GRADUATE STUDIES MANUAL

Department of Electrical Engineering

POLICIES AND PROCEDURES FOR GRADUATE STUDENTS

THE STATE UNIVERSITY OF NEW YORK UNIVERSITY AT BUFFALO

These policies and procedures were adopted by the Faculty of the Department of Electrical Engineering in September 1984 and amended in September 1986, January 1992, January 1995, June 2000, February 2002, August 2003, August 2004, August 2005, January 2008 and July 2016. The Department reserves the right to modify the procedures and requirements described in the manual. Such modifications generally will not be considered as retroactive.

No person, in whatever relationship with the University at Buffalo, the State University of New York, shall be subject to discrimination on the basis of age, creed, color, handicap, national origin, race, religion, sex, marital or veteran status.

Updated July 2022

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1.0 GENERAL INFORMATION

This manual is intended to provide general information to all graduate students and faculty advisors in the Department of Electrical Engineering. It only includes the additional policies and procedures that apply specifically to the EE graduate program. Therefore, students must also refer to the documentation provided by the office of The Graduate School for the policies and procedures that apply to all graduate students.

1.1. EE Graduate Studies Office

Graduate Academic Advisor

The Graduate Academic Advisor assists in all aspects of the admissions process as well as helping students with the academic procedures for obtaining a graduate degree in EE. The advisor may be contacted by email to kbartelo@buffalo.edu, by fax to 1-716-645-3656, or by postal mail to the following address:

Department of Electrical Engineering
230 Davis Hall
University at Buffalo, North Campus
Buffalo, NY 14260

Table 1.1-Additional UB, SEAS and EE Electronic Resources

Title	Publisher	URL address
UB Rules & Regulations	Student Conduct and Advocacy	https://www.buffalo.edu/studentlife/who-we-are/departments/conduct.html
Graduate School Policies and Procedures	The Graduate School	Policy Library - The Graduate School at the University at Buffalo - University at Buffalo
Student Affairs	Student Affairs	https://www.sa.buffalo.edu/contact
SEAS Website	SEAS	https://engineering.buffalo.edu/
UB Website Search	The University at Buffalo	https://www.buffalo.edu/search/search.html
EE Website	EE Graduate Admissions	https://engineering.buffalo.edu/ee/grad/graduate_programs.html
HUB	Office of the Registrar	https://registrar.buffalo.edu/hub/

1.2. INITIAL ADVISEMENT AND REGISTRATION

Graduate study is individual in nature and requires frequent interaction between student, his/her advisor, and other faculty members. To initiate this important process, each Master's student is assigned to the Director of Graduate Studies as a preliminary advisor upon admission. Initial advising by faculty will occur during orientation. The faculty and staff will: (1) work with the student to decide coursework that should be taken during the first year of graduate study; (2) help with any general questions a student may have about the program and opportunities for research; and (3) be of assistance to counsel in non-curricular matters, such as health; housing; resource referrals on matters of English comprehension, speaking, or writing. Each graduate student is required to maintain continuous registration throughout the duration of their graduate program. Students will need to register as an EE Graduate Program registrant at the beginning of each semester or summer period in which the student is taking courses or working on a thesis or dissertation under the supervision of a faculty member. No credit will be allowed for work done without proper prior registration. Deadlines for initial registration and Drop/Add periods can be found on the University's website: https://registrar.buffalo.edu/ .International students registering for the first time should report to the Office of International Student and Scholar Services in 210 Talbert Hall for assistance on housing, visa status, and orientation. All incoming students must attend the department's orientation where they will be introduced to the Director of Graduate Studies as well as be provided with a general overview of the policies and procedures related to graduate studies in EE. This orientation typically is held the week before the beginning of semester classes. At the completion of their orientation, new students will register for their first semester's classes.

Per immigration regulations, international students must maintain full time status during their entire period of graduate study at UB. To maintain full time status as considered by certain outside agencies/organizations such as lending institutions, health insurance carriers, and the U.S. citizenship and Immigration Service, all graduate students must be registered for a minimum of 12 credits hours during each fall and spring semester or a minimum of 9 credit hours if the student holds a teaching, or research assistantship. Master's students are required to register for 12 credits in their first semester, 12 credits in their second semester, and 6 credits in their third semester. Under these circumstances, students will be certified full-time even though they are registered for fewer than 12 Credits (or fewer than 9 credits if they concurrently hold an assistantship). Graduate students should refer to the Graduate School Policies and Procedures for a description of the circumstances that may justify full time status with fewer than 12 credits.

Each student is expected to become thoroughly familiar with the contents of this manual, which is also available on the Department website: www.engineering.buffalo.edu/electrical. If additional information is needed, students should ask a faculty advisor. Questions regarding purely administrative matters should be directed to the Graduate Academic Coordinator.

There are situations when it is necessary for the department to contact graduate students. Students should make sure their current address and phone number is updated in the HUB. Information on how to update records in the HUB can be found at https://registrar.buffalo.edu/hub/ .

2.0 GRADUATE PROGRAMS AND DEGREE REQUIREMENTS

Within the School of Applied Sciences EE currently offers the following graduate programs, Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in electrical engineering. The following program concentrations are available for graduate students within these degree options: Electronics & Photonics, Power & Energy Systems, and Networking & Communications.

While graduate students typically pursue degree options within one of the above technical areas, graduate study, and research programs, by nature, are designed to allow for flexibility to meet student interest. Graduate students, working with their advisor, are responsible for developing the program of study that fits their needs and career goals. For each program, the required courses as well as preapproved elective courses are specified. The required courses ensure that EE graduate students have knowledge in the basic mechanics and mathematics that are the "fundamental language" of electrical engineering.

2.1 MASTERS OF ENGINEERING SCIENCES (M.S) DEGREE

With a concentration in one of the following:

IOT (Internet of Things)
Clean Energy
Quantum Science & Nanotechnology
Nanoelectronics

Thesis-based, designed to provide a fundamental/research-oriented program of advanced study for students wishing to enhance their knowledge and understanding within a specialized discipline, involving an element of original research.

Thesis Option

≥ 18	Formal APC-approved program courses
≤ 6	Informal Courses: Individual Problems
3 - 6	Thesis

Course-based, aimed for those students who wish to develop an advanced understanding of material in their chosen area of specialization, but are not interested in writing a research thesis or project report.

All Course Option

≥ 24	Formal APC-approved courses
≤ 6	Informal Courses: Individual Problems EE616: Technical Synthesis & Communication for Electrical Engineers. (To be taken within 4 semesters of admission)

2.2 MASTERS OF ENGINEERING SCIENCES (M.E.) DEGREE

Project Option

≥ 21	Departmental Focus Area Courses
≤ 6	Informal Courses: Individual Problems 0- 3
3	Project

Graduate students preparing for careers in engineering practice would generally follow the all-course option, while those planning on further graduate education would normally choose the thesis option. For all three options a minimum of 30 credit hours must be completed for the degree.

2.3 Culminating Experience Requirements

Each M.S. program of study includes a culminating experience that can be in the form of EE616: Technical Synthesis & Communication for Electrical Engineers or a 3-6 credit thesis. The all-course option, which requires 30 credit hours of coursework and ePortfolio course, is the recommended path for most M.S. students. However, a student, with the approval of his/her permanent advisor, can choose a thesis as the culminating experience. In these cases, it is the responsibility of the M.S. student to identify a thesis supervisor as well as an approved thesis topic. The coursework, culminating experience, and projected time for each Master's option are shown in Table 2.1 The estimated "time to completion" is based on prior experience.

Table 2.1 Master's Degree Culminating Experiences Options

Option	Minimum credits of approved Course work	Culminating experience	Estimated time to completion
All Course with specified concentration	30	EE616: Technical Synthesis & Communication for Electrical Engineers	18 months
Thesis	24	6 credit M.S. thesis and defense	18-24 months
Project (M.E.)	27	3 credit project and presentation	18 months

The requirements for comprehensive examination, thesis and project are outlined below.

All-course path. Upon completion of 30 credit hours of course work, each student enrolled in the all-course M.S. program must register for and successfully complete EE616: Technical Synthesis & Communication for Electrical Engineers.

M.S. Thesis. The M.S. thesis must be successfully defended before an open audience and the student's M.S. thesis committee. The M.S. thesis committee is chaired by the student's permanent advisor and includes at least one additional faculty member from EE. The student's permanent advisor will help to form the committee. These faculties must also be listed as members of the Graduate Faculty as determined by the Graduate School. Faculty members from other departments also can participate on a student's committee but may not replace the two required departmental representatives except when approved by the Director of Graduate Studies. Prior to the M.S. thesis defense, the student in consultation with the advisor will prepare a draft of the thesis that is sufficiently close to a final version and is deemed "defendable". This process will normally require several iterations. Upon completion, the student must prepare a "reader's copy" of his/her thesis at least 15 working days before the scheduled date of the defense. During these 15+ days, the student's committee members will review the document and decide whether revisions are required or if the defense can take place as scheduled. If revisions are necessary, then additional time will be needed for further review. Once the thesis is ready for defense, general announcements must be posted one week prior to the defense. The defense should consist of an oral presentation open to the public. Following the open session, the defense will continue with the student's thesis committee only. After the defense, the committee will determine whether the student has successfully defended the thesis or whether additional work is required. After successfully completing a thesis defense, the candidate must submit the completed M form and an electronic copy of the thesis to the Graduate School as described at https://www.buffalo.edu/grad/succeed/graduate/electronic-submission.html

M.E. Project. The M.E. project report shall be submitted to the student's project advisor, who has sole responsibility for its review, revision, and acceptance. The project advisor must be a faculty member in the Department and a member of the Graduate Faculty. A second reader of the project M.E. report can also be assigned at the discretion of the project advisor. After acceptance of a final draft of the M.E. project report, the project advisor may request that the student presents his/her project orally to an open audience.

The Graduate School will accept any self-consistent format that follows conventions of a recognized discipline, but some general formatting standards are also expected as outlined in the Guidelines for Electronic Thesis/Dissertation Preparation and Submission booklet. This booklet is available on the Graduate School's website at: https://www.grad.buffalo.edu. Final formatting should be determined in consultation with the student's advisor and committee.

2.4 Advisors for M.S. Thesis Option

All M.S. students opting for thesis as the culminating experience must select, with mutual agreement, a permanent advisor as soon as possible but no later than the end of their second semester of full-time study. Once selected, students are required to consult with their permanent advisor to plan their coursework and research for each remaining semester. The permanent advisor provides guidance and helps direct the student's thesis. The student's M.S. thesis committee is chaired by the student's permanent advisor.

2.5 Important Milestones for Master's Degree

As shown in Table 2.1, Master's students, in consultation with their advisors, are required to meet appropriate milestones as they progress through their programs. The targets shown in Table 2.1 are meant to be general guidelines and it is the responsibility of each student to meet appropriate deadlines.

In addition to the completion of coursework and the culminating experience, students are required to complete the exit survey.

When all requirements for graduation have been completed (course work plus culminating experience), the Master's thesis student must submit a completed M-form to the department. The M-form provides information on the degree option and dates for completion and must be signed by the student's advisor, committee members if appropriate, and the Department's Director of Graduate Studies or the Chair. Upon completion of all requirements, students are required to complete an Exit Survey administered by the School of Engineering and Applied Sciences. Data collected in this survey is used to evaluate program strengths and areas needing improvement, employment benchmarking, and student evaluation of their graduate experiences at UB.

2.6 DOCTOR OF PHILOSOPHY PROGRAM

The Doctor of Philosophy (Ph.D.) program emphasizes research in a specialized area and includes a dissertation that expresses a high level of independent scholarship. The procedures for satisfying the requirements of the Ph.D. degree in the Department of Electrical Engineering are three-fold and are based on successful completion of:

- An approved program of graduate coursework
- All the components of the Ph.D. qualifying examination; and a dissertation proposal
- A dissertation defense and approval of the Ph.D. dissertation.

Students who are admitted into the doctoral program with the M.S. degree, will not receive financial aid if they decide to repeat the M.S. program. In addition, if offered financial aid, they will be eligible for only 42 credit hours of tuition waivers.

2.7 Responsible Conduct of Research (RCR) Training Requirement

In addition to the above listed components, all Ph.D. students are required to document their successful completion of "Responsible Conduct of Research" (RCR) training when they submit their Application to Candidacy (ATC) for their Ph.D. degree. This training requirement is fulfilled by completing the Collaborative Institutional Training Initiative (CITI) Online Program in Responsible Conduct of Research (RCR) with a score of 80% or higher. Please refer to the Graduate School Manual of Policies and Procedures regarding this policy for more information: https://www.grad.buffalo.edu/policies/phd.

2.8 Ph.D. Program Coursework

Course work for the Ph.D. degree should reflect a well-defined area of study and must be approved by the student's Ph.D. committee. The full program of coursework should be formulated by the student and his/her advisor in the first or second semester after admission to the Ph.D. program. The required courses for the M.S. program are also applicable to Ph.D. students for their specific area of study. The Ph.D. program consists of a minimum of 72 credit hours beyond the Bachelor's degree. A maximum of 30 credit hours from a Master's degree can be credited towards the Ph.D. Accordingly, at least 42 credit hours beyond a Master's degree are required for the Ph.D. degree, which will include from 12 to 30 credit hours of dissertation and at least 12

hours of coursework. Ph.D. students will not receive credit for repeating courses taken earlier for the Master's degree at UB or other institutions. Formal approval of a student's program is obtained through filing the Application to Candidacy.
Full-time Ph.D. students are required to register for EE 585 (Fall Semester) and EE 586 (Spring Semester). At least two semesters of Seminar are required for Ph.D. students. Students are expected to attend these seminars.

2.9 Ph.D. Advisory/Examination Committees

Students pursuing a Ph.D. are guided by a committee headed by their EE advisor. This committee has the responsibility of evaluating and approving the student's program of coursework as well as advising the Ph.D. dissertation.
Committees are usually formed by the advisor, although student input is often incorporated for the dissertation advisory committee. Committees must be composed of a primary research advisor who is a faculty member in EE and at least three additional faculty members from the University, three of which are also from EE. All faculty members serving on Ph.D. committees must be members of the University Graduate Faculty. Note that Associate Members of the Graduate Faculty may not serve on Ph.D. committees as one of the three required core committee members but may serve as additional committee members. Also, members from outside the University (e.g., industry representatives) can serve as additional members on Ph.D. committees but not as one of the three required core committee members. Committee memberships are formalized when a student's Application to Candidacy is accepted by the Graduate School.

2.10 Ph.D. Qualifying Examination

Admission to formal candidacy for the Ph.D. degree requires successful completion of the EE Ph.D. qualifying examination. The EE Ph.D. qualifying examination consist of the following.

Final Presentation:

The student presents in front of a committee a research topic selected by the Advisor. The committee is comprised of four (4) EE-faculty members, with the Advisor being one of them. The topic of the PhD qualifying exam should be research oriented, and the presentation should be developed along the following directions:

- The student will orally demonstrate, in a scholarly manner, capabilities of conducting a literature review on the chosen topic, in-depth analysis of state-of-the-art research articles, reproduction of results from the chosen literature, and potential directions of innovation (if any).
- A written report should be also provided to demonstrate the student's writing skills. The report should not exceed five (5) pages, including figures, references, etc.
- The presentation topic may serve as a foundation for future PhD work.
- During the presentation, committee members will ask questions regarding the research topic and fundamental knowledge.
- Presentation duration: 40mins, including questions. After the presentation, committee members vote on a Pass/Fail grade, under the majority rule. In case of failure, the student may petition through the Department Chair for one only re-examination, to be held within six (6) months from the first oral presentation.

<u>The student is not considered a Ph.D. candidate by EE until the student passes the qualifying examination.</u>

2.11 Dissertation and Defense

Upon satisfactory completion of the qualifying examination and acceptance of a Ph.D. research proposal by the major professor, the Ph.D. Dissertation Committee will assume responsibility for directing the dissertation work that will be carried out under the guidance of the candidate's major advisor. The dissertation must represent an original and significant contribution to the state of knowledge in the candidate's area of concentration. The final academic requirement, to be satisfied by a candidate, is the oral Ph.D. defense of his/her dissertation, which includes a public presentation by the candidate, an open session for questioning by the audience and committee members, and a closed session for additional questions by the committee members and any faculty members attending the defense. General announcements for Ph.D. dissertation defenses must be posted one week prior to the defense. All faculty members and graduate students are invited to attend. Passing this examination indicates that the Ph.D. committee is satisfied that the student possesses a true understanding of the material related to and contained in the dissertation. After successfully completing the dissertation defense, the candidate must submit to the Graduate School a digital copy of the dissertation, a copyright and billing form, and the Ph.D. exit survey. A completed and signed M-Form should be submitted to the Graduate Academic Coordinator after the final dissertation has been uploaded to the Graduate School.

The Graduate School will accept any self-consistent format that follows conventions of a recognized discipline, but some general formatting standards are also expected as outlined in the Graduate School's booklet entitled Guidelines for Thesis and Dissertation Preparation and Submission. This booklet is available on the Graduate School's Website at: https://www.grad.buffalo.edu

2.12 Important Milestones during Ph.D. Program

Ph.D. students, in consultation with their advisors, are required to meet appropriate milestones as they progress through their programs. It is the responsibility of each student to meet the timelines appropriate for their situation.

In addition to the completion of coursework and the culminating experience, there are three important forms that must be completed by the student:

- **The Application to Candidacy.**
- **The M-Form (at matriculation) and**
- **The Exit Survey**

When all requirements for the Ph.D. degree have been completed, students must submit a completed M-form to the Department. The M-form provides information on dates for completion of Ph.D. requirements and must be signed by the student's advisor, dissertation committee members, and the Department's Director of Graduate Studies or the Chair. The original signed M- form must be submitted to the Graduate School prior to the published dates for degree conferral. Upon completion of all requirements, students are required to complete an Exit Survey administered by the School of Engineering and Applied Sciences. Data collected in this survey is used to evaluate program strengths and areas needing improvement, employment benchmarking, and student evaluation of their graduate experiences at UB.

3.0 ADDITIONAL POLICIES AND PROCEDURES

3.1 RESIDENCY

M.S. degree programs require a 24 credit-hour residency requirement at UB. Ph.D. degree programs require a minimum residency requirement of the equivalent of two complete academic years of full-time study at UB. This includes two semesters of continuous full-time study not already applied to the Master's degree.
Students must maintain continuous registration until all degree requirements have been fulfilled. If such registration should be impossible, they must secure a leave of absence.

3.2 TRANSFER OF CREDITS TAKEN AT OTHER UNIVERSITIES

A maximum of 6 transfer credits of graduate course work may be applied toward the 30-credit hour requirement for a Master's degree.
Although SEAS policies allow a maximum of 36 transfer credits to be applied toward the 72 minimum credit hour requirement for the Ph.D. degree, EE limits credits taken at other universities to 30 credits (normally from a Master's degree) that can be applied toward the Ph.D. Only courses applicable to the engineering degree are acceptable as transfer credit. EE, in conjunction with the Graduate School, must approve all transfer credits. Only those graduate courses completed with grades of "B" or better are eligible for consideration as transfer credit. However, the grade of the transferred course will not be counted towards the student's grade point average at UB.
Graduate courses taken while registered in another department within SUNY/Buffalo with a grade of "B" or better will be accepted provided it is appropriate to the student's program. Students should consult with their respective advisors and the Director of Graduate Studies for further information.
Note: No credit will be allowed for work done without proper registration. Proper registration is also important for determination of the residence requirement. "Residence" implies the pursuit of advanced study or research while registered at SUNY/Buffalo under the supervision of the Graduate School faculty.

Time Limit for Prior Coursework: The Graduate School sets limits on using preceding coursework more than 10 years old. Coursework, whether transfer or UB credits, more than 10 years old that is to be included in a degree program must be petitioned at the time of the students' admission to the program or at the time the credits are considered by the department. If these credits have been included in an approved extension of time limit petition, they are valid only until the expiration date of that petition. Accordingly, any further extension of an approved time limit for degree completion will require, concurrently, a repetition for approval of these older courses. Requests for approval of courses more than 10 years old must be petitioned through the Graduate School using **Section 1**, **Part G** of the **Graduate Student Petition Form.** Appropriate justification of how the courses relate to the student's program, and how the student has kept current with the subject matter of such courses, must be provided.

3.3 INFORMAL COURSES (Independent Study, Individual Problems)

Informal courses usually include Independent Study and Individual Problems. These are taught on an informal basis by arrangement with an instructor and do not have formal catalog descriptions. Informal courses can be taken by M.S. and Ph.D. students and must be documented for inclusion with the Application to Candidacy. Such documentation must be supplied for each informal course taken and a required short narrative description of the content

covered which includes the signatures of the student and instructor. A copy of this narrative must be included with the student's Application to Candidacy for each such informal course taken for credit. A maximum of 6 credit hours of informal course work may be applied toward the minimum 30 credit hour requirement for the M.S. degree. Excluding those credits applied towards the M.S. degree, a maximum of 6 additional credit hours of informal course work may be applied towards the minimum 72 credit hour requirements for the Ph.D. degree.

3.4 UNDERGRADUATE COURSES FOR GRADUATE CREDIT

A student wishing to use an undergraduate course for graduate credit must submit a petition to the Graduate School prior to registering for the course to receive approval. This petition must include a clear statement from the instructor of the course regarding what additional work will be required of the student to qualify for graduate credit. Copies of these petitions must be included in the Application to Candidacy. Retroactive approval will not be granted. Remedial courses, taken to make up deficiencies in a student's undergraduate background, will not be considered for graduate credit.

Only courses at the 400 level will be considered for graduate credit, and a maximum of two such courses (6 semester hours of credits) may be applied toward a graduate degree. This maximum limit applies to the entire M.S. and Ph.D. programs.

Undergraduate courses that carry 4 or more semester hours of credit will receive a maximum of 3 semester hours of graduate credit.

3.5 INAPPLICABLE CREDITS

Credits for the following courses are not applicable towards the minimum requirements for Master's and Ph.D. degree programs:

- English Language Courses.
- Remedial courses taken to fulfill department admission requirements.

3.6 GRADING POLICY

S grades are assigned to signify adequate progress in Thesis, Project, and Dissertation, since continuous registration is required. All other grades in courses applicable to the degree must be letter grades A, A-, B+, B, B-, C+, C, D, F, and FX (never attended) carrying quality points of 4.0, 3.67, 3.33, 3.0, 2.67, 2.33, 2.0, 1.0, 0 and 0, respectively. Incomplete Grade ("I"): The instructor must assign a letter grade within no more than two additional semesters plus the intervening summer as established by the academic calendar. Students may petition for a 4-month extension of the time limit to complete an "Incomplete". If the course requirements are not completed within this period, or by the previously approved extension date, the "Incomplete" ("I") will automatically default to an "Unsatisfactory" ("U") grade. For all graduate courses, an interim grade of Incomplete (IU) may be assigned if the student has not completed all requirements for the course. An interim grade of Incomplete (IU) shall not be assigned to a student who did not attend the course. The default Unsatisfactory (U) grade shall become the permanent course grade of record if the 'IU' is not changed through formal notice by the instructor upon the student's completion of the course within twelve (12) months after the close of the term for which the 'IU' is assigned.

3.7 REPEATING COURSES

Current UB Graduate School policy on repeating courses states "If a graduate student repeats a course that is normally not "repeatable" ("repeatable" courses include dissertation, research, thesis, project; independent study; directed readings, etc.), only the highest grade earned in the course will be counted toward the degree and used to calculate the grade point average associated with the graduate degree GPA. However, the student's official transcript will record all courses and accompanying grades and all grades attempted will (including repeated courses) be calculated in the cumulative GPA. All resulting grades earned are calculated in the GPA reflected on the student's final official transcript. UB Engineering places the additional stipulation that at most two such repeat attempts can be made for courses other than normally "repeatable" courses. This limit can be met in two different ways, by repeating the same course twice or by repeating two separate courses once each.

3.8 NON-MATRICULATED GRADUATE STUDENT

Students who hold a bachelor's degree are permitted to register for graduate coursework as non-matriculated students for a maximum of 12 credit hours. Admission on a provisional basis as a non-matriculated student must be approved by the Director of Graduate Studies and the Chair of the Department. Once registration reaches twelve hours, a service indicator will be placed on the student's academic record by the Graduate School prohibiting further registration until the student matriculates into a graduate degree program. A Master's student admitted on a provisional basis as a non- matriculated student must demonstrate his or her ability to perform satisfactorily at the graduate level before being admitted to the degree program as a matriculated student. The department will specify the conditions in the letter of admission offering provisional status.

3.9 SCHOLASTIC STANDING

A minimum average of "B" (3.0/4.0) must be maintained during all graduate work. All work taken for graduate credit and applicable towards the degree is used in calculating the grade point average. A student whose average falls between 2.5 and 3.0 at the end of any grading period will be placed on academic probation.

Exclusive of 'S' grade, grades earned in courses counted toward the student's M.S. or Ph.D. program must average a 'B' (3.00) grade point average or better to be in good academic standing in the graduate program.

3.10 ACADEMIC PROBATION

For any of the following conditions for an M.S. or Ph.D. student:

The student receives a grade of 'U', 'F', or 'D' in any course required for completion of a graduate degree program.

- The student's cumulative GPA falls below the minimum of 3.0; or
- The student indicates a lack of ability as determined by the Director of Graduate Studies or the student's academic advisor,

The student will receive an immediate academic review by the Director of Graduate Studies. Upon completion of the academic review, the Director of Graduate Studies may place the student on academic probation or recommend dismissal.

Students placed on academic probation will be issued a probationary letter by the Chair of the Department or the Director of Graduate Studies (with a copy to the student's advisor, if applicable) indicating the conditions that must be met and an appropriate time frame in which to regain good academic standing in the graduate program.

3.11 ACADEMIC DISMISSAL

A graduate student may be dismissed from the program if any of the following conditions apply:

- A grade of "F" is earned in any course that could be applied towards the degree.
- More than two grades are obtained from among "C," "D," and "U" in courses that could be applied to the degree.
- More than four resigned "R" grades are obtained in courses which are towards the degree.
- The conditions of provisional admission have not been satisfied within one semester after admission.
- The student is found guilty of academic dishonesty.
- Probationary status has not been removed after one semester, or within a determined period by the Director of Graduate Studies
- The cumulative grade point average for courses which could be applied tothe degree falls below 2.5 at the end of any grading period.

A student who has been officially dismissed and who seeks reinstatement must submit a formal request for reinstatement, along with a supporting statement of explanation, to the Chair of the Department. The request shall be reviewed according to the Policies and Procedures of the UB Graduate School. The Chair can readmit a student back into the program immediately following dismissal.

3.12 APPLICATION TO CANDIDACY

The Application to Candidacy (ATC) form, available at https://www.grad.buffalo.edu serves as a useful planning document for the student and the student's thesis or dissertation committee, and indicates to the Graduate School the student's intended degree date. Once admitted to candidacy, a student may not need to enroll for 12 credits (9 credits for graduate, teaching and research assistants) to be certified as a full- time student. As such, it is important for the student to prepare and submit their ATC as soon as possible. The timing for the ATC for MS thesis and ME students is after the second or third semester, or immediately following the successful completion of the qualifying examination for Ph.D. students. If the student has not completed all course-work, the ATC includes a summary of courses intended to be applied toward the degree. The following additional points should be noted with regard to the ATC:

i. The ATC must be accompanied with a transcript of all coursework listed on the application, official transcripts to document any transfer credits, and informal course descriptions (for independent study or special topics courses). As well as a plan layout of future credits.

ii. Major revisions that are necessary in the ATC (e.g., significant change in topic or abstract, adding and/or deleting more than two courses, changes in anticipated graduation date, changing major advisor, etc.) must be submitted to the Graduate School for approval by the divisional committee (check on Graduate School website or with the Graduate Studies Coordinator to find appropriate forms https://www.buffalo.edu/grad/succeed/graduate/application-to-candidacy.html

iii. Minor amendments to the ATC that become necessary through changes in registration (e.g., adding or deleting anticipated courses or credits) must be formalized through an amendment petition available on the Graduate School website.

iv. The ATC for the Ph.D. degree must be filed within one year of passing the Ph.D. qualifying examination. Later filings may delay the student's graduation.

v. The ATC must be submitted at least three months prior to the expected degree conferral date.

vi. An approved ATC must be on file before a student may submit a Certification of Full- Time Status Form.

3.13 DEGREE CONFERRAL TIMETABLE

It is the responsibility of the student to submit the proper paperwork on time to both the Department and the Graduate School, as well as to satisfy the general requirements for a degree as specified in the Graduate Student Manual of the Graduate School. Each graduate student must become familiar with these University regulations. The Degree Conferral Timetable for Receipt of Paperwork is summarized online at https://www.buffalo.edu/grad/succeed/graduate/requirements.html

3.14 TIME LIMITS FOR DEGREE

a) M.S. degree - Two years from the first registration date in the graduate program, excluding approved leaves of absence. (For part-time students, the time limit is six years from the first registration date in the graduate program, excluding approved leaves of absence).

b) Ph.D. degree - Seven years from the first registration date in the program, excluding approved leaves of absence.

Requests for extensions of time limits must be petitioned using a Graduate Student Petition Form with departmental approval through the Director of Graduate Studies. The student must

be currently making active progress towards the degree. The petition will be presented to the SEAS divisional committee for approval before being submitted to the Graduate School. The petition must clearly delineate reasons for the extension, present a schedule for progress, and set a deadline for completion of the program. The extension of time limit is normally granted for a maximum period of one year.

3.15 LEAVES OF ABSENCE

Requests for a leave of absence must be approved by the Director of Graduate Studies using a Graduate Student Petition Form. The form must then be forwarded to the Graduate School by the end of the first week of the semester in which the leave is to begin. Therefore, a petition for leave of absence should be filed with the Department prior to the start of the semester in which the leave is to begin. Leaves of absence will normally be granted for only one year at a time.

Leaves of more than one semester require valid justification and documentation from the student and the student's advisor. Examples of valid justification include documented cases of financial hardship, illness, or compulsory military service. A student who leaves the program after completion of some graduate work but has not been given an approved leave of absence must reapply and be readmitted as a new student, according to university regulations. Continued leaves of absence beyond two years will normally not be granted. International students are advised to consult with International Student and Scholar Services, 210 Talbert Hall, North Campus, (716) 645- 2258, prior to applying for a Leave of Absence.

3.16 GRADUATE RESEARCH ASSISTANTSHIP STIPENDS POLICY

Several types of fellowships and assistantships are available. The Graduate School offers the University-wide Presidential Fellowships, while the School of Engineering and Applied Sciences (SEAS) offers the school-wide Graduate Teaching Fellowships. The EE Department administers its own program of financial aid through the Teaching Assistantships (TA) and Research Assistantships (RA).

In addition to the University support, there are Federal, State, and private sources of funds to help with graduate education. All students should complete a Financial Aid Form through the Office of Financial Aid in 232 Capen Hall. Some sources to consider are: National Science Foundation (NSF) Graduate Fellowship Program, and the Office of Naval Research Graduate Fellowship. Please note some funding is only available to domestic students.

The Presidential Fellowships are awarded on a highly selective basis by the Graduate School. Candidates are nominated by the EE Department based on the Undergraduate record, GRE scores in the Verbal, and Quantitative and Analytical parts of the examination, exemplary extracurricular achievements, a strong curriculum vitae, and two strong letters of recommendation from the members of the EE Faculty. These fellowships are normally awarded one year at a time, renewable up to a maximum of four years. Students are required to maintain a GPA of 3.5 or more during the tenure of the fellowship.

The most common form of financial support for incoming students is the Teaching Assistantship. International students must have a TOEFL score of at least 550 on the paper-based version and 213 on the computer-based version in order to be eligible. In addition, international students who are awarded a TA position must pass the SPEAK test during Orientation Week. Full Time Teaching Assistants are expected to spend approximately 20 hours

per week performing their assigned teaching duties. Half Time Teaching Assistance are expected to spend approximately 10 hours a week. Teaching assignments are usually assigned during the first week of each semester.

Teaching Assistantships (TA) are awarded by the Department to qualified graduate students. Since there are usually more full-time graduate students than there are awards of financial aid, the selection is made on a highly competitive basis. Financial aid is awarded for one semester at a time and is subject to renewal for the second semester with a total commitment of not more than one year.

Research Assistantships (RA) are awarded by individual professors who have externally funded research support. The students are expected to perform research duties diligently, while pursuing their degrees. In general, students are expected to be supported on Research Assistantships as they progress towards their M.S. or Ph.D. degrees.

Graduate students who are not registered before the first day of classes are not eligible for financial support, either as Presidential Fellow, Teaching Assistant, or Research Assistant. Students awarded financial aid who have sudden changes of plans in joining the Department or in continuing in the Department should notify the Department a minimum of 15 days before the start of the semester involved. This consideration and timely notification enable the Department to appoint alternate candidates to these positions.

Students must take it upon themselves to apply for financial aid each year. Those interested in Presidential Fellowships must take the GRE examination sufficiently ahead of time, so that test scores are available by the middle of December of the year preceding a Fall acceptance.

3.17 TUITION SCHOLARSHIP POLICIES

The following rules and procedures are applied to tuition scholarship students in the EE Department.

a. A student must be a full-time graduate student, registered for at least 9 credit hours, or has petitioned and has been accepted for full-time status.

b. Scholarship support will be granted only to full-time students who hold the regular appointment of RAs, GAs, TAs, and Presidential Fellows.

c. Tuition scholarships will be granted for Fall and Spring semesters only. No tuition scholarships will be awarded for the summer sessions.

d. Tuition scholarships will be awarded only for the program for which a student has been officially admitted.

In any given semester, any TAP award will reduce the amount of tuition scholarship.

No tuition scholarship allowance will be made for those courses which are not counted towards the degree program.

3.18 ACADEMIC DISHONESTY

Academic integrity is at the heart of all academic pursuits. As published by the University at Buffalo, academic dishonesty includes, but is not limited to, the following:

a) **Previously submitted work**. Submitting academically required material that has been previously submitted – in whole or in substantial part – in another course, without prior and expressed consent of the instructor.

b) **Plagiarism**. Copying or receiving material from any source and submitting that material as one's own, without acknowledging and citing the debts to the source (quotations, paraphrases, basic ideas), or in any other manner representing the work of another as one's own.

c) **Cheating**. Soliciting and/or receiving information from, or providing information to, another student or any other unauthorized source (including electronic sources such as cellular phones and PDAs), with the intent to deceive while completing an examination or individual assignment.

d) **Falsification of academic materials**. Fabricating laboratory materials, notes, reports, or any forms of computer data; forging an instructor's name or initials; resubmitting an examination or assignment for reevaluation which has been altered without the instructor's authorization; or submitting a report, paper, materials, computer data, or examination (or any considerable part thereof) prepared by any person other than the student responsible for the assignment.

e) **Misrepresentation of documents**. Forgery, alteration, or misuse of any University or official document, record, or instrument of identification.

f) **Confidential academic materials**. Procurement, distribution or acceptance of examinations or laboratory results without prior and expressed consent of the instructor.

g) **Selling academic assignments**. No person shall sell or offer for sale to any person enrolled at the University at Buffalo any academic assignment, or any inappropriate assistance in the preparation, research, or writing of any assignment, which the seller knows, or has reason to believe, is intended for submission in fulfillment of any course or academic program requirement.

h) **Purchasing academic assignments**. No person shall purchase an academic assignment intended for submission in fulfillment of any course or academic program requirement.

The University at Buffalo takes its commitment to principles of academic integrity very seriously. All students are encouraged to carefully review the UB policies regarding academic integrity on a regular basis. Policies can be found at: https://grad.buffalo.edu/Academics

As engineers, EE graduate students have special ethical obligations. As per the National Society of Professional Engineers (NSPE) Code of Ethics, "engineers shall avoid deceptive acts" and "shall conduct themselves honorably, responsibly, ethically, and lawfully so as to enhance the honor, reputation, and usefulness of the profession."

3.19 PUBLICATION POLICY

All publications of scholarly work by EE graduate students are subject to the following policy.

i) Any student submitting work for publication conducted while they are a student in the Department must have that work reviewed by their research/academic advisor prior to submittal.

j) Faculty review of papers submitted under this policy should acknowledge faculty review in the Acknowledgment Section of the paper.

k) The department will pursue withdrawal of papers submitted without research/academic advisor review.

This policy is in no way intended to limit student desire for publishing independent work, rather, it is meant to help guide and protect the interests of the student, the department, and the university.

4.0 SUPPLEMENTAL INFORMATION

4.1 Computing Resources Available to EE Graduate Students

Campus-wide computing resources, maintained by University at Buffalo Information Technology (UBIT) Services, are available to all EE graduate students. To access these resources, students are required to activate their UBIT account at Workstations based on UNIX, LINUX and other computing platforms are available at several campus computing laboratories. Information regarding available UBIT resources is available at https://www.ubit.buffalo.edu

SEAS also maintains extensive computing facilities for the support of academic and research activities. After receiving a UBIT account, a SEAS account can be obtained by applying at the SEAS computer facility at 101 Bell Hall, or online at the Science and Engineering Node Services (SENS) website at https://www.sens.buffalo.edu/accounts

In addition to the above-mentioned resources, EE maintains laboratories in 213 Furnas Hall with personal computers based on the MS-Windows operating system. Students generally access these machines using their UBIT username.

4.2 Research Centers and Laboratories

The Department is home to several well-equipped research centers and state-of-the- art laboratories that graduate students often use in their research. Descriptions of the various research centers and laboratory facilities within EE can be found at https://engineering.buffalo.edu/electrical/research/research_facilities.html

4.3 Student Clubs

The UB Student Association is home to over 130 clubs. Graduate students who wish to join professional student clubs can find more information at https://gsa.buffalo.edu/

4.4 Safety

Safety precautions should be always followed. When in the laboratories, all students must follow all safety rules and procedures. The student should become familiar with all relevant safety requirements and procedures before using any laboratory equipment. All students must

complete the EH &S Safety Training before they will be allowed to work in a laboratory. EH &S often offers training for the department in the fall or students may sign up for the regularly scheduled training at https://www.buffalo.edu/facilities/ehs/lab-safety/lab-safety-training.html

Information on these training modules will be provided at orientation meetings at the beginning of the school year. In case of an emergency, contact University Police at 6452222.

4.5 Keys / Card Access

Permission to obtain office and laboratory keys or swipe card access must be granted by the Department. Keys may be obtained from the EE technical supervisor once permission is approved. Offices and laboratories should always be locked at night and/or whenever they are unoccupied.

4.6 Offices and Desks Office and desk space

When available space is assigned to full-time students by the EE technical supervisor.
Desk space is provided to students with a graduate, teaching, or research assistantship only.
It may not be possible for every student to be assigned desk space.

4.7 Mail, Telephones and Copying

Students with an office space may receive mail in in 230 Davis Hall. Outgoing mail can be deposited in the department office. Students should have all personal mail sent to their local residences rather than to the University address.

There is one main copier for department use, in the department office at 230 Davis Hall. This copier may be used only by graduate students copying material associated with a research project or with a teaching assignment. The amount of copying done on these copiers should generally be limited to less than 50 copies. Large copy volumes should be taken to the University copy service in Jacobs Hall (Quick Copy Center). For students on research projects, an account to use a copier in the Science and Engineering Library (SEL) also can be arranged through the research project director. Any personal copying, including copying of notes, homework/examination solutions, journal articles, and thesis drafts is not permitted on department copiers. Public copy machines are in the libraries and in Great Lakes Graphics in the UB Commons.

4.8 Use of University Letterhead

University letterhead paper should not be used unless the letter is for official University business and the student's advisor has approved its use.

4.9 Faculty and Staff Contacts

Contacts for all EE faculty and staff can be found on the department web site at:
https://engineering.buffalo.edu/electrical/grad/graduate_programs.html