproved is not considered retaliation against the grievant. Protection of confidentiality does not preclude disclosures necessary to redress actions leading to a grievance.

c. Standards of Evidence

The grievance committee’s decision shall be made on the “preponderance of evidence” standard. Any finding against an individual or department on the subject of the grievance must be support by a preponderance of the evidence.

d. Academic Freedoms and Rights of the Parties

1. It shall be a prime concern of all persons who implement this policy and these procedures to protect the academic freedoms fundamental to the academic enterprise. Among other things, this includes the professional judgments of student performance that are an essential part of the graduate education process. Academic freedom, however, affords no license for the mistreatment of graduate students.

2. The rights of the primary involved individuals shall be specified in the form of a written notice or letter from the head. The primary involved individuals have the following rights:

   a) To receive notice of the identity of the members of the grievance committee.
   b) To receive a written statement of the charge including the subject matter being considered by the grievance committee. If additional information emerges during the committee’s evaluation that
substantially changes the subject matter, the parties shall be informed promptly in writing.

c) To submit statements in writing and to meet with the committee to present information.

d) To consult private legal counsel, or another person who may provide advice at the meeting with the committee. Prior notice of the presence of an advisor must be given and any other primary involved party may request a delay of up to 5 calendar days to arrange for the presence of an advisor.

e) To review and respond to the grievance committee’s final report.

3. Any of the parties responsible for the implementation of this policy may consult University Legal Counsel at any time during the informal or formal processing of a grievance.

e. Conflict of Interest

A conflict of interest is a significant professional or personal involvement with the facts or the parties to a dispute. Any participant, who has a conflict of interest in a dispute under this procedure, or a concern about a conflict on the part of another, shall report it to the Head who shall take appropriate action. If the Head has such a conflict, the head will inform the Associate Dean of the Graduate College who will, in consultation with the dean of the academic college, decide how to address the situation.

f. Timeliness and Procedural Changes.

All procedures prescribed in this document should be conducted expeditiously. The Head for good cause may extend any of the time periods and may make other reasonable alterations of these procedures, provided that the alteration does not impair the ability of a grievant to pursue a grievance or the respondent(s) named in the grievance to defend him/herself. Any alterations of these procedures must be communicated to all pertinent parties.

g. Withdrawal of a Grievance

The grievant may submit a written request to withdraw the grievance at any time. The head shall decide whether to approve the request. A request to withdraw shall be approved only if both parties to the action agree to terminate the proceedings. If the withdrawal request is approved, the head shall notify the primary involved parties and the files shall be destroyed. If the withdrawal request is denied, the grievance shall continue to be processed to a conclusion according to the above procedures.
h. Termination of University Employment

The termination of University employment of any of the primary involved individuals in a grievance, by resignation or otherwise, after initiation of procedures under this policy shall not necessarily terminate these proceedings.

i. Malicious Charges

Bringing unfounded charges in bad faith is a violation of this and the Graduate College grievance policy. If the grievance committee determines that the allegation(s) in the grievance or the testimony of any person was unfounded and motivated by bad faith, that finding shall be communicated by the head to the Dean of the Graduate College and the dean of the academic college. After consultation with the Provost, the deans may inform the head of such a finding. Such finding may be the basis for disciplinary action or other personnel decision in accordance with University rules and regulations.
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