Graduate Program
Electrical Engineering Doctoral Program:
Examinations and Procedures
Approved August 8, 2002

1.0 Introduction

1.1 Purpose of Document

This document is intended for students who are considering the pursuit of a doctoral degree in Electrical Engineering. It states specific requirements and procedures associated with entry into and progress through the program. It is noted that these procedures are written for the "typical" student. Students with unusual circumstances should consult the graduate adviser regarding appropriate procedures. A summary of the various forms required before completion are given in Appendix A. Appendix B contains a flow chart of the procedure.

1.2 Terminology

It is important to take note of several important terms related to the classification of students at various points during the pursuit of a doctoral degree.

Students with Permission to Continue Beyond Masters: This is an official category of the UTA graduate school. Students who have passed 30 hours of graduate level course work and have not yet achieved the official status of Approval to Continue in the Doctoral Program (see next term) must apply for this status. This represents a transition from the Masters to the Doctoral Program after the MSEE is completed. See a list of forms in Appendix A.

Students with Approval to Continue in the Doctoral Program: An official category of the UTA graduate school that is applied to those students who have passed the Doctoral Diagnostic Examination. (This status can be attained during completion of the MSEE.) Only students in the Doctoral program may enroll in EE 6x99 - Dissertation.

Doctoral Candidate: An official category of the UTA graduate school. A student is not classified as a doctoral candidate until the student has 1) passed the Doctoral Comprehensive Examination and 2) submitted an Application for Candidacy and Final Program of Work.

1.3 Responsibility of the Student

It is the student's responsibility to follow the procedures set forth in this document.

1.4 Date of Implementation

All students admitted in or after the Fall of 2002 semester must follow these new procedures. Students admitted prior to the Fall 2002 semester can choose to follow these new guidelines. However, it is emphasized that the last time the oral research potential examination form of the Doctoral Diagnostic Examination will be offered is
at the end of the 2003 spring semester. Thus, all students who originally enrolled prior to the Fall of 2002 and who have not taken and passed the oral test form of the EE Doctoral Diagnostic Examination by the end of the 2003 spring semester must also follow these new procedures.

2.0 Doctoral Diagnostic Examination

For the new graduate student with the ultimate goal of earning the doctoral degree, the Diagnostic Examination procedure can and should be initiated during the time of completing requirements for the MSEE. The courses to be used in the Technical Proficiency requirement can be applied in any MSEE Program of Work.

A graduate student interested in pursuing a doctorate first aims at achieving the "Approval to Continue in Doctoral Program" status. To achieve this status, the Doctoral Diagnostic Examination must be passed. In order to pass this examination, four requirements must be met: 1) a Technical Proficiency requirement, 2) a dissertation adviser requirement, 3) a Diagnostic Examination requirement, and 4) a final certification requirement.

It should be recognized that students may or may not be classified in the "Permission to Continue Beyond a Masters" while pursuing "Approval to Continue in the Doctoral Program" status. "Permission to Continue Beyond a Masters" is a classification for students who have completed 30 hours of graduate work and who wish to continue studies, but have not yet achieved (or are not pursuing) the status of "Approval to Continue in the Doctoral Program.

Note that there are certain dependencies associated with the requirements noted above. Students are encouraged to begin the process of identifying a faculty member willing to serve as a dissertation adviser as early as possible (even prior to admission).

Procedures associated with each of these requirements and their further specification is contained within the separate sections that follow.

2.1 Dissertation Adviser Requirement

It is the student's responsibility to identify, a faculty member willing to serve as the student's dissertation adviser. Students are encouraged to contact faculty members who might serve as dissertation adviser to discuss their technical interests and career objectives as well as to convey their qualifications.

2.2 Diagnostic Examination Requirement

It is required that each student demonstrates the ability to pursue a Ph.D. Toward this end, a written Diagnostic Examination must be taken and passed before continuing in the program.

The Diagnostic Examination must be taken within the first 19 credit hours of course work toward the Ph.D. or the first long semester that follows completing 18 credit hours. A student not passing the Diagnostic Examination must retake it the next full semester, or the next full semester after completing 18 credit hours. He is permitted
to take the examination a total of two times. A student not having attempted the Diagnostic Examination by this time will have been deemed to have taken the exam and failed. In such a case he would be allowed to take the exam once and then during his next full semester. Ordinarily, a student will complete two full semesters in which he will have taken the Technical Proficiency courses. The Diagnostic Examination will be based on a subset of the following Technical Proficiency courses:

1. EE 5302
2. EE 5305
3. EE 5306
4. EE 5307
5. EE 5308
6. EE 5340
7. EE 5350
8. EE 5361

These represent one course from each of the technical proficiency areas. A student will choose four of these eight areas on which he will be examined. Successful 1.) completion of the Diagnostic Examination, 2.) having a dissertation adviser will allow him to proceed toward final certification of acceptance.

2.3 Final Certification and Acceptance

Following the Diagnostic Examination, the candidate will be reviewed and classified in one of four possible places.

1. Approval to continue in the doctoral program (i.e., "unconditional pass").

2. Approval to continue with specified remedial work.

3. Failure, but permission for re-evaluation after a specified period.

4. Failure and dismissal from the program.

These are specific categories that must be submitted to the UTA Graduate School.

The dissertation adviser will be responsible for counseling students with regard to the Graduate Studies Committee's decision. For students in the fourth category (failure and dismissal), the dissertation adviser will communicate why this classification is in the best interest of the student. Upon completion of the of the Diagnostic Examination, the candidate may enroll in the dissertation course, (EE 6399, EE 6699, or EE 6999).

3.0 Comprehensive Examination

After having passed the Diagnostic Examination which results in the status "Approval to Continue in Doctoral Program," students will complete course work according to their tentative program of work and begin to identify and enlist faculty members who will serve on the Comprehensive Examination committee. The student will also begin to conduct preliminary research and prepare a dissertation proposal document. The dissertation adviser will guide the student with regard to the format of this
document. The student should also consult with members of the examination committee on specific technical issues and content of their research plan during preparation of the proposal.

The Comprehensive Examination should be taken within the first 37 credit hours of course work in the Doctoral program. A student failing to take the Comprehensive Examination within this period of time will be required to take EE 6397 during which he will prepare for the Comprehensive Examination during that semester. This course will not be allowed as part of the course requirements. However, a student is not required to take EE 6397 if he takes the Comprehensive Examination within the 37 credit hour limit. Ordinarily, the examination will be during the second year of the program. A student will be allowed to take the Comprehensive Examination a maximum of two times, but a repeat must be done no later than during the following long semester. However, the research topic the student chooses for the Comprehensive Examination may be modified during his actual research with approval of the dissertation committee.

When the student and dissertation adviser feel that the dissertation proposal document is in adequate form, the student will schedule the Comprehensive Examination (see form in Appendix A) and distribute a final copy of their dissertation proposal document to members of the Comprehensive Examination committee at least one week prior to the Comprehensive Examination. The student should also complete relevant portions of the Comprehensive Examination Report form and bring this form to the meeting. The evaluation of the student will include the following criteria:

1. Ability to define a problem and propose a realistic plan of study and research
2. Critical literature review and library research
3. Analytical ability
4. Oral presentation
5. Visual presentation of materials
6. Quality of documentation of the presentation
7. Writing ability

The format of the Comprehensive Examination is an oral presentation by the student before the comprehensive examination committee. There are two objectives of this meeting: 1) examination of the student, and 2) the achievement of consensus on the part of the committee and student regarding the adequacy of the research plan. The student will prepare and make a brief presentation of the proposal which will be followed by questioning from the committee members. Questions will likely focus on, but not be restricted to, the student's research proposal. After questioning, the student will be asked to leave and the committee will confer. During this conference, an assessment of the student will be made in accordance with the form titled Comprehensive Examination Report (Appendix A). In addition, specific modifications to the research plan will be determined.

The committee will complete the Comprehensive Examination Report form. If the student passes the comprehensive examination, an Application for Candidacy and Final Program of Work form (see Appendix A) should be prepared by the student and submitted to the UTA Graduate School by the Graduate Adviser along with the Comprehensive Examination Report.
4.0 Course Requirement

The program of work is expected to include 18 semester hours of graduate level work beyond the master's degree. These courses may include graduate level mathematics, science, or engineering relevant to the student's program, but only with approval of the graduate adviser. The student must maintain a 3.0 GPA in all electrical engineering courses and a 3.0 GPA in all course work applied to the electrical engineering degree. Upon completion of the Comprehensive Examination, the candidate should enroll in the dissertation course, (EE 6399, EE 6699 or EE 6999) continuously until defense of the dissertation. This ordinarily requires at least 30 total semester hours of dissertation credit.

5.0 Dissertation Defense

After having passed the Comprehensive Examination, the student will complete remaining course work according to the Final Program of Work and form a dissertation committee. In most cases, the members of this committee will be the same as those who served on the comprehensive examination committee. However, this is not a requirement. The student will conduct the research according to the approved proposal and under the supervision of his dissertation adviser. The student is encouraged to keep dissertation committee members appraised of progress and problems encountered during this process.

Upon completion of the research, the student will prepare a dissertation document and then schedule a dissertation defense.

The format of the Dissertation Defense is similar to that of the Comprehensive Examination. Dissertation defenses are open to all members of the university community. Typically, non-committee members will be asked to leave at some point to allow for a period of questioning by members of the dissertation committee. After all questioning is concluded, the student will be asked to leave and the Dissertation Committee will confer to determine the outcome of the defense according to possible outcomes delineated on the Dissertation Defense Report form (Appendix A).

Appendix A

List of UTA Graduate School and Department Forms
Used in the EE- Doctoral Program
(Graduate School form unless otherwise noted)
(All forms may be obtained from the EE Advising)

1. Application to Continue Beyond the MasterDegree.
2. Request to take the Doctoral Diagnostic Examination
3. Tentative Program of Work (doctoral students should attach the names of the tentative dissertation committee, with signature of dissertation adviser)
4. Request for Comprehensive Examination
5. Comprehensive Examination Report
6. Application for Candidacy and Final Program of Work
7. Request for Dissertation Defense
Appendix B

1. Admission to Department
2. GPA = 3.5 in 3 TPCs
3. Dissertation Adviser
4. Diagnostic Examination
5. 19 Credit Hours
   - Pass Exam Certification
   - Retake Exam Next Semester 1 Repeat
   - Remaining Courses
6. 37 Total Credit Hours Maximum
   - Comprehensive Exam
   - Research Proposal
   - Pass Exam
   - Change Research Proposal
   - Committee Review
   - Dissertation Defence