



# Graduate Student Handbook

Department of Electrical and Computer Engineering

University of Kentucky

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## 2 ABOUT THIS HANDBOOK

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The purpose of this handbook is to acquaint you with the rules and requirements that must be followed in order to obtain a graduate degree in Electrical Engineering from the University of Kentucky. Supplementary information and up-to-date forms are available under the department’s [Graduate Program website](#).

Students are solely responsible for familiarizing themselves with all regulations and requirements contained within this Handbook and the [University of Kentucky Graduate School Bulletin](#). Much of this Handbook was derived from the latter publication. In no case will a regulation be waived or an exception granted because a student pleads ignorance. This handbook is not intended to be a substitute for the Graduate Bulletin which is the authoritative source of information for all graduate studies. Additional information, including application inquiries and further clarification on either departmental or university policies may be obtained by consulting the ECE Director of Graduate Studies at [ecedgs@engr.uky.edu](mailto:ecedgs@engr.uky.edu).

## 3 PROGRAM OF STUDY

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The Department of Electrical and Computer Engineering provides programs for study and research leading to the Master of Science in Electrical or Computer Engineering and the Doctor of Philosophy. Graduate curricula within the Department of Electrical and Computer Engineering are concentrated in the following major areas:

- Computational Electromagnetics
- Controls and Manufacturing
- Micro/Nano-scale Devices and Materials
- Power and Energy
- Computer Architecture and Embedded Systems
- Signal Processing and Machine Learning

Our graduate students collaborate with faculty researchers in the department and across the College of Engineering to make the technological advances that can improve everyday life, whether it be through faster communications, greener energy transmission and distribution, enhanced national security, more effective and less expensive health care, etc. They also work across disciplinary boundaries with researchers in other engineering departments and in world-class facilities like the Center for Nanoscale Science & Engineering and the Center for Visualization & Virtual Environments.

An additional option for ECE graduate students is the **Graduate Certificate in Power and Energy**, a 15 credit hour program to be taken in conjunction with an engineering MS or PhD that rapidly prepares students for power and energy careers. The program can be completed in as little as one calendar year (MS project option). MS project topics (and thesis topics) are drawn from industry, from faculty and staff of the Center for Applied Energy Research, and through Power and Energy Institute of Kentucky (PEIK) faculty members and associated faculty.

## 4 ADMISSION REQUIREMENTS

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The followings are required for admission to the Electrical and Computer Engineering Graduate Programs:

1. A bachelor's degree or higher from an accredited institution. You may apply if you are in your final year of studies and you expect to earn your degree before the start of the semester you are applying. Formal proofs, usually in the form of a final official transcript, must be provided upon admission.
2. Your prior degree should be in electrical or computer engineering. Degrees in physics, mathematics, computer science, or other field of engineering would be considered. However, core undergraduate courses in Electrical and Computer Engineering will be required prior to completing your graduate degree in Electrical or Computer Engineering.
3. If your prior institution uses a 4.0 scale, a minimum grade-point average (GPA) of at least 3.0 on all graduate and undergraduate work is required. If you attended a university that does not use the 4.0 system, do not convert your grades to GPA – leave it blank on your application.
4. The followings are our minimum Graduate Record Examination (GRE) requirements:
  - MS degree: Verbal + Quantitative  $\geq$  301 (or 1100 in old version) and Analytical Writing  $\geq$  2.5
  - PhD degree: Verbal + Quantitative  $\geq$  310 (or 1200 in old version) and Analytical Writing  $\geq$  3.0
5. For International applicants, our minimum TOEFL score requirement (for both MS and PhD degrees) is 550 (paper-based) / 213 (computer-based) / 80 (Internet-based). Alternatively, IELTS scores higher than or equal to 6.5 are also acceptable.

Satisfying minimal standards, however, does not guarantee your admission as admission decision is made on a competitive basis. To be awarded Fellowships and Assistantships, you usually need much higher scores. All applicants will be considered for Fellowships and Assistantships (subject to the deadlines specified in 6.1) and no separate forms are required.

## 5 APPLICATION PROCEDURE

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### 5.1 DEADLINES

Our graduate program accepts student in both fall and spring semesters. The application deadlines are as follows:

Fall semester:

- February 1 for international applicants
- July 1 for domestic applicants
- February 1 for all applicants interested in fellowships and assistantships

Spring semester:

- August 15 for international applicants
- November 15 for domestic applicants
- New assistant awards are not typically given for students starting in spring semester

### 5.2 APPLICATION MATERIAL

1. Prior to submitting your application, review the University of Kentucky Graduate School's [Guidelines for Admission Applications](#).
2. Submit your [on-line application](#) to the Graduate School.
3. When submitting official test scores to the Graduate School, please use the following codes:

- Official GRE Scores from ETS
  - Institution code: 1837
  - Department code: 1203 for Electrical Engineering and 1201 for Computer Engineering
- (For international applicants) Official TOEFL scores from ETS or Official IELTS scores
  - School code: 1837
  - Department code: 66

Inquiries concerning an applicant's admission status can be found at the UK Graduate School website at <http://www.gradschool.uky.edu> or by writing to the Graduate School. Phone calls will not be accepted, and information will not be provided over the telephone.

## 6 GENERAL PROGRAM REQUIREMENT

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### 6.1 ACADEMIC ADVISOR

The ECE Director of Graduate Studies serves as a student's initial academic advisor upon admission into the ECE graduate program. All full-time graduate students must choose a regular academic advisor by the end of their first semester of graduate work in the UK Electrical & Computer Engineering program. Part-time students should comply with this requirement after completing nine credit hours of graduate course work. In conjunction with their academic advisor, the student must formulate a program of study. This plan will list the graduate courses to be taken in order for him/her to obtain his/her degree. A research topic for the thesis/project/dissertation must be included. The Director of Graduate Studies through the use of the Graduate Program Planning Approval Sheet must then approve the plan of study and research topic. A copy of this plan containing the signatures of both the student's academic advisor and the Director of Graduate Studies is to be filed in the student's academic folder. Students not complying with this requirement may be denied future class registrations. Significant changes to a student's graduate program plan, particularly the changing of advisors, must be approved by the ECE Director of Graduate Studies with a copy of the change to be included in the student's academic folder.

### 6.2 ACADEMIC LOAD

The normal load of a full-time graduate student is 9 credit hours. Under no circumstances may a student's academic load exceed 15 credit hours in any one semester. During the summer sessions, the maximum load for the four-week session is 4 credit hours and for the eight-week summer session is 9 credit hours or a total load for both sessions of 12 credit hours. For the student who is a full-time teaching assistant or whose university service requires approximately 20 hours per week maximum, the academic load may not exceed 10 credit hours per semester. Exceptions to this rule may be made upon the recommendation of the Director of Graduate Studies and with the approval of the Graduate School Dean.

### 6.3 TRANSFER CREDIT

Up to nine credit hours can be transferred with the approval of the graduate school. Details about the procedure and restrictions of transferring credits can be found in the Graduate School Bulletin.

### 6.4 TIME LIMIT FOR DEGREES

Details about time limit for degrees can be found in the Graduate School Bulletin.

## 7 DEGREE REQUIREMENT – MASTER OF SCIENCE IN EE (MSEE)

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### 7.1 MS MISSION STATEMENT

The mission of the MS program in Electrical Engineering at the University of Kentucky is to provide students with an advanced education in electrical and computer engineering, with the ability to contribute to scholarly research and to new technologies, and to prepare them for successful careers.

### 7.2 EXPECTED MS OUTCOMES

As a part of our mission, students completing a MS in Electrical Engineering in the Department of Electrical and Computer Engineering will have obtained the following outcomes:

1. A mastery of fundamental concepts in electrical and computer engineering;
2. The ability to perform creative research;
3. The ability to communicate difficult technical concepts both orally and in writing;
4. An understanding of professional and ethical responsibility.

### 7.3 MS CURRICULUM

The master's degree requires 24 credit hours of acceptable graduate level course work and a zero credit hour thesis (Plan A). A non-thesis option (Plan B) consisting of 30 credit hours of acceptable graduate level course work and a 3 credit hour project is also available. At least two thirds of the courses must be from within the Department of Electrical & Computer Engineering. At least one half of all MS credit requirements must be at the 600 or 700 level. Enrollment in the non-thesis option requires approval of the Director of Graduate Studies and must be requested within the student's first 9 credit hours of graduate course work. All MS students must also complete three of the six 600-level graduate core courses in electrical engineering and obtain a GPA of 3.0 or higher in the three core courses. These core courses are listed in Section 8.5.1.

### 7.4 MS THESIS/PROJECT FINAL EXAM PROCEDURE

A final examination is administered to all MSEE candidates. This examination may be oral, written, or both as determined by the student's academic advisory committee. The examining committee shall consist of the student's academic advisor, one other qualified member of the UK Graduate Faculty plus a third qualified committee member. Membership on the UK Graduate Faculty is preferred but is not required of the third committee member. At least one of the student's examining committee members must hold full membership on the UK Graduate Faculty. The Director of Graduate Studies and the UK Graduate School must obtain approval of the student's examining committee. Request to take the Final Exam must be made at least two weeks in advance of the date of the exam. It is made by filing an online form on the graduate school website. The following procedure is required by ECE Department:

1. Download the MS Student Final Exam Checklist
2. Fill in the information on Page 1 and Page 2, the project title on Page 3, and save it.
3. E-mail the filled Checklist and the ECE Department Rubrics for MS Final Examinations to his/her advisor before the final exam.
4. Make sure that the thesis/project advisor has the Rubrics and Checklist before the MS Final Exam.

After the Final Exam, the advisor needs to e-mail or turn in both the Checklist and the signed exam card to DGS. The DGS will not sign off the Final Exam card until the Checklist is received. It is the student's responsibility to confirm with the DGS if his/her signed final exam card has been submitted within one week of completing the Final Exam.

After the DGS signs off on the Final Exam card, the card will be sent to the Graduate School and the Final Exam is concluded.

**Note:** A PhD student who enters with only a BS degree also has an option to obtain an MS degree on the way toward his/her PhD studies. This can be done by using his/her partial research results for his/her MS thesis and following the same procedure as described above.

## 8 DEGREE REQUIREMENT – DOCTOR OF PHILOSOPHY (PHD) IN EE

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### 8.1 PHD MISSION STATEMENT

The mission of the PhD program in Electrical Engineering at the University of Kentucky is to provide students with an advanced education in electrical and computer engineering, with the ability to identify and develop creative solutions to novel and existing problems, with the expertise to independently contribute to scholarly research and to new technologies, and to prepare them for successful careers.

### 8.2 EXPECTED PHD OUTCOMES

As a part of our mission, students completing a PhD in Electrical Engineering in the Department of Electrical and Computer Engineering will have obtained the following outcomes:

1. A mastery of fundamental concepts in electrical and computer engineering;
2. The ability to perform independent research;
3. The ability to identify, investigate, formulate, and solve new problems of interest through scholarly research in order to contribute new ideas and engineering concepts;
4. The ability to communicate difficult technical concepts both orally and in writing;
5. An understanding of professional and ethical responsibility.

### 8.3 PHD CURRICULUM

The PhD degree is a research degree granted on the basis of broad knowledge of electrical or computer engineering and in-depth study in a specific area leading to a dissertation reflecting original work by the doctoral candidate. To obtain a PhD degree in Electrical and Computer Engineering, in addition to meeting the general Graduate School requirements, a student must:

1. ***Earn 42 graduate credit hours taken at the University of Kentucky while in graduate standing, and take a technical writing course (WRD204 or equivalent) beyond the 42 graduate credit hours.***

For students with an MS degree earned at an accredited university in the U.S., the required graduate credit hours are reduced to 18 units. For students with an MS degree earned at an accredited institution outside of the U.S., the required graduate credit hours are 24 units. All PhD students must also complete three of the six 600-level graduate core courses in electrical engineering with a score of “B” or higher in each core course. These core courses are listed in Section 8.5.1. Of the required course credits, at least two thirds must be from within the Electrical and Computer Engineering Department, and at least half must be at the 600 or 700 levels.

**2. Pass the PhD Written Qualifying Examination.**

The Departmental Written Qualifying Exam is administered by the department. The exam will test the student's foundational knowledge in electrical or computer engineering as well as the student's graduate knowledge in areas related to his/her research. Details of the written qualifying exam can be found in Section 8.5.

**3. Go through Annual Reviews.**

Every PhD student must go through an annual review with his/her PhD advisory committee. Before the Written Qualifying Exam, the student's annual review is conducted by DGS. The student should organize his/her PhD advisory committee as early as possible after the Written Qualifying Exam. The student's oral qualifying exam and his/her PhD final defense are also considered as annual reviews. The student will receive written feedback from his/her committee regarding the annual review. More details on the annual review are provided below.

**4. Pass PhD Oral Qualifying Exam.**

After passing his/her Written Qualifying Exam and completing his/her course requirements, the student should be focused on a research topic. The second part of this exam is the Oral Qualifying Exam administered by the Graduate School and the student's doctoral advisory committee. This exam will test the soundness of the student's proposed doctoral dissertation research. At least two weeks prior to the oral exam, the student must prepare and submit a written prospectus to his/her doctoral advisory committee outlining his/her research plan. On the oral qualifying exam date scheduled through the Graduate School, the student will then give an oral presentation of his/her proposed research, with sufficient evidence demonstrating knowledge of the topic, the novelty of the topic, and a research plan to complete the dissertation research. Full details of the PhD qualifying requirements can be found in Section 8.5.

**5. Pass Final Defense.**

Upon completion of the research, the PhD student will give an oral presentation before his/her doctoral advisory committee in defense of his/her dissertation research. The dissertation research will undergo the scrutiny of the doctoral advisory committee, who will be responsible to determine the novelty, completeness, and success of the candidate's research program. The PhD candidate should submit a completed copy of his/her dissertation to all members of the advisory committee no later than 2 weeks prior to the scheduled defense date.

**6. Submit the PhD Dissertation.**

Upon passing the PhD defense and upon approval of the PhD Advisory committee, PhD advisor, and the Director of Graduate Studies, the student will submit (electronically) the final version of the PhD Dissertation to the Graduate School. The PhD Dissertation must meet all formatting requirements of the Graduate School.

## 8.4 MAJOR PROFESSOR AND ADVISORY COMMITTEE

Doctoral students should choose a major professor during the first semester of their doctoral studies. The Director of Graduate Studies may initially serve as a student's academic advisor but by the end of the first semester, he/she must choose a major professor. The student's full advisory committee is to be chosen no later than one year prior to taking the Qualifying Examination. This committee, along with the major professor who serves as the Chair of the committee, guides the student, determines his/her doctoral course work, and sets specific requirements to be followed in order for the student to obtain his/her degree.

The committee consists of four members. The student's major professor as well as two other members of his/her advisory committee must be faculty members in Electrical & Computer Engineering. Another committee member must be from outside the Electrical & Computer Engineering Department. All members of the student's advisory committee must be members of the Graduate Faculty. The major professor as well as two additional committee



members must be full members of the Graduate Faculty. Formation of the advisory committee is completed by filling an online request form on the graduate school website.

The Advisory Committee is to remain intact for the duration of the student's graduate career. If for any reason a committee member cannot continue to serve on the panel, a suitable replacement is to be recommended by the major professor and requested by the student by filing an online form for change of advisory committee. The replacement must be approved by the ECE Director of Graduate Study as well as by the Graduate School.

## 8.5 QUALIFYING EXAM

The ECE PhD qualifying exam consists of two parts:

1. A formal written pre-qualifying examination testing core undergraduate concepts;
2. An oral exam.

In addition, the student must also satisfy the pre-qualifying course requirements.

### 8.5.1 Pre-Qualifying Course Requirements

To fulfill the course requirements, students must take at least 9 hours of graduate core courses, and can take up to 6 hours of independent study (EE 783) approved by the DGS.

Core courses: Students must take at least 3 of the 6 graduate core courses in EE:

- EE 611 – Deterministic Systems
- EE 621 – Electromagnetic Fields
- EE 640 – Stochastic Systems
- EE 661 – Solid State Electronics
- EE 685 – Digital Computer Structure
- EE 641 – Advanced Power Systems

Students must receive a B or higher in at least three of these core courses.

### 8.5.2 Written pre-qualifying exam

The exam shall be taken at the beginning of the second semester of enrollment. If a student fails the exam, a second exam must be taken at the beginning of the next semester. No third exam is allowed. The exam will be offered two times per year: once in the Fall semester and once in the Spring semester. The exam problems are organized into two parts.

*Part I* problems apply to all students and are selected from topics typically covered in the following courses:

- EE 211 Circuits I
- EE 221 Circuits II
- EE 282 Design of Logic Circuits

*Part II* problems are selected from topics typically covered in the following six courses:

- EE 380 Microcomputer Organization
- EE 415 Electromechanics
- EE 421G Signals and Systems
- EE 461G Introduction to Electronics
- EE 468G Introduction to Engineering Electromagnetics
- EE 480 Advanced Computer Architecture

A PhD student needs to select the two of the six subject courses in advance.

A student may request (with documented evidence) to waive the exam of one or more subject courses for both Part I and Part II. The request must be reviewed and approved by a committee of at least three graduate faculty members designated by the Director of Graduate Studies. The request must be made eight weeks in advance of the exam.

A score of 70% will guarantee a pass on a subject course. If a second exam is needed, the student will take the exam for the failed subject course(s) only.

### **8.5.3 Oral Qualifying Exam**

The oral exam has a two-fold purpose: evaluate the student's ability to conduct research and test the depth of knowledge in the student's field of research.

Prior to scheduling the oral qualifying exam, the PhD student must form their PhD advisory committee and complete the "Doctoral Advisory Committee Request" form through the Graduate School. The students must also have passed their written pre-qualifying exam and completed their pre-qualifying course requirement prior to scheduling their oral qualifying exam. The request to schedule the qualifying examination must be submitted to the Graduate School a minimum of two weeks in advance of the planned date.

The students should notify their advisory committee the intent to take their oral qualifying exam a minimum of two months prior to the anticipated date of the exam. The student should prepare a research proposal and submit it to the committee prior to the oral qualifying exam.

The research proposal should clearly state its objectives, provide motivation and background for the topic, clearly propose the new technology or ideas, provide an expected timeline based on clearly stated milestones, provide metrics for validating the proposed research, and the impact of the research.

**Once scheduled, the oral qualifying exam will consist of three components:**

- 1. Proposal presentation (typically less than 1 hour)**

The student will present their proposal to their committee highlighting the objectives of the proposed research, providing background and motivation for the topic, detailing the proposed research, justifying the proposed approach or techniques, providing an expected time line with milestones, summarizing the expected impact, and identifying risks of failure and potential for success

- 2. Proposal Critique**

After the proposal presentation, the committee will take time to ask questions about the research proposal, raise concerns, or provide comments. The candidate should have sufficient knowledge to field questions and concerns.

- 3. General Questions**

After all questions regarding the proposal are completed, the committee will then ask an array of questions on topics directly related to the candidate's field of research. The intent is to test the candidate's depth of knowledge in their field of research, and the ability to think and respond impromptu to technical questions.

## **8.6 PHD STUDENT ANNUAL REVIEW**

As required by the Graduate School Bulletin, the progress of a PhD student must be assessed annually. This assessment will be done by the student's advisory committee, and must be completed at least once per year in the format of a "PhD Annual Review".

**The annual review will have two components:**

1. A formal written research summary of the student's research activity
2. A formal presentation before the student's committee (open to the public) summarizing the student's research activities.

The PhD student annual review must be scheduled by the student with his/her PhD advisory committee. For a student's first annual review, he/she must download the PhD Student Checklist, and then fill in the first page electronically. He/she needs to e-mail the filled checklist together with the rubrics to his/her advisor before the annual review. The committee needs the checklist and rubrics to conduct the annual review. For a student who is not doing the annual review for the first time, he/she does not need to send the form to his/her advisor because the checklist is reusable until graduation.

The PhD student should submit a written research summary to his/her advisory committee no later than 1 week prior to the annual review. The student should prepare a presentation (power-point, or similar) on the order of 30 minutes that summarizes his/her research. The student should also be prepared to field questions from the committee about the research. The student's written report and presentation will be assessed quantitatively by the advisory committee. The categories to be assessed can be found on the PhD student checklist. Each committee member will independently assess the PhD student following a pre-defined set of rubrics. The student should familiarize themselves with the criterion to be adequately prepared. After the annual review, his/her advisor needs to send the completed checklist back to DGS for record.

Pre-written-qualifying PhD students, who have no advisors, must also complete an annual review. The DGS will conduct the annual review by interviewing the student. The student needs to fill in the PhD Student Checklist and e-mail it to DGS, and then schedule an appointment. For qualifying year students (typically, the second or third year), the oral qualifying exam serves as the student's annual review. For final year students who plan to do their PhD Final exams, no annual review is needed.

## **8.7 PHD FINAL EXAM PROCEDURE**

Please follow the Graduate School's Check Sheet and the procedure outlined by the Graduate School. The following procedure is required by ECE Department. It is the student's responsibility to make sure that his/her advisor has the rubrics and the PhD Student Checklist (reusable). The Final exam card will be e-mailed to the advisor from the graduate school. After the Final Exam, the advisor needs to e-mail the Checklist to the DGS's personal e-mail address and deliver the Final exam card to the DGS's mailbox at the department office. The DGS will not sign off on the Final exam card until the Checklist is received. It is the student's responsibility to check with the DGS if his/her Final exam card is signed within one week of completing the Final exam. After the DGS signs off on the Final exam card, the card will be sent to the Graduate School and the Final Exam is concluded.

## **9 COURSES**

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All courses numbered 500-799 may be counted for credit toward a graduate degree. Additionally, those courses numbered 400G - 499G outside of Electrical Engineering may be taken, upon approval of the Director of Graduate Studies, for graduate credit. Additionally, new graduate course offerings of current interest are offered under the course number EE 699 - Topics in Electrical Engineering and include the appropriate course sub title (a PhD can take up to 6 credit hours of EE699). Exceptions are possible if a request is made to DGS in advance and both DGS and the graduate school approves it).

Students may enroll in independent problem/research courses (EE 595 or EE 783) under the supervision of a graduate faculty member. Such work may not duplicate thesis/project work or work from previous courses. The form

is available in the ECE office and must be signed by the faculty member responsible for supervising the student's work at the time of his/her registration. This form will include a synopsis of the work to be completed in order to receive credit for the course. It is to be kept on file in the ECE office.

There are a number of special courses for graduate students. The usage of these courses is explained below.

## **9.1 EE 748**

If students need to request an enrollment in the zero hour course EE 748 (Master's Thesis Research), they must complete the Enrollment Request Form for EE 748 and email the form to the DGS and cc their advisor and the department's academic advisor prior to the end of the registration period. The form must be signed by their advisor. Note that the maximum length of enrollment in EE 748 for full-time students is 3 semesters. Students who enroll for EE 748 for more than 3 semesters must petition the DGS by submitting a completed enrollment Request Form.

## **9.2 EE 767**

PhD students should enroll in this course only after they have completed and passed the Oral Qualifying Exam requirements. PhD students must enroll in EE 767 (2 credit hours) every semester thereafter until they complete their PhD in order to remain in good standing or full time student status. A student may register for EE 767 the semester he/she expects to complete the Oral Qualifying Exam. If a student fails to complete his/her Oral Qualifying Exam requirement in that semester, the student must drop EE 767.

For the first-time enrollment in EE 767, students must submit the EE 767 registration form electronically to the department's academic advisor and cc to the DGS. Please include your name, UK ID, EE 767 Section# (in UK online class schedule), the name of your advisor, and your oral Qualifying Exam date. Filling out more information in the form is encouraged. Make sure your advisor sends your checklist to Ms. Green-Hinkle. Without your checklist, you cannot register for EE 767.

For re-enrollment of EE 767, in every semester students must submit the EE 767 registration form electronically to the department's academic advisor and cc to DGS.

## **9.3 EE 780 (2 HOURS)**

This course is for curriculum training internship in industry and national labs. Application for advanced training in electrical/computer engineering to solve complex practical problems is subject to approval of DGS. This course may be repeated for a maximum of 6 credit hours. MS and PhD students in electrical engineering who have completed 18 hours of graduate courses can enroll. For enrollment, the student must submit a 2-page mini proposal with a faculty or industrial sponsor for a project. The proposal will include objectives, proposed tasks, and anticipated results. A final report must be submitted to the DGS that documents the performed work and achieved results.

## **9.4 EE 783**

Registration for Special Problems in Electrical Engineering is done directly by the student. However, students must complete the departmental form for this course if they are to receive a grade for it. MS students can take one 3 hour EE 783 course towards their degree. PhD students can take up to two EE 783 courses (6 hours) towards their qualifying course credit hours.

## **9.5 EE 784 (3 HOURS)**

EE 784 must be taken by students who are completing the MS with the project option (Plan B). MS students can enroll in EE 784 after completing their 30 hours of course work (including the 3 core graduate level courses), or

during the semester students expect to complete their 30 hours of course work. The MS project should be a 1 semester project completed by the student under the advice of his/her academic advisor. The student must form an MS committee of 3 faculty members and defend the project during the semester he/she enrolls in EE 784. The student must also complete the project according to the Graduate Bulletin guidelines. To enroll in EE 784, the EE 784 registration form shall be submitted to the DGS.

## 9.6 EE 790 (1-9 HOURS)

After completing all the course work and prior to the oral qualifying exam, the student can take 2 hours of EE790 per semester. Registering for 2 hours of EE790, along with the DGS approved course load reduction, is considered as full-time student status. Registration for this class can be done by contacting the DGS with the course load-reduction form. At the end of the semester, the student must also prepare and submit to the DGS the current draft of his/her PhD qualifying exam proposal. Note that the proposal does not have to be completed, however, the student should show progress in the proposal during the course of the semester. The submitted proposal draft must be signed and dated by the student and the student's PhD advisor.

# 10 FINANCIAL ASSISTANCE

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## 10.1 TEACHING AND RESEARCH ASSISTANCE

Limited financial assistance is available to qualified applicants in the form of graduate teaching and research assistantships. Stipends vary depending upon the student's program level and type of support. U.S. citizens in good academic standing are given first priority on all assistantships awarded by the ECE Department. While no separate application for assistance is required, the admission applications must be submitted to the Director of Graduate Studies by February 1 for consideration for the next academic year.

A committee composed of ECE faculty representatives determines teaching assistantship recipients for each academic year. Individual faculty members with extramural funding select research assistants on an individual basis. Ordinarily, applicants are notified by May 31 as to the decision on their application.

Because of the enormous demand for financial support, normally, international students whose most recent degree is from a college/university outside the U.S. must enroll in the Electrical & Computer Engineering graduate program at the University of Kentucky and complete a minimum of one semester (9 hours) of graduate credit with a minimum GPA of 3.0/4.0 before consideration for a departmental graduate assistantship. Obtaining the minimum GPA does not guarantee the awarding of an assistantship. All awards are made on a competitive basis.

In addition to the monthly monetary stipend for services performed, graduate assistants are nominated for tuition scholarships awarded by the ECE Department for all or part of their tuition. The Director of Graduate Studies nominates assistantship recipients for tuition scholarships. All graduate assistants are responsible for paying mandatory university fees over and above basic tuition charges for each semester.

### **The followings are the conditions of appointment for all ECE graduate assistantships:**

1. Teaching and research assistantships in the Department of Electrical & Computer Engineering are awarded on a competitive basis. Students are reviewed at the end of each semester to ascertain whether or not reappointment will be made.
2. Teaching assistants in the Department of Electrical & Computer Engineering must maintain a GPA of 3.0 or better to be considered for reappointment.

3. Teaching and research assistants must be full-time during each semester of employment. The Director of Graduate Studies must approve any exceptions.
4. Teaching and research assistants must show adequate progress towards their degrees in order to be considered for reappointment. Full-time (20 hours per week) teaching and research assistants may not hold employment internal or external to the University, without the approval of the Director of Graduate Studies. Half-time (10 hours per week) teaching and research assistants may hold employment, internal or external to the University, for no more than 10 additional hours per week.
5. Teaching and research assistants must be present and available on campus to carry out assigned duties for the entire period of appointment. The exception to this is in the case of designated University holidays during the assignment period.
6. Teaching assistants must maintain regularly posted office hours to provide time for consultations with students. Failure to do so will result in disqualification for consideration for future appointments.
7. Teaching assistants are evaluated each semester as to their TA performance. Each must receive positive evaluations from her/his supervising professor and, where applicable, from students taught in the classroom in order to be considered for reappointment.
8. Research assistants are evaluated according to the expectations set forth by their employing professor. Consideration for future appointments is based on this evaluation of performance and the availability of extramural funding.
9. All teaching and research assistants are required to attend department sponsored seminars unless teaching a course as part of her/his TA load or attending a course as part of her/his academic course load.

## 10.2 FELLOWSHIPS

All Fall semester applicants who have been accepted into our program no later than January 15th will be considered for nomination of selected University Fellowships. Applicants who are deemed to be most qualified will be nominated.