



DEPARTMENT OF  
ELECTRICAL ENGR. & COMPUTER SCIENCE

TICKLE COLLEGE OF ENGINEERING  
UNIVERSITY OF TENNESSEE, KNOXVILLE

## GRADUATE HANDBOOK

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DEPARTMENT HEAD WELCOME MESSAGE .....	4
INTRODUCTION.....	5
Graduate School Introduction .....	5
Department Introduction.....	5
DEPARTMENT OVERVIEW .....	6
EECS Faculty.....	6
Services Provided by Faculty and Staff .....	6
GRADUATE STUDENT DUTIES/RESPONSIBILITIES.....	7
General Duties/Responsibilities .....	7
Things to Do Your First Semester .....	9
<b>ADMISSION REQUIREMENTS AND APPLICATION PROCEDURES .....</b>	<b>10</b>
GRE.....	10
English-Proficiency.....	11
Admission Policies and Application Procedures.....	11
<b>FINANCIAL SUPPORT .....</b>	<b>12</b>
General Statements .....	12
Graduate Teaching Assistant (GTA) .....	13
Graduate Research Assistant (GRA).....	14
General Guidelines for Assistantships .....	14
EECS Fellowships.....	14
Graduate Assistantship - System and Network Administrator .....	15
Other Financial Support .....	15

<b>RESEARCH ACTIVITIES .....</b>	<b>16</b>
Responsible Conduct of Research.....	16
<b>REGISTRATION AND ADVISING .....</b>	<b>16</b>
Registration for Classes Each Term.....	16
Part-Time Students .....	17
<b>ACADEMIC REQUIREMENTS .....</b>	<b>17</b>
MS Students .....	17
Online MS Students .....	18
PhD Students .....	18
Admission to Candidacy.....	19
Grievance and Appeals Processes .....	19
<b>PHD INTERNSHIPS .....</b>	<b>19</b>
General Requirements .....	19
Assistantships and Fellowships .....	19
<b>APPENDIX.....</b>	<b>20</b>

# Department Head Welcome Message



Welcome to the Min H. Kao Department of Electrical Engineering and Computer Science (EECS). I am delighted that you have chosen our department for your graduate studies.

EECS was formed on July 1, 2007 by the merger of the Department of Electrical and Computer Engineering and the Department of Computer Science. We moved into the Min H. Kao Building in March 2012. Built for EECS, this state-of-the-art building brings almost all our activities under one roof.

EECS offers degrees in Electrical Engineering, Computer Engineering, and Computer Science. Each program provides undergraduate degrees as well as graduate degrees at the MS and PhD degrees. We are a diverse department with research interests spanning numerous fields including but not limited to digital and analog/mixed-signal integrated circuits, machine learning and artificial intelligence, bioinformatics, embedded systems, high performance computing, neuromorphic computing, power and energy, visualization and image processing, and wireless and sensor networks. Please explore our department web pages to learn more about the research activities. It is critical for you as a graduate student to identify your area of interest early in your studies to take advantage of the available research opportunities.

The faculty and I hope you are as excited as we are about new directions for our programs and will enjoy the educational and research opportunities the department offers.

Dr. Garrett S. Rose  
Department Head

# Introduction

## Graduate School Introduction

In order to serve the mission and vision of the Graduate School and preserve the integrity of Graduate Programs at the University of Tennessee, Knoxville, information related to the process of graduate education in each department is to be provided for all graduate students.

Based on Best Practices offered by the Council of Graduate Schools, it is important that detailed articulation of the information specific to the graduate degrees offered in each department/program be disseminated.

The Department Graduate Handbook does not deviate from established [Graduate School Policies](#) noted in the Graduate Catalog, but rather provides the specific ways in which those policies are carried out.

## Department Introduction

EECS offers graduate programs leading to the Master of Science and Doctor of Philosophy with majors in Electrical Engineering (EE), Computer Engineering (CpE), and Computer Science (CS). Some of the major offers their own set of concentrations as detailed in the Graduate Catalog.

As an EECS graduate student, you are considered an educated, responsible adult pursuing the frontiers of these expanding horizons. Look for opportunities beyond the required course work and take advantage of the learning opportunities offered to you. Participate in department and university seminars, professional groups and technical conferences. In graduate school, you have a relationship with faculty that is closer than before, and different - more like a colleague in learning and research. Your program will be more individualized, deeper, and less hurried. There will be chances to further develop your individual talents, be they basic research, analysis, synthesis, design, development, technical writing, or oral presentations. Research on the very frontiers of technology will be a major part of your program as you prepare a thesis or dissertation. There is also financial support available for graduate students through fellowships, teaching assistantships, and/or research assistantships.

EECS along with the College of Business Administration also offers dual MS-MBA degrees. Students must be admitted by both EECS and the College of Business Administration. All three majors within EECS support the dual MS-MBA degree program.

This handbook contains information for how EECS and the Graduate School function, the range and selection of courses available, and what to do should difficult situations arise. *Please note that this handbook is purely advisory and that the material it contains is a comprehensive statement of university*

*policy*. Always consult the current [Graduate Catalog](#) for the most up-to-date and accurate description of procedures and requirements.

We know that it will become apparent to you that the staff, faculty, and you the student are all here for the same purpose: a successful learning experience leading to graduation with an MS or a PhD degree that will foster a successful career in advanced Computer Science, Computer Engineering or Electrical Engineering. Your future begins today, and we know that you also will feel the excitement, pride and deep satisfaction that will be yours in the EECS graduate program.

## Department Overview

### EECS Faculty

EECS has 44 full-time tenure/tenure-track faculty, 6 professors of practice/lectures, and a large number of adjuncts/joint faculty and emeritus professors. See the EECS webpage for details. You engage with the faculty when you take their courses, and when you participate in research projects and seminars. One of the full-time faculty will become your academic advisor. More about this role below.

### Graduate Program Administration

Director of Graduate Studies: Dr. Jens Gregor <http://www.eecs.utk.edu/people/jens-gregor>

Graduate Committee Chair: Dr. Hairong Qi <http://www.eecs.utk.edu/people/hairong-qi/>

Administrative Assistant: Mr. Chris Franco <http://www.eecs.utk.edu/people/christian-franco/>

**Director of Graduate Studies:** This person oversees departmental aspects of the graduate program, approves and signs forms and petitions, and interacts with the Graduate School on behalf of the department and graduate students when needed. Also serves as default advisor.

**Graduate Committee:** This group of faculty oversees the academic aspects of the curriculum including but not limited to catalog changes and procedural matters.

**Graduate Admissions:** Not shown above. The job is handled by a committee.

**Administrative Assistant:** This person handles day-to-day matters including departmental communication with the graduate student body and submits non-electronic forms to the Graduate School.

### Services Provided by Faculty and Staff

The main Business Office of the department is in the Min H. Kao Electrical Engineering and Computer Science Building, Suite 401, and serves as the focal point for undergraduate and graduate activities. The

staff in this office has detailed knowledge of the day-to-day operations of the department and will be your initial point of contact if any difficulties arise. They provide office support for the faculty and help facilitate the graduate and undergraduate programs.

The faculty (who teach the classes and supervise graduate student research) and the staff (who provide the supporting services) are whom you might consider to be the permanent residents of the Min H. Kao Building. A graduate student population of ~300 students, many of whom you will encounter in labs and occasionally in classes, also have places of work in the Min H. Kao Building and the Science and Engineering Research Facility (SERF).

You will receive most of your instruction from the department's faculty. They are reasonable people and very interested in helping you, especially if they sense that you are a capable and serious student and doing all you can to help yourself. In addition to teaching responsibilities, the faculty is involved in research and the oversight of graduate student research programs. They can help you determine where to go for further information on a particular aspect of the fields of Computer Engineering (CpE), Computer Science (CS) or Electrical Engineering (EE).

The staff is responsible for the smooth, orderly, day-to-day operation of the department. The staff in the main business office maintains advising files on all graduate students. These files contain semester grade reports, an academic history, other academic records, and comments from advisors where appropriate. Most forms and student information sheets are available in the main business office and can be returned there after completed and the appropriate signatures have been obtained. The staff in the business office is frequently in contact with the faculty and can act as a good communications link between you and them, arranging contacts convenient to both. The staff is also the principal source of information of a general nature concerning the department. Lost and found items can be reported to the staff in 401 Min H. Kao Building.

Another important component of the staff can be found in the Information Technology (IT) group. The EECS IT staff are in the Min H. Kao Building, Suite 423. They make sure that all the laboratory and computer equipment is in working order, oversee use of the small machine shop in which students can build up the hardware needed for class projects, and operate a parts store from which you can purchase most of the electronic components needed for project assignments.

# Graduate Student Duties/Responsibilities

## General Duties/Responsibilities

Graduate students are expected to be aware of and satisfy all regulations governing their work and study at the university. See the [graduate catalog](#) for general degree requirements, [Hilltopics](#) for campus policies and procedures, student code of conduct and more, and the [Graduate School webpage](#) for general

student life information including your rights and obligations, information on theses/dissertations, steps to graduation incl. deadlines, and forms needed along the way.

**When in doubt about policies, students should confer with the mentioned resources, then their major advisor. Only if he/she does not know the answer should they contact the Director of Graduate Studies (see Graduate Program Administration). DO NOT USE THE DGS AS YOUR FIRST RESOURCE.**

All graduate students are expected to work diligently toward their degree. Not doing so may lead to termination from the program. This includes satisfying university and departmental requirements in a timely fashion. All graduate students are also expected to attend departmental functions when invited such as department seminars, guest speaker events, and the awards banquet.

Graduate Teaching Assistants (GTAs) report to the instructor of the course to which they have been assigned. Graduate Research Assistants (GRAs) report to the principal investigator(s) (PIs) of the project(s) on which they work. Typically, that is also their major advisor.

GTAs and GRAs are expected to carry out the tasks assigned to them in a thorough and timely manner while making satisfactory academic progress toward their degree. Not doing so may lead to loss of assistantship as well as any fellowship they might hold. Being a GTA/GRA is a privilege, not an entitlement.

## Satisfactory Academic Progress

MS students are expected to graduate within 6 calendar years of enrollment. They must sign up for and successfully pass one or more courses each fall and spring semester with summer being optional. MS students must maintain a cumulative GPA of 3.0 or better. Failure to do so results in academic probation.

PhD students are expected to graduate within 8 calendar years of enrollment. They must sign up for and successfully pass one or more courses each fall and spring semester with summer being optional until they start taking 600 credit hours (dissertation research). They must pass their comprehensive exam (aka research proposal) within 5 calendar years of enrollment. CS PhD students are expected to pass their core courses with a grade of B or better within their first year of enrollment. ECE PhD students are expected to pass their qualifier exam within their first year of enrollment. PhD students must maintain a cumulative GPA of 3.0 or better. Failure to do so results in academic probation. Furthermore, PhD students who receive No Progress (NP) grades for two consecutive semesters of 600 are subject to dismissal from the program.

GTAs and GRAs are expected to be enrolled as full-time students during the academic year. For a 10-hour appointment, that means taking 9 hours or more each semester. For a 20-hour appointment, it means taking 6 hours or more each semester. GTAs and GRAs who fail to make progress toward their degree or go on academic probation may have their assistantship terminated.

Graduate students are expected to meet regularly with their advisors. The advisor will provide feedback on academic progress and performance in an annual evaluation meeting.



## Computer Accounts

University account: In some courses, you may be specifically directed to use one of the many computer systems available for student use on campus. Students can obtain their own personal account, which will remain in effect while the student is registered at the University. To register for an account, you need to contact OIT (Office of Information Technology).

EECS account: EECS computing resources are restricted to departmental faculty, staff and students. EECS computer accounts should not be confused with university computer accounts. For most students, the EECS account is created from class enrollment data. Accordingly, account information may be distributed during class at the beginning of your first semester. Otherwise, students should see EECS IT Support in 423 Min H. Kao to obtain an account.

## Things to Do Your First Semester

- a. Obtain a UT email account. This account will be how you receive information from the university and the department.
- b. Acquaint yourself with departmental requirements and course sequencing and learn how to register for courses using One Stop Express Student Services.
- c. Read the Graduate School publications including the Graduate Catalog's introductions to the Graduate School and EECS procedures and requirement.
- d. **Obtain a academic advisor**: Your default departmental advisor is the Director of Graduate Studies. GRAs should (in most cases) switch to the person sponsoring them. All other graduate students should find an advisor on their own. For those doing an MS project or thesis or a PhD, this will be their research advisor. For those doing an MS course-only, this should be one of their course instructors. Let the Administrative Assistant (see Graduate Program Administration) know who the advisor is.

## Optional Career Services Support

Students can register with the [Center for Career Development](#) for all things career-related. The center provides career counseling, interviewing and resume advice, and updated information on career fairs and workshops. By registering with the HIRE-A-VOL system, students gain access to job postings and other employment opportunities that include full/part time positions and internships. Students are encouraged to use Career Services and the many features they offer.

# Admission Requirements and Application Procedures

## [The Graduate School - The University of Tennessee](#)

The following are the general requirements for admission to the Graduate School at the University of Tennessee, Knoxville. Many programs also require departmental applications and have additional departmental requirements. Please contact your department directly for the specific program requirements.

*1. Applicants must have obtained a bachelor's degree from a college or university accredited by the appropriate regional accrediting agency. A non-U.S. degree must be equivalent to a bachelor's degree from the United States and must be accredited by its regional or national accreditation agency.*

*2. United States degree holders must have earned a minimum of 2.7 out of a possible 4.0 GPA or a minimum of 3.0 during the senior year of undergraduate study. If you have completed previous graduate coursework, you must have earned a minimum of 3.0 out of a possible 4.0 GPA.*

*3. Applicants with non-U.S. degrees must have earned a minimum of 3.0 on a 4.0 scale or other equivalent to a 'B' average. If you have completed previous graduate coursework, you must have earned a minimum of 3.3 out of a possible 4.0 GPA or other equivalent to a 'B+' average.*

*4. Applicants may require [standardized test scores](#), depending upon their program requirements. Applicants whose native language is not English must submit [TOEFL](#) or [IELTS](#) test scores in order to be fully admitted. See below for more information on standardized testing.*

Admission is handled by the Office of Graduate Admissions. For additional information, refer to the statement on Admission Requirements and Application Procedures in the [Graduate Catalog](#).

## GRE

Applicants are not required to take the GRE but may do so if they want to show their academic prowess. There is no minimum score requirement, but the quantitative score should be greater than 158 to be competitive. Scores should be sent to the University of Tennessee, Knoxville using institution code 1843.

## English-Proficiency

Non-native speakers of English are required to take either the TOEFL (Test of English as a Foreign Language) or the International English Language Testing System (IELTS). Find out how to register for the [TOEFL](#) or the [IELTS](#).

To be admitted, applicants must score 80 or better on the internet-based TOEFL (iBT) or 6.5 on the IELTS. Applicants may be eligible for [English Proficiency Conditional Admission](#). To become a GTA, applicants must score 100 or better on the TOEFL or 7.0 on the IELTS.

Scores should be sent to the University of Tennessee, Knoxville. For the TOEFL, use institution code 1843. For the IELTS, use the following mailing address: UT Office of Graduate Admissions, 201 Student Services Bldg., Knoxville, TN 37996-0221.

## Admission Policies and Application Procedures

Anyone with a BS degree from a regionally accredited institution or foreign equivalent who wishes to take courses for graduate credit, whether or not the person desires to become a candidate for a degree, must submit a formal online application for admission to graduate study or apply for transient status. No action is taken until a file is complete. An applicant will be notified once action has been taken by the department/program and the Office of Graduate Admissions. Applicants should check their status online.

To apply for admission, the following materials must be submitted to Graduate Admissions through the on-line application submission process:

- 1. The completed online Graduate Application for Admission (<http://graduateadmissions.utk.edu/>).*
- 2. A non-refundable application fee - paid by credit card or electronic check. (U.S. citizens can request a waiver of this fee by submitting a request to the Graduate Admissions Chair).*
- 3. One unofficial transcript from all colleges and universities attended submitted on-line at the time of application to the Graduate School. An unofficial transcript or university record is defined as a scanned version of the transcript or university record that would be sent by mail as an official transcript. The document must contain the institution name, course names, grade information, terms of attendance and any academic notations. Transcripts or academic records uploaded from the institution's student information system portal will not be accepted. Transcripts or university records that are not in the English language must be submitted in both the original language and a certified English translation.*
- 4. The submission of official transcripts, degree certificates, and English translations to the Graduate Admissions Office is required following the offer of admission. In order for transcripts to be considered official, they must be sent directly from the institution. The Graduate School will reserve the right to revoke admission to a student if any unofficial or official documents are found to be fraudulent following review and comparison. Registration is prohibited after the first semester of enrollment until students have*

*submitted the official copy of transcripts, including any degree certificates or degree confirmations, from all institutions previously attended.*

*5. Official scores from Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) if native language is not English (refer to section on English Certification).*

Additional departmental/program requirements may include but are not limited to:

1. Departmental application.
2. Reference letters or rating forms.
3. Statement of interest

To register for the IELTS, contact IELTS at <http://www.ielts.org>.

To register for the GRE and TOEFL, contact

Educational Testing Service  
Princeton, New Jersey 08450  
<http://www.ets.org>

The ETS UT code is 1843. Test results reach the university in approximately three weeks.

All documents submitted become the property of the university and will not be returned. For international graduate student application procedures, see Admission of International Students.

# Financial Support

## General Statements

Graduate assistantships are the primary source of funding for graduate students and are offered by EECS as well as other departments and administrative offices of the university. An assistantship is a financial award to a graduate student for part-time work in teaching, administration, or research while pursuing an advanced degree. Appointments are normally on a one-fourth (10 hours/week aka quarter-time) to one-half (20 hours/week aka half-time) basis. The stipend is payable in twelve monthly installments. In addition to the stipend, Graduate Teaching Assistants (GTA), Graduate Teaching Associates (GTAssoc), Graduate Assistants (GA), and Graduate Research Assistants (GRA), with appointments on a one-fourth time basis or higher, are entitled to a waiver of fees and tuition for the period of appointment in accordance with university policy. These appointments also include a benefit of health insurance for the student.

GTAs are hired by the department. Students who have been admitted to or are currently enrolled in one of the EECS graduate programs may apply using a [student self-nomination form](#). Having a faculty member (be that a course instructor or the major advisor) also submit a nomination is recommended.

GRAs are hired by the faculty. Interested students need to reach out to faculty who work in their area(s) of interest and expertise.

While there is no central point of contact for information on GA positions in administrative offices around the university, some positions are filled periodically in college advising centers, admission offices, residence halls, and other service offices.

Fellowships: Fellowships are awards that may or may not require service. Most fellowships are awarded on the basis of academic merit and potential for scholarship.

Other employment: Domestic students can work on-campus and off-campus. International students need to check with CGE on the possibility of them pursuing employment. Students with a graduate assistantship are limited to a total of 20 hours/week for all types of employment during the academic year.

## Graduate Teaching Assistant (GTA)

A graduate teaching assistantship pays tuition, fees, health insurance and a monthly stipend. A Bachelor or Master of Science in Computer Engineering, Computer Science or Electrical Engineering with at least a 3.0 GPA average is required. These are highly competitive positions of responsibility, with office space and facilities provided accordingly. The department awards approximately 65 graduate teaching assistantships each year. The majority of these are quarter-time positions with a limited number being half-time. Some quarter-time GTAs are also quarter-time GRAs (Graduate Research Assistants). Some GTAs help with the laboratories associated with undergraduate courses in Computer Engineering, Computer Science or Electrical Engineering. Some assist instructors in grading homework and other assignments. Many also host office hours. GTAs should take course loads as prescribed under “Policy for the Administration of Graduate Assistantships” in the Graduate catalog and engage only in the assistantship and their degree program. Students should find a graduate advisor to act as a sponsor for their application to be a GTA. Applications are solicited twice a year. The EECS webpage has a [self-nomination link](#).

The Graduate School requires the ACTFL OPIc Test for GTAs whose first language is not English. Students who score less than “Advanced High” (AH) should retake the test every semester until the score is AH or better. Students with scores lower than AH may have their GTA revoked and/or their activities regulated based on the test results. For complete details see “Policy for the Administration of Graduate Assistantships” in the Graduate School section of the Graduate Catalog. See the [International Teaching Assistant \(ITA\) Testing Program](#) webpage for further information regarding testing dates/locations and other frequently asked questions. Non-native English-speaking students must score 100 or better on the TOEFL and 7.0 on the IELTS.

## Graduate Research Assistant (GRA)

A graduate research assistantship pays tuition, all fees, health insurance and a monthly stipend. At present, there are approximately 100 GRAs in the EECS Department. A GRA is paid through the University by a sponsor (government agency or company) to do research on a project. GRAs are chosen by the faculty principal investigator as positions become available. They are generally quarter-time or half-time appointments with paid tuition, fees, and health insurance plus a monthly stipend appropriate to the student's level and the research project. Being a GRA is especially useful for PhD students since the involved research usually provides an excellent dissertation topic and computer and laboratory facilities to conduct the research. Students should contact faculty who have similar research interests to inquire about the availability of being sponsored by a GRA.

## General Guidelines for Assistantships

Note that among the procedures and regulations of the Graduate School are some regarding assistantships. For example, the Graduate School requires that the course load of a half-time GTA or GRA be 6 to 11 hours at a minimum. The Graduate School limits the time for holding an assistantship to 3 years for a MS student and 5 years for a PhD student. The Graduate School requires the ACTFL OPIc Test for GTAs whose first language is not English, and regulates their activities based on the results. For complete details see "Policy for the Administration of Graduate Assistantships" in the Graduate Catalog.

## EECS Fellowships

The Bodenheimer Fellowship provides \$10,000 per year per person to select MS and/or PhD students in EECS. Normally combined with a GTA or a GRA position the total value is more than \$30,000. The Bodenheimer Fellowship fund was established by alumnus Michael Crabtree in honor of Professor Robert E. Bodenheimer who taught in the department for almost forty years prior to his retirement.

The Min Kao Fellowship provides \$7,200 per year per person and a tuition waiver to six superior EECS graduate students. This fellowship was established after UTK EECS alumnus Dr. Min Kao, CEO of Garmin International, Inc., donated \$5 million to the department to establish fellowships, scholarships, and professorships. The Min Kao Fellowship is combined with a GRA position to provide students with funding of at least \$25,000/year.

The Ron Nutt Family Fellowship provides funding to qualified students interested in studying medical imaging. This fellowship provides \$16,000 per year per person for up to three years and is renewed on an annual basis. The Ron Nutt Family Fellowship is combined with a GTA or a GRA position bringing the total value to more than \$35,000. Dr. Nutt is an alumnus of the department and a founder of what now is known as Siemens Molecular Imaging.

The Tickle College of Engineering Fellowship provides \$5,000 per year per person to several students in the college. These are highly competitive fellowships, but a few EECS students receive these each year. Students should find a faculty sponsor to nominate them for one of these fellowships.

Other fellowships include the Dr. Vaughn Blalock Graduate Memorial Award, the Chancellor's Honors Award, the National Science Foundation (NSF) Award, the University of Tennessee, Graduate Fellowship Award and the Department Excellence Awards.

## Graduate Assistantship - System and Network Administrator

EECS has a sizable IT staff managing lab equipment, handling the UNIX system administration and other matters. Usually, two graduate assistants are doing system admin work. Students who have good UNIX system/network admin skills can inquire about the availability of these positions. The Office of Innovative Technologies (OIT) has a variety of systems and network groups, many of which have GA positions. Obtaining a position with OIT requires interviews.

## Other Financial Support

<http://gradschool.utk.edu/graduate-student-life/costs-funding/>

Other forms of support besides departmental assistantships include fellowships outside the department, jobs on and off campus and loans. EECS students have often found jobs at the High Performance & Scientific Computing group under OIT, Tickle College of Engineering Fundamentals (EF), as well as other academic departments (such as Biology, the Engineering Fundamentals Division, Psychology, Human Ecology and the Veterinary School) who need students with skills in electrical engineering, computer engineering, or computer science in their research. The Graduate School has competitively awarded travel grants which provide partial reimbursement of expenses for graduate students to make scholarly presentations at professional meetings. Application deadlines for each term are in the preceding term. Sometimes research contracts are also able to help fund graduate research assistant's travel to professional meetings. Students should work with their faculty advisor to write and submit papers for conferences. Most of the faculty will try to send students to domestic conferences if research contracts have sufficient funding.

The Graduate School identifies sources of support in its annual publication, "GradSources." For computer science and engineering, the National Science Foundation, the U.S. Department of Energy, and the U.S. Department of Defense are particularly good sources. Notices of financial aid received by the department are posted for you on the various bulletin boards in Min H. Kao and posted on the department web page.

Most importantly, you should be active and early in pursuing the many sources of support that are open.

# Research Activities

The electrical engineering, computer engineering, and computer science graduate programs contain considerable research for the purpose of providing a genuine experience in real frontier research in the area of the student's interest. The EECS Department has more than \$20 million worth of research contracts, making it very active in research and one of the highest funded at UTK. Graduate students should realize that the foremost reason for having this research is for their experience. Matching students to research is done carefully to meet our responsibilities to both the student and the sponsoring agency, who expects completely professional results. You should invest some time, early in your program, in talking with faculty and other graduate students about their research. In some cases, they will have publications or seminars from which you can learn. To become part of a research project you generally must be hired by the faculty member who is the Principal Investigator on that project. Openings occur throughout the year as projects start or students leave them.

## Responsible Conduct of Research

The University of Tennessee, Knoxville, takes its obligation to implement and support best practices in research seriously. The University of Tennessee's Office of Research provides guidance and support for the implementation of training for Responsible Conduct of Research (RCR). In response to Section 7009 of the *America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science (COMPETES) Act* (42 U.S.C. 1862o-1) this RCR Institutional Plan has been developed to provide appropriate training and oversight in the responsible and ethical conduct of research.

Responsible and ethical conduct of research is critical for excellence, as well as public trust, in science and engineering. Consequently, education in RCR is considered essential in the preparation of future scientists and engineers. All EECS graduate students are required to complete RCR online training. Information on guidelines and requirements, training programs, forms, contact information and additional resources for this program can be obtained through the Office of Research (<http://research.utk.edu/compliance/rcr-institutional-plan/>).

# Registration and Advising

## Registration for Classes Each Term

To register for classes each term, you will want to see the "Timetable of Classes". This Timetable covers all undergraduate and graduate procedures and classes. It gives detailed instruction on how to register



for each situation you might be in, as well as the times and locations of all classes. The normal procedure is to select classes via Web. These steps must be done well in advance, and if you are too late you may not be able to select the courses that you prefer to take or incur additional fees.

Caution: Be sure to register for each course for graduate credit, even if it has an undergraduate number. Only in this way can you count the course toward a graduate degree. Courses that might be in this category include some math courses or a few senior-level EECS courses. When 4xx courses are co-taught with 5xx courses, always, sign up for the 5xx course.

## Part-Time Students

It is practical to earn an MS degree as a part-time student if the student already has an acceptable BS in Computer Engineering, Computer Science or Electrical Engineering. Pay close attention to the 6 year time limit mentioned above.

It is usually not practical to pursue a PhD as a part-time student, except perhaps for some coursework in the early stages. The part-time status is not generally compatible with the level of commitment and intensity of the program, especially in the qualifying examination participation, the dissertation research and the Graduate School's residence requirement. However, anyone who is working at a research institution and highly qualified and motivated for the PhD can nonetheless explore doing it with faculty in this department. A minimum recommendation is that his/her employer share the motivation and provide one of the letters of recommendation in support of the student's application.

# Academic Requirements

## MS Students

MS students must accumulate a minimum of 30 credit hours. They have three options: course-only, project or thesis. Course-only students take 30 course credit hours in consultation with their academic advisor. There is no comprehensive final exam. Project students take 27 course credit hours plus 3 credit hours of 501. All work is done in consultation with their academic advisor. The project culminates with a report and/or a presentation. This work is judged by a committee of three faculty including the academic advisor. Thesis students take 24 course credit hours plus 6 credit hours of 500. All work is done in consultation with their academic advisor. They write a thesis in accordance with university policy and defend their work to a committee of three faculty including the academic advisor.

MS students getting a CS degree must take 3 core courses from the following list: CS530; and CS540, CS561 or CS561; and CS580 or CS581. They must earn a grade of C or better in each course. If they earn a grade

of D or F in one of the core courses and another core course option exists, they may take that course to fulfill the requirement. Alternatively, graduate students may, in consultation with their advisor, repeat up to two courses in which they earn a grade of D or F. There is no option to repeat courses in which a student earns a higher grade.

## Online MS Students

The online MS in computer science offers a 30 credit hour course-only option. Students choose between three concentrations: cybersecurity, data mining and intelligent systems, and software engineering. See the [Online MS webpage](#) for program details.

## PhD Students

PhD students who start with a BS must accumulate a minimum of 39 course credit hours, a minimum of 24 dissertation credit hours, and a combined minimum total of 72 credit hours. The unspecified 9 credit hours and course credit, dissertation credit, or a combination thereof. All work is done in consultation with their academic advisor. They write a dissertation in accordance with university policy and defend their work to a committee of four faculty including the academic advisor and one external member.

PhD students who start with an MS must accumulate a minimum of 24 course credit hours, a minimum of 24 dissertation credit hours, and a combined minimum total of 48 credit hours. Students who enter with an MS from EECS may follow the above credit hour requirements for students starting with BS meaning they need must accumulate a minimum of 15 course credit hours, a minimum of 24 dissertation credit hours, and a combined minimum total of 48 credit hours. All work is done in consultation with their academic advisor. They write a dissertation in accordance with university policy and defend their work to a committee of four faculty including the academic advisor and one external member.

PhD students getting a CS degree must take 3 core courses from the following list: CS530; and CS540, CS561 or CS561; and CS580 or CS581. They must earn a grade of B or better in each course. If they earn a grade below a B in one of the core courses and another core course option exists, they may take that course to fulfill the requirement. Alternatively, graduate students may, in consultation with their advisor, repeat up to two courses in which they earn a grade of D or F. There is no option to repeat courses in which a student earns a higher grade. If retaking the course or taking another core course is not possible, the grade stands, and the student will not be able to graduate.

PhD students getting a Computer Engineering or an Electrical Engineering degree must pass a qualifier exam which entails writing and defending a critical literature survey to a committee of three faculty members. The academic advisor does not serve on this committee which furthermore is unrelated to the dissertation committee. Students are expected to attempt their qualifying exam within their first year of

enrollment. A second and final attempt is allowed within two years of entering the PhD program. See <https://www.eecs.utk.edu/graduate/phd-qualifying-exam/> for details.

## Admission to Candidacy

MS students must file for admission to candidacy no later than the semester before the one they intend to graduate. Note that the course-only form is different from the project and thesis form.

PhD students typically file for admission to candidacy when they have defended their research proposal. This is officially known as the comprehensive exam.

## Grievance and Appeals Processes

Graduate students should always try to resolve grievances with their academic advisor, supervisor, or instructor as the case may be. When this is not feasible, they should contact the Director of Graduate Studies who will get the Department Head involved if need be.

# PhD Internships

## General Requirements

Domestic students may work off-campus at will and can thus do paid internships with companies of their choice. International students must obtain CPT approval from CGE to work off campus.

Students who have stated taking 600-credit hours can apply for an exemption if their internship is not related to their dissertation research (doesn't produce data or publications).

## Assistantships and Fellowships

GTAs must relinquish their position to do an internship during the academic year. There are no restrictions on the summer term. GRAs must relinquish their position to do internships during any term including summer. Assistantships cannot be combined with an internship.

Fellowships cannot be maintained while doing an internship.

# Appendix

The following web links point to on-line resources including applications and forms.

- a. International students
  - a. Center for Global Engagement ([cge.utk.edu](http://cge.utk.edu))
  - b. International House ([ihouse.utk.edu](http://ihouse.utk.edu))
  - c. ITA Testing Program ([tiny.utk.edu/ita-testing](http://tiny.utk.edu/ita-testing))
- b. Professional development & training
  - a. Office of Graduate Training and Mentoring ([gradschool.utk.edu/training-and-mentorship](http://gradschool.utk.edu/training-and-mentorship))
  - b. Best Practices in Teaching Program ([tiny.utk.edu/bpit](http://tiny.utk.edu/bpit))
  - c. UT Libraries Information for Graduate Students ([libguides.utk.edu/graduate](http://libguides.utk.edu/graduate))
  - d. Center for Career Development ([career.utk.edu](http://career.utk.edu))
  - e. Tennessee Teaching and Learning Center ([tenntlc.utk.edu](http://tenntlc.utk.edu))
  - f. Experience Learning ([experiencelearning.utk.edu](http://experiencelearning.utk.edu))
- c. Funding
  - a. Costs and funding opportunities ([tiny.utk.edu/grad-funding](http://tiny.utk.edu/grad-funding))
  - b. Graduate Student Senate Travel Awards ([gss.utk.edu/travel-awards](http://gss.utk.edu/travel-awards))
  - c. Financial Aid and Scholarships ([onestop.utk.edu/financial-aid](http://onestop.utk.edu/financial-aid))
- d. Student resources
  - a. Counseling Center ([counselingcenter.utk.edu](http://counselingcenter.utk.edu))
  - b. Department of Electrical Engineering & Computer Science ([www.eecs.utk.edu](http://www.eecs.utk.edu))
  - c. Graduate School ([gradschool.utk.edu](http://gradschool.utk.edu))
  - d. Graduation Deadlines ([tiny.utk.edu/grad-deadlines](http://tiny.utk.edu/grad-deadlines))
  - e. Graduate School Forms ([gradschool.utk.edu/forms-central](http://gradschool.utk.edu/forms-central))
  - f. Graduate Catalog ([tiny.utk.edu/grad-catalog](http://tiny.utk.edu/grad-catalog))
  - g. Student obligations and appeals process ([tiny.utk.edu/rights-obligations](http://tiny.utk.edu/rights-obligations))
  - h. Graduate Student Senate ([gss.utk.edu](http://gss.utk.edu))
  - i. Office of Graduate Admissions ([gradschool.utk.edu/admissions](http://gradschool.utk.edu/admissions))

- j. Student Conduct and Community Standards ([studentconduct.utk.edu](http://studentconduct.utk.edu))
- k. Office of Equity and Diversity ([oed.utk.edu](http://oed.utk.edu))
- l. Sexual Misconduct, Relationship Violence, and Stalking ([sexualassault.utk.edu](http://sexualassault.utk.edu))
- m. Office of Multicultural Student Life ([multicultural.utk.edu](http://multicultural.utk.edu))
- n. Office of Research Integrity ([research.utk.edu/compliance](http://research.utk.edu/compliance))
- o. Tickle College of Engineering ([www.engr.utk.edu](http://www.engr.utk.edu))
- p. Thesis/Dissertation Consultant ([gradschool.utk.edu/thesis](http://gradschool.utk.edu/thesis))