Department of

Electrical and Computer Engineering

GRADUATE HANDBOOK

2024–2025

MISSISSIPPI STATE UNIVERSITY™
JAMES WORTH
BAGLEY
COLLEGE OF ENGINEERING

Welcome

On behalf of the faculty and staff of the Department of Electrical and Computer Engineering, I welcome you to the graduate program at Mississippi State University. We hope you will have a stimulating and enjoyable experience in our department and at MSU.

This handbook contains data and information useful to all. The members of the ECE faculty and administrative staff are available to help you by answering questions and providing further information. The university's Office of the Graduate School is also at your disposal to answer your questions; much additional information can be found in the *Graduate Catalog* (`http://catalog.msstate.edu/graduate/`) updated yearly by the Office of the Graduate School. You will also want to consult the graduate information at the department's website (`https://www.ece.msstate.edu`) as well as the website of the Graduate School (`https://www.grad.msstate.edu`). In particular, the forms you will need to complete throughout your graduate study can be found at these two websites. Finally, the *Graduate Calendar* (`https://www.grad.msstate.edu/calendar/`) lists dates and deadlines each semester that are relevant to all graduate students.

We hope that you find the graduate program to be both exciting and challenging. As an ECE graduate student, you are a member of a highly capable and motivated group. You will find your graduate-student colleagues to be a stimulating group and interaction with them to be a valuable component of your professional growth. Feel free to ask questions about the department, program, faculty, or even graduate student life at MSU.

The faculty and staff of the Department of Electrical and Computer Engineering at Mississippi State University look forward to working with you, both inside and outside the classroom.

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Special Note

The information and guidelines in this handbook are not intended to negate or contradict any rules of the Graduate School. All students should consult the current edition of the *Graduate Catalog* (`http://catalog.msstate.edu/graduate/`) and be cognizant of all university policies therein.

Contents

1. General Information and Policies

1.1 Academic Performance

To be in good academic standing, students must maintain a cumulative graduate GPA of 3.0. Grades below B on graduate work are not considered to be good progress; a grade lower than a B will normally result in a warning letter.

1.2 Probations

If a graduate student's cumulative GPA falls below 3.0, the student will be placed on academic probation. Additionally, a student who obtains a grade below a B on a prerequisite course will be placed on academic probation. While on probations, either academic or misconduct, a student will not be eligible to receive financial support (teaching or research assistantships, fellowships, etc.).

On-campus students: To be removed from academic probation, the on-campus student must, by the end of the next semester (the summer is counted as one semester), raise his or her cumulative GPA to 3.0 and earn a grade of B or above on any prerequisite courses for which a grade lower than B was previously obtained. Note that if a student's initial admission is provisional or if a student is on probation, he or she must carry a course load of 9 credit hours of coursework.

Distance students: To be removed from academic probation, the distance-education student must, over the next 9 hours taken, raise his or her cumulative GPA to 3.0 and earn a grade of B or above on any prerequisite courses for which a grade lower than B was previously obtained.

1.3 Academic Dismissal

A student will be dismissed from the graduate program if any of the following occur:

- a student has been on academic probation at some point in the past and, in some subsequent semester, the student's cumulative graduate GPA falls again below a 3.00

- a student receives a grade of D or F on a graduate course, and earn a grade of C or lower after retake

- a student receives a grade of C on more than two graduate courses

- a student receives a grade of U on a graduate course in two consecutive semesters

- a student is found to be responsible for violating the Student Honor Code

- a masters student fails the non-thesis comprehensive examination twice

- a masters student fails the thesis defense twice

- a doctoral student does not pass the coursework-based qualifier within the designated time period

- a doctoral student fails the oral preliminary comprehensive examination twice

- a doctoral student fails the dissertation defense twice

- a student receives an unsatisfactory evaluation of a thesis or a dissertation

- a student fails to take a prerequisite course in the required semester or earn a grade of B or above on any prerequisite courses for which a grade lower than B was previously obtained

In case of a dismissal from the graduate program, a student may appeal his or her academic status according to the following procedure:

> Within four weeks of being notified of the official dismissal, the student must present the request and related explanation in writing to the department head and the graduate program director. The department head and graduate program director will review the appeal with the ECE graduate committee and render a recommendation. If the appeal at the departmental level is unsuccessful, a student may then appeal to the college dean. If the appeal at the college level is unsuccessful, the student may then appeal to the Provost and Executive Vice President.

1.4   Application for Admission

Students should submit admission to graduate study at Mississippi State University online at the website for the Office of the Graduate School. Do not send any materials directly to the Department of Electrical and Computer Engineering or to the Bagley College of Engineering. Contact the Office of the Graduate School for questions regarding the application for admission process or what materials are required to be submitted with an admission application.

1.5   Building Access

Electronic access to Simrall and certain laboratories is provided to students using university ID or keypad entry. Anyone permitting guests to enter the building after hours (5pm–7am) is reminded that they are responsible for the actions of those persons.

1.6   Course Load

To be classified as a full-time student by the university, a student must be enrolled in 9 or more credit hours during a regular semester (spring or fall).

A normal graduate course load is considered to be 9-13 credit hours. Greater than 13 credit hours is considered overload, and students are charged for credit hours in excess of 13. The maximum load in the spring or fall semester is 16 credit hours. In a five-week summer term, the maximum is 7 credit hours.

Teaching assistants, research assistants, and those holding fellowships within the Department of Electrical and Computer Engineering are recommended to enroll in 13 credit hours (including at least 1 credit hour for research) in spring and fall semesters, and a minimum of 6 credit hours in the summer, except when the student takes an ESL course (see below). Thesis/dissertation research hours with any professor can be used to meet this load requirement. For summer enrollment, the student can register for 6 hours in the 10-week summer term, or a combination that sums to 6 hours in the two 5-week terms.

All international graduate students must be enrolled in 9 credit hours to be considered full-time graduate students under immigration laws. International graduate student should not drop below 9 credit hours without

first informing their major professor and obtaining a written statement of permission. In addition, the student must obtain permission from the International Services Office. International students already attending Mississippi State University before the summer semester who are in good standing are not required to take courses in the summer semester. Those entering the university for the first time in the summer semester must take a minimum of 6 credit hours. Students are advised to consult with the International Services Office to verify their minimum course load.

Special Note Concerning ESL: If a student is enrolled in an English as a Second Language (ESL) course, the university limits the course load for that semester to 9 hours. Enrolling in more than 9 hours when an ESL course is part of a student's schedule will result in the student being billed for extra tuition (several thousand dollars) above the normal tuition amount. This extra tuition is not covered by any assistantship tuition waiver.

1.7 Course Retakes

Courses at the graduate level cannot be retaken, unless approved by the Graduate Coordinator for a course that a student previously receives a grade of F or D.

1.8 Cross-Listed Courses

Students enrolling in an ECE course that is cross-listed with courses in one or more other departments must enroll in the ECE section of the course. Cross-listed courses taken from a department other than ECE may not be included on a student's Program of Study.

1.9 Curricular Practical Training

An international student enrolled on an F-1 visa in the Doctor of Philosophy degree or the Thesis-Option Master of Science degree in Electrical and Computer Engineering may request departmental approval to be employed in an internship under regulations established by the United States Citizenship and Immigration Services regarding Curricular Practical Training (CPT). The eligibility criteria for this departmental approval are as follows:

- The student must be in valid F-1 status.

- The student must have been enrolled in the Thesis-Option Master of Science degree or the Doctor of Philosophy degree in the department full-time for at least one academic year.

- The internship must be directly related to and contribute to the student's thesis or dissertation research.

- The student must enroll in a graduate-level course in the Cooperative Education Program offered by the Career Center during the semester or term that the internship is held.

- The internship must be approved by the major professor and the graduate program director via the submission of the *ECE Approval Form for Internship Under Curricular Practical Training* prior to the start of the internship.

1.10 Directed Individual Study

In order to take ECE 7000 Directed Individual Study, a student must apply for approval by submitting to the graduate program director a signed *ECE Directed Individual Study Form*. The deadlines for submission of this form are as follows:

November 15	Spring semester enrollment
April 15	Summer term enrollment
July 15	Fall semester enrollment

Notes:

- Students cannot take ECE 7000 during their first semester of enrollment in the department.

- A student may take only one Directed Individual Study course in a semester; only two Directed Individual Study courses may count toward a Program of Study.

- Only graduate faculty in the Department of Electrical and Computer Engineering may be the instructor for a Directed Individual Study course.

- A faculty member in the Department of Electrical and Computer Engineering may not offer more than two Directed Independent Study courses in a single semester.

- The research or study proposed for a Directed Individual Study course cannot be part of a "controlled" project as defined by the International Traffic in Arms Regulations (ITAR).

- Students who take Directed Individual Study under a professor in the Department of Computer Science and Engineering must enroll in CSE 7000 and must contact the graduate program director in that department for relevant procedures.

1.11 Graduate Assistantships

Teaching Assistantships: Teaching assistantships (TAs) are awarded by the department to qualified outstanding students. All students applying to the graduate program are automatically considered for TA positions, and a decision is made only after a student's complete application materials are reviewed. To be eligible to serve as a TA, students must pass the required certification offered by the Office of the Graduate School—domestic students must pass the Graduate Teaching Assistant Orientation and the Microteaching Simulation/Classroom Certification Evaluation (both held prior to fall and spring semesters); international students must pass the Classroom Communication & Culture Workshop (held prior to fall semester only) in addition to both the Graduate Teaching Assistant Orientation and the Microteaching Simulation/Classroom Certification Evaluation. A student cannot serve as a TA until he or she passes all parts of the required certification and is certified at the TA-2 level. An international student must enroll in ESL 5323 Academic Research and Writing during the first semester that he or she serves as a TA unless he or she has an undergraduate degree from an accredited US institution.

Research Assistantships: Research assistantships (RAs) are awarded by faculty members with research funding. Students are encouraged to contact faculty members within their area(s) of interest to learn more about research activities and possible support. Often, research assistantships are extended to students only following classroom experience with the sponsoring faculty.

Any graduate student being employed as a graduate assistant may not be employed more than one-half time (i.e., 20 hours per week) total employment by the university as a whole. Any student so employed must notify all departments involved before accepting such employment by more than one department within or outside of the Bagley College of Engineering. Additionally, any graduate student employed as a graduate assistant working the maximum 20 hours per week cannot also be employed outside of the university without prior approval from the Office of the Graduate School.

Any student paid less than $600.00 per month is paid on a wages basis; such wages support is not considered to be a graduate-assistant appointment (see "Student-Worker Positions" below).

Students with provisional admission or on probations are prohibited from holding graduate assistantships. Graduate assistantships are subject to termination or adjustment when a student receives a grade below B on any prerequisite or graduate course; drops below a 3.0 GPA in any semester; fails to perform his or her assigned duty in a satisfactory manner; or funds for support of the assistantship become unavailable in the department.

In order to receive graduate-assistantship support during the summer, a student must be registered as a full-time graduate student for the subsequent fall semester, unless the student is graduating that summer semester.

An international student must have a current I-9 on file with the university to be employed in any status. The university will immediately terminate a student's employment upon the expiration date of his or her I-9, unless a new I-9 has been completed.

1.12   Program of Study and Committee Request Forms

It is the responsibility of each graduate student to develop a suitable program of graduate study in conjunction with the student's major professor and graduate committee. This program of graduate study must be documented with the submission to the graduate program director of a *Graduate Program of Study* form signed by the student and his or her entire graduate committee. For full-time students, the *Graduate Program of Study* form must be submitted during the first semester of graduate enrollment; for part-time students, this form must be submitted after completion of 9 graduate credit hours. Changes to the program of study require approval and must be documented with the submission to the graduate program director of a *Change to Graduate Program of Study* form.

The composition of the graduate committee is declared via the *Committee Request* form. Note: the Department of Electrical and Computer Engineering does not have formal concentrations; consequently, the "Concentration" line on the *Committee Request* form must be left blank. The level and appointing depart-ment for each faculty member on the graduate committee can be found in the Graduate Faculty listing within the Graduate Catalog (`http://catalog.msstate.edu/graduate/faculty/`). Changes to the graduate committee require approval of both the faculty members being removed from the committee as well as those being added. Changes to the graduate committee must be documented with the submission to the graduate program director of a *Request for Change of Committee Members* form.

1.13   Registration for Courses

Currently enrolled students must preregister for the next fall or spring semester's courses using Banner. Course registration requires that the student obtain *registration release*. Instruction for obtaining registration

release is emailed to all graduate students each semester shortly before preregistration begins. For full-time students, registration release will not be granted until the student has submitted completed and signed *Graduate Program of Study* and *Committee Request* forms; both forms must be current and updated.

The ECE department requires all currently enrolled graduate students to be preregistered for class by the last day of classes of the preceding semester:

Semester	Preregistration Deadline
Fall	Last day of Summer semester
Spring	Last day of Fall semester
Summer	Last day of Spring semester

Note that a student will always be able to adjust his or her schedule by adding or dropping classes up through the first week of class.

1.14 Report of Examination Results Forms

Report of Examination Results forms are to be submitted directly to the graduate program director by the major professor. Students are not permitted under any circumstances to handle *Report of Examination Results* forms.

1.15 Schedule Changes

Course changes after the regular deadline must be approved by the deans of the Bagley College of Engineering and the Graduate School. An Add/Drop form (`https://www.registrar.msstate.edu/students/forms-petitions/`) along with a Bagley College of Engineering Add/Drop Checklist (`https://www.bagley.msstate.edu/people/current/petitions-appeals-requests/`) must be submitted to the graduate program director. The graduate program director will then forward the forms to the dean's office for approval.

1.16 Student-Worker Positions

Any student paid less than $600.00 per month must be paid on an hourly-wage basis; such wages support is not considered to be a graduate-assistant appointment, but rather a student-worker position. The student must be registered during the semester in which wages are received. Additionally, in order to receive student-worker support during the summer, a student must be registered for the subsequent fall semester, unless the student is graduating that summer semester.

An international student must have a current I-9 on file with the university to be employed in any status. The university will immediately terminate a student's employment upon the expiration date of his or her I-9, unless a new I-9 has been completed.

1.17 U Grades

A student is dismissed from the graduate program if the student receives a grade of U in a graduate course in two consecutive semesters.

If a student receives a grade of U in ECE 9000 research hours, the student's major professor completes the *Department of Electrical and Computer Engineering Research Hours U Grade Form* which documents specific and measurable research goals for the subsequent semester (summer included). Failure to complete these goals will then result in a second U grade and dismissal from the graduate program.

1.18 Unclassified Graduate Students

Course Enrollment: Graduate students who have been admitted to the university in unclassified status may enroll in graduate-level courses offered by the Department of Electrical and Computer Engineering providing that they possess the requisite academic and technical background as well as satisfy any prerequisite conditions for the courses in question. To enroll in a course, the unclassified student must contact the instructor of the course to seek approval for the enrollment. The instructor will verify that the unclassified student has background and prerequisites sufficient for enrollment; the instructor may request that the unclassified student provide transcripts or other documentation to establish sufficient background and prerequisites. The instructor must email his or her approval for the enrollment to the graduate program director who will then issue the "major override" necessary for enrollment. It is the unclassified student's responsibility to seek registration release from the Office of the Graduate School and to enroll in the course after the major override has been issued.

Transfer to a Degree Program: A graduate student holding unclassified status may apply for admission into a degree program offered by the Department of Electrical and Computer Engineering after completing 9 hours of graduate-level courses in unclassified status. All 9 hours must be courses in the Department of Electrical and Computer Engineering. All the usual admission criteria apply (see the specific degree programs to follow for details); additionally, the GPA over the 9 hours of courses taken in unclassified status must be at least 3.0 for admission into a Master of Science program or at least 3.5 for admission into a Doctor of Philosophy program.

2. Master of Science in Electrical and Computer Engineering _____

2.1 Admission Criteria

2.1.1   Regular Admission

In addition to meeting the requirements set forth by the Graduate School for regular graduate admission to the university, regular admission to the Master of Science in Electrical and Computer Engineering program requires all of the following:

- a GPA of 3.00/4.00 on a B.S. degree

- a TOEFL score of 79 or an IELTS score of 6.5 for the student whose native language is not English unless he or she has earned a degree from a U.S. institution

For students with an undergraduate degree from a program that is not EAC/ABET accredited, they are encouraged to provide the GRE score.

2.1.2   Conditional Admission

Students who are fully funded by some external source (typically a scholarship program sponsored by the government of the student's home country) and who meet all other admission requirements, but lack only the TOEFL/IELTS score required for regular admission, may apply to be admitted conditionally, provided that the student's funding source will cover one year of English as a Second Language (ESL) study. After one year of ESL study, the student can apply for regular admission into the graduate program in Electrical and Computer Engineering providing that a TOEFL/IELTS score meeting admission requirements (79 TOEFL, 6.5 IELTS) has been obtained. Conditional admission is available only for the fall semester. During the time of ESL study, a conditionally admitted student may take only ESL courses; a conditionally admitted student may not take courses other than ESL courses, or engage in research activities, during the time of ESL study. To be considered for conditional admission, the student must include in their statement of purpose submitted with their application for admission a statement that they wish to be considered for conditional admission. Documentation of the source of funding indicating that the funding will cover a year of ESL study must also be submitted with the application materials.

2.1.3   Provisional Admission

The university allows students who do not meet the GPA requirement for regular admission to be admitted into a program provisionally. However, the Department of Electrical and Computer Engineering does not typically offer provisional admission. In the unlikely event that provisional admission is granted, the student is required to achieve a GPA of 3.00 on the first 9 credit hours of graduate courses (transfer credits and unclassified graduate credits may not be used). If a GPA of 3.00 is not achieved, the student will be terminated from the graduate program. Furthermore, a student who is admitted provisionally is not eligible for financial support (TA, RA, fellowships, etc.).

2.1.4   Accelerated Program (B.S./M.S. Combined Degree)

Highly qualified undergraduates in the Department of Electrical and Computer Engineering are encouraged to consider applying to the Accelerated Program. This program permits students to earn up to 9 hours of graduate-level coursework during the final year of undergraduate studies. Students in the Accelerated Program take graduate-level courses and earn both undergraduate credit and graduate credit simultaneously.

Admission into the Accelerated Program requires at least junior standing (60 or more completed under-graduate semester hours) as well as a cumulative GPA of at least 3.5 for all undergraduate work. To apply for admission in the Accelerated Program, complete the *Application for Admission to the ECE Accelerated Program* form and return to the graduate program director.

See "Accelerated Program" below for policies pertaining to the Accelerated Program.

2.2 Course Requirements

Thesis Option: 30 credit hours beyond the B.S. degree

- 24 credit hours course work (8 courses)
- 6 credit hours of ECE 9000 Research/Thesis

Non-Thesis Option: 30 credit hours beyond the B.S. degree

- 30 credit hours of course work (10 courses)

General Requirements:

- at least half of the courses must be at the 8000 level
- up to 6 credit hours of ECE 7000 Directed Individual Study; these will be counted as 8000-level courses
- up to 9 credit hours from outside the department is permitted; out-of-department hours must be approved in advance of enrollment by the department

Minor Area: Students can optionally designate an area outside the department as a minor subject to the following requirements:

- A minor requires at least 9 credit hours taken from a single department outside of ECE
- Out-of-department courses that are cross-listed with an ECE course cannot be counted toward a minor
- Only one minor is permitted
- One faculty member from the minor area must serve on the student's graduate committee
- Additional requirements as specified by the specific minor area may apply

In general, courses to be applied to a student's graduate program and to count toward a student's degree must be approved by the student's graduate committee. Among courses outside the department that will not count toward a graduate degree program are:

- MA/ST 6523 Introduction to Probability
- MA 6533 Introductory Probability and Random Processes
- ST 8114 Statistical Methods
- CSE 6753 Computation Fundamentals

Inquire to the graduate program director about other courses prior to enrollment.

2.3 Examinations

2.3.1 Comprehensive Examination (Non-Thesis Option)

A student pursuing the non-thesis option is required to pass an oral, comprehensive examination consisting of all the graduate-level courses taken toward the degree. To be eligible to take the oral comprehensive examination, a student must have a GPA of 3.0 and be within 6 credit hours of completing the course work on the student's program of study. The student must be enrolled during the semester that the oral comprehensive examination is administered, which must occur on or before the last day of final examinations.

The oral comprehensive examination is scheduled by the student's major professor and must be attended by all graduate-committee members. The procedure for the oral comprehensive examination is as follows:

- The student's graduate committee draws up a list of 6 topics covering the student's coursework. The major professor collects the topics from the committee members, assembles the list of topics, and provides the list of topics to the student no later than two weeks before the scheduled oral comprehensive examination.

- At the oral comprehensive examination, the committee selects 3 topics from the previously provided list of 6. The student is asked questions on these 3 topics by the committee, and the student orally responds to the questions.

- The committee evaluates the student's responses by completing the *Department of Electrical and Computer Engineering Masters Non-Thesis Oral Comprehensive Examination Evaluation Form*.

- The major professor submits the completed *Department of Electrical and Computer Engineering Masters Non-Thesis Oral Comprehensive Examination Evaluation Form* along with the *Report of Examination Results* form to the graduate program director at the completion of the oral comprehensive examination. The *Report of Examination Results* form must be submitted directly to the graduate program director by the major professor; students are not permitted under any circumstances to handle *Report of Examination Results* forms.

If a student fails the oral comprehensive examination, he or she will not be allowed to repeat the examination for 4 months, subject to the committee's approval. A second failure terminates the student from the program.

The student must submit the *Department of Electrical and Computer Engineering Graduation Form* to the graduate program director on the day of the oral comprehensive examination. Additionally, the student must complete the Bagley College of Engineering Graduate Exit Survey at `https://www.bagley.msstate.edu/forms/bcoeprograms/gradexit`.

2.3.2 Thesis Defense (Thesis Option)

For the thesis option, a student is required to orally defend his or her thesis. The thesis defense is scheduled by the student's major professor, and the date and time must be scheduled at least three weeks in advance.

The student must announce the thesis defense three weeks prior to the defense date by sending an email to `support@ece.msstate.edu` (see previous announcements at `https://www.ece.msstate.edu/` for format and content).

The thesis document (finished not a draft) must be read and approved by the major professor and presented to the remaining committee members two weeks before the scheduled oral defense; additionally, the thesis document must be submitted to the graduate program director via TurnItIn in Canvas two weeks before the defense.

The student must be enrolled during the semester that the thesis defense takes place, which must occur on or before the last day of final examinations. The thesis defense must be attended by all graduate-committee members. At the thesis defense, the graduate committee signs the *Report of Examination Results* form indicating whether the student has passed or failed. The com-mittee also completes the *Departmental of Electrical and Computer Engineering Thesis and Dissertation Defense Evaluation Form*. The *Report of Examination Results* form and the *Departmental of Electrical and Computer Engineering Thesis and Dissertation Defense Evaluation Form* must be submitted directly to the graduate program director by the major professor. Students are not permitted under any circumstances to handle *Report of Examination Results* forms.

The student must submit the *Department of Electrical and Computer Engineering Graduation Form* to the graduate program director immediately following the thesis defense.

If a student fails the thesis defense, he or she will not be allowed to repeat the defense for 4 months, subject to the committee's approval. A second failure terminates the student from the program.

2.4   *Thesis Document*

A student pursuing a thesis option must write a masters thesis. A thesis is a formal research paper presented by the student to the Graduate Faculty at Mississippi State University, who certify that the presented work meets the standard of the academic discipline. The thesis document must be approved by the major professor prior to the thesis defense. The thesis must be approved by the student's graduate committee, the graduate program director, and the Bagley College of Engineering (via signatures on the *Electronic Thesis and Dissertation Committee Acceptance* (ETDCA) form) prior to initial submission of the thesis to the Library.

In order to secure the signature of the graduate program director on the ETDCA form, the student must submit the *Department of Electrical and Computer Engineering Graduation Form*. Theses will not be signed if this form is not on file Additionally, the thesis document must be submitted to the graduate program director via Canvas for plagiarism check; theses will not be signed until passing the plagiarism check.

The student must complete the Bagley College of Engineering Graduate Exit Survey (`https://www.bagley.msstate.edu/grad/forms/`). The college-level signature on the ETDCA form will not be received without completion of the exit survey; additionally, all committee members and the graduate program director must sign the ETDCA form before requesting the dean's signature. Follow the *Bagley College of Engineering Thesis/Dissertation Signature Page Checklist* to obtain the college-level signature. Note: the MSU Library requires that all faculty be listed on the signature page exactly as their name appears in the Graduate Faculty listing within the Graduate Catalog (`http://catalog.msstate.edu/graduate/faculty/`).

Theses must be submitted electronically to and approved by the Office of Thesis and Dissertation Format Review at MSU Libraries prior to graduation. Electronic submission of the thesis document takes place through the zero-credit LIB 9010 course for which the student must enroll for the semester of graduation. See the relevant deadlines at `http://lib.msstate.edu/thesis/` as well as the submission process at `http://lib.msstate.edu/thesis/process/` for complete details.

It is expected that the work leading to masters thesis constitutes a research contribution of sufficient novelty and significance to warrant submission of at least one article to an archival journal or conference proceedings. It is strongly encouraged that thesis-option students work with their major professor to complete a submission of such a journal or conference article prior to the thesis defense. All publications (published, accepted, submitted, or in preparation) must be documented on both the *Department of Electrical and Com-puter Engineering Graduation Form* as well as the Bagley College of Engineering Graduate Exit Survey.

2.5 Graduate Committee

The graduate committee consists of:

- major professor
- committee members (2)

It is the responsibility of each graduate student to determine what area will be studied and to select a major professor to further guide them. The major professor must be selected from within the Department of Electrical and Computer Engineering. The student, working with the major professor, is responsible for selecting two other faculty to serve as committee members. Note that a faculty member from the minor area will serve on the student's graduate committee if a minor area is chosen.

All committee members must hold graduate faculty standing. Graduate faculty are listed in the *Graduate Catalog* (`http://catalog.msstate.edu/graduate/`).

For full-time students, the major professor and graduate committee members are to be selected during the first semester of a student's graduate enrollment and must be documented with the submission to the graduate program director of a *Committee Request* form signed by the student and his or her entire graduate committee (for part-time students, this form is submitted after completing 9 graduate credit hours). Changes to the committee require approval and must be documented with the submission to the graduate program director of a properly signed *Request for Change of Committee Members* form. *Failure to submit the Committee Request form in time and keep it up-to-date may result in the student not released to register for courses.*

2.6 Prerequisite Courses

It is required that all graduate students take the following courses for credit as required remedial undergraduate course work unless their transcript shows equivalent credit. Additional courses may be required.

- ECE 3413 Introduction to Electronic Circuits or ECE 3423 Circuits I
- ECE 3424 Intermediate Electronic Circuits or ECE 3244 Electronics I
- ECE 3443 Signals and Systems
- ECE 3714 Digital Devices and Laboratory
- ECE 3724 Microprocessors and Laboratory or ECE 4743 Digital System Design

2.7 Transfer Credit

Graduate course credit hours taken elsewhere and passed with a grade of B or higher are transferable upon request and approval by the student's graduate committee. Transfer credit may not constitute more than 9 semester hours of course work. Additionally, transfer credit from one master degree program at MSU toward a second MSU master degree is limited to a maximum of 9 credit hours. All thesis research hours must be taken at MSU. Credit may not be transferred from an institution outside of the U.S.

2.8 Accelerated Program (B.S./M.S. Combined Degree)

Students enrolled in the Accelerated Program must follow the policies below:

- As part of the application for admission to the Accelerate Program, the student must designate a major professor. The major professor will serve as the student's eventual major professor for the M.S. degree and will ensure that the coursework taken as part of the Accelerated Program is appropriate for a *Graduate Program of Study* form for the M.S. degree.

- Once the student is accepted into the Accelerated Program, the student and the major professor select up to 9 hours that will satisfy both undergraduate and graduate requirements. These courses may be at either the 6000 level or 8000 level. For each course, the student enrolls in the course for graduate credit (i.e., the 6000-level section, rather than the 4000-level section, of a split-level course). Note that, in any one semester, the combination of undergraduate and graduate credit hours may not exceed 13 hours.

- Each semester that the student desires to enroll in one or more graduate-level courses, the student submits the *Undergraduate Enrollment in Accelerated Degree Program* form to the graduate program director. Once this form has been approved by the department and college, the Graduate School will issue a level override that will enable the student to enroll in the graduate courses designated on the form. After these graduate-level courses have been successfully completed, the university registrar will grant credit for the corresponding undergraduate courses using the same grades as received for the graduate courses. For the case of a split-level course, the transcript will show credit for both the 4000- and 6000-level courses. In the case of an 8000-level course, an undergraduate special-topics course of the same title will be entered on the transcript to allow dual credit.

- Directed-individual study (ECE 7000) is ineligible for the Accelerated Program.

- A student may opt out of the Accelerated Program at any time, at which point the student would complete only the undergraduate portion of the program, and no additional dual-counting of courses would occur.

- The student is expected to apply to the M.S. degree program during the last semester of enrollment in the B.S. program. Application to the M.S. program would be made through the standard application process via the Graduate School.

- The student will receive the B.S. degree once the requirements for the B.S. degree are met. The student is required to complete all of the requirements for both the B.S. and M.S. degrees in order to receive both degrees, and those requirements are identical to the requirements for students enrolled in traditional B.S. and M.S. degree programs.

- The student is classified as an undergraduate until fulfillment of all the requirements for the B.S. degree. At that time, and upon admission to the M.S. program, the student will be classified as a graduate student and will be subject to all the guidelines pertaining to the M.S. degree.

2.9 Sequential MSECE Timeline

Non-Thesis Option

√	Task	When
☐	Submit *Committee Request* form	First semester of enrollment
☐	Submit *Graduate Program of Study* form	First semester of enrollment
☐	Apply to graduate	Early in semester of graduation (check Graduate Calendar for exact deadline)
☐	Schedule oral comprehensive examination	At least three weeks before oral comprehensive examination
☐	Take oral comprehensive examination	Late in semester of graduation (check Graduate Calendar for exact deadline)
☐	Major professor submits *Report of Examination Results* form and *Department of Electrical and Computer Engineering Masters Non-Thesis Oral Comprehensive Examination Evaluation Form* to graduate program director	Immediately following oral comprehensive examination
☐	Submit signed CAPP to graduate program director	Immediately following oral comprehensive examination
☐	Submit the *Department of Electrical and Computer Engineering Graduation Form* to the graduate program director	Immediately following oral comprehensive examination
☐	Complete Bagley College of Engineering Graduate Exit Survey (online)	Immediately following oral comprehensive examination

Thesis Option

√	Task	When
☐	Submit *Committee Request* form	First semester of enrollment
☐	Submit *Graduate Program of Study* form	First semester of enrollment
☐	Enroll in LIB 9010	At the beginning of semester of graduation
☐	Apply to graduate	Early in semester of graduation (check Graduate Calendar for exact deadline)
☐	Schedule thesis defense	At least three weeks before thesis defense
☐	Announce thesis defense to support@ece.msstate.edu	Three weeks before thesis defense
☐	Thesis read and approved by major professor	Two weeks before thesis defense
☐	Submit finished thesis to graduate committee	Two weeks before thesis defense
☐	Submit finished thesis to graduate program director via Canvas for similarity check	Two weeks before thesis defense
☐	Thesis defense	Check Graduate Calendar for exact deadline
☐	Major professor submits *Report of Examination Results* form and *Department of Electrical and Computer Engineering Thesis and Dissertation Defense Evaluation Form* to graduate program director	Immediately following thesis defense
☐	Complete Bagley College of Engineering Graduate Exit Survey (online)	Immediately following thesis defense
☐	Submit signed CAPP to graduate program director	Immediately following thesis defense
☐	Submit the *Department of Electrical and Computer Engineering Graduation Form* to the graduate program director	Immediately following thesis defense
☐	Collect signatures on the ETDCA form	Prior to first submission of thesis to MSU Library (check Graduate Calendar for exact deadline)
☐	Submit thesis to MSU Library	Late in semester of graduation (check Graduate Calendar for exact deadline)

3. Doctor of Philosophy in Electrical and Computer Engineering

3.1 Admission Criteria

3.1.1 Regular Admission

Admission from the Masters Degree: In addition to meeting the requirements set forth by the Graduate School for regular graduate admission to the university, regular admission to the Doctor of Philosophy in Electrical and Computer Engineering program requires all of the following:

- a GPA of 3.25/4.00 on an M.S. degree
- a TOEFL score of 79 or a IELTS score of 6.5 for the student whose native language is not English unless he or she has earned a degree from a U.S. institution

For students with an undergraduate degree from a program that is not EAC/ABET accredited, they are encouraged to provide the GRE score.

Direct Admission from the Bachelors Degree: Highly-qualified undergraduate students may be directly admitted to the doctoral program. In addition to meeting the requirements set forth by the Graduate School for regular graduate admission to the university, direct admission to the Doctor of Philosophy in Electrical and Computer Engineering program requires all of the following:

- a minimum undergraduate equivalent GPA of 3.50/4.00 on the last 60 credit hours of undergraduate courses, or a first-class with distinction degree classification for students whose degrees are from institutions where no GPA is reported
- a TOEFL score of 79 or a IELTS score of 6.5 for the student whose native language is not English unless he or she has earned a degree from a U.S. institution

For students with an undergraduate degree from a program that is not EAC/ABET accredited, they are encouraged to provide the GRE score.

Transfer from the Masters Program: Students currently enrolled in the Master of Science in Electrical and Computer Engineering program in the Department of Electrical and Computer Engineering who wish to transfer to the doctoral program prior to completing the requirements for the Master of Science degree must submit a new application. Requirements for admission to the doctoral program are all of the following:

- a minimum undergraduate equivalent GPA of 3.5 on the last 60 hours of undergraduate courses, or a first-class with distinction degree classification for students whose degrees are from institutions where no GPA is reported
- a minimum graduate GPA of 3.8 on the first 15 credit hours of graduate courses

3.1.2 Conditional Admission

Students who are fully funded by some external source (typically a scholarship program sponsored by the government of the student's home country) and who meet all other admission requirements, but lack only the TOEFL/IELTS score required for regular admission, may apply to be admitted conditionally, provided that the student's funding source will cover one year of English as a Second Language (ESL) study. After one year of ESL study, the student can apply for regular admission into the graduate program in Electrical and Computer Engineering providing that a TOEFL/IELTS score meeting admission requirements (79 TOEFL, 6.5 IELTS) has been obtained. Conditional admission is available only for the fall semester. During the time

of ESL study, a conditionally admitted student may take only ESL courses; a conditionally admitted student may not take courses other than ESL courses, or engage in research activities, during the time of ESL study. To be considered for conditional admission, the student must include in their statement of purpose submitted with their application for admission a statement that they wish to be considered for conditional admission. Documentation of the source of funding indicating that the funding will cover a year of ESL study must also be submitted with the application materials.

3.1.3   Provisional Admission

The university allows students who do not meet the GPA requirement for regular admission to be admitted into a program provisionally. However, the Department of Electrical and Computer Engineering does not typically offer provisional admission. In the unlikely event that provisional admission is granted, the student is required to achieve a GPA of 3.00 on the first 9 credit hours of graduate courses (transfer credits and unclassified graduate credits may not be used). If a GPA of 3.00 is not achieved, the student will be terminated from the graduate program. Furthermore, a student who is admitted provisionally is not eligible for financial support (TA, RA, fellowships, etc.).

3.2   Course Requirements

Admission from the Masters Degree: at least 48 credit hours beyond the M.S. degree (hours may vary based on approval of student's graduate committee)

- at least 24 credit hours of course work (8 courses)
- at least 24 credit hours of ECE 9000 Dissertation/Research

Direct Admission from the Bachelors Degree: at least 66 credit hours beyond the B.S. degree (hours may vary based on approval of student's graduate committee)

- at least 42 credit hours of course work (14 courses)
- at least 24 credit hours of ECE 9000 Dissertation/Research

General Requirements:

- at least half of the courses must be at the 8000 level
- up to 6 credit hours in ECE 7000 Directed Individual Study; these will be counted as 8000-level courses
- up to 12 credit hours from outside the department is permitted; out-of-department hours must be approved by the department

Minor Area: Students can optionally designate an area outside the department as a minor subject to the following requirements:

- A minor requires 12 credit hours taken from a single department outside of ECE; at least 3 hours must be at the 8000-level
- Out-of-department courses that are cross-listed with an ECE course cannot be counted toward a minor
- Only one minor is permitted
- One faculty member from the minor area must serve on the student's graduate committee

- Additional requirements as specified by the specific minor area may apply.

In general, courses to be applied to a student's graduate program and to count toward a student's degree must be approved by the student's graduate committee. Among courses outside the department that will not count toward a graduate degree program are:

- MA/ST 6523 Introduction to Probability
- MA 6533 Introductory Probability and Random Processes
- ST 8114 Statistical Methods
- CSE 6753 Computation Fundamentals

Inquire to the graduate program director about other courses prior to enrollment.

3.3 Examinations

3.3.1 Coursework-based Qualifier

The ECE coursework-based Ph.D. qualifier requires Ph.D. students to earn a 3.5 GPA on the first 18 credit hours of ECE graduate coursework (at least 50% of credit hours must be at 8000-level). *DIS courses are not considered for Ph.D. qualifier*. Full-time students are required to pass the qualifier by the end of the second year of doctoral enrollment.

Students who do not achieve this can submit a plan of action to the Graduate Coordinator for achieving the required GPA. Then they can take up to additional 6 credit hours of ECE graduate courses to improve their overall ECE course GPA to 3.5 (50% of overall ECE credit hours must be at 8000-level).

3.3.2 Oral Preliminary Examination (Dissertation-Proposal Defense)

The purpose of the oral preliminary examination (dissertation-proposal defense) is to determine the student's ability to develop scholarly research. The oral preliminary examination may be taken only after the student has passed the qualifier; in addition, the student must have completed, or be within 6 hours of completing, the course work. The oral preliminary exam consists of a presentation of current research activities toward the student's dissertation, including

- the identification of a specific research topic
- literature review
- proposed method
- preliminary results

The student's graduate committee may also ask questions related to course work pertaining to the student's dissertation proposal. Passing the oral preliminary examination requires the approval of the dissertation topic by the student's graduate committee.

At least one week prior to the oral preliminary examination, the student must submit to his or her graduate committee and to the graduate program director a written dissertation-proposal document, which should include the following:

- background information

- literature review

- motivation

- proposed method

- preliminary results

- complete references

The student must be enrolled during the semester that the oral preliminary examination takes place, which must occur on or before the last day of final examinations. The oral preliminary examination must be attended by all graduate-committee members. At the examination, the graduate committee signs the *Report of Examination Results* form indicating whether the student has passed or failed (use the "Oral Comprehensive" line); the *Report of Examination Results* form must be submitted directly to the graduate program director by the major professor. Students are not permitted under any circumstances to handle *Report of Examination Results* forms.

It is required that the work leading to the oral preliminary examination constitute a research contribution of sufficient novelty and significance to warrant submission of at least one article to a peer-reviewed archival journal. Specifically, doctoral students are required to have submitted at least one article to a peer-reviewed journal prior to the oral preliminary examination; a preprint of this journal submission as well as proof of submission (e.g., a printout of an email from the journal acknowledging receipt of the submission) must be submitted along with the *Report of Examination Results* form.

If a student fails the oral preliminary examination, he or she will not be allowed to repeat the examination for 4 months, subject to the committee's approval. A second failure terminates the student from the program.

The oral preliminary examination must be taken by July 1 for December graduation, by November 1 for May graduation, and by February 1 for August graduation.

3.3.3 Dissertation Defense

A doctoral student is required to orally defend his or her dissertation. The defense must be scheduled by the student's major professor, and the date and time must be scheduled at least three weeks in advance.

The student must announce the dissertation defense three weeks prior to the defense date by sending an email to `support@ece.msstate.edu` (see the previous announcements posted at `https://www.ece.msstate.edu/` for format and content).

The dissertation document (finished not a draft) must be read and approved by the major professor and presented to the remaining committee readers two weeks before the scheduled oral defense; additionally, the dissertation document must be submitted to the graduate program director via TurnItIn in Canvas two weeks before the defense.

The student must be enrolled during the semester that the dissertation defense takes place, which must occur on or before the last day of final examinations. The dissertation defense must be attended by all graduate-committee members. At the dissertation defense, the graduate committee signs the *Report of Examination Results* form indicating whether the student has passed or failed. The committee also completes the *Departmental of Electrical and Computer Engineering Thesis and Disserta-tion Defense Evaluation Form*. The *Report of Examination Results* form and the *Departmental of Electrical and Computer Engineering Thesis and Dissertation Defense Evaluation Form* must be

submitted directly to the graduate program director by the major professor. Students are not permitted under any circumstances to handle Report of Examination Results forms. The student must submit the *Department of Electrical and Computer Engineering Graduation Form* to the graduate program director immediately following the dissertation defense.

If a student fails the dissertation defense, he or she will not be allowed to repeat the defense for 4 months, subject to the committee's approval. A second failure terminates the student from the program.

3.4 Dissertation Document

All doctoral students must write a doctoral dissertation. A dissertation is a formal research paper presented by the student to the Graduate Faculty at Mississippi State University, who certify that the presented work meets the standard of the academic discipline. The dissertation document must be approved by the major professor prior to the dissertation defense. The dissertation must be approved by the student's graduate committee, the graduate program director, and the Bagley College of Engineering (via signatures on the *Electronic Thesis and Dissertation Committee Acceptance* (ETDCA) form), prior to initial submission of the dissertation document to the Library.

In order to secure the signature of the graduate program director on the ETDCA form, the student must submit the Department of Electrical and Computer Engineering Graduation Form. Dissertations will not be signed if this form is not on file. Additionally, the dissertation document must be submitted to the graduate program director via Canvas for plagiarism check; dissertations will not be signed until passing the plagiarism check.

The student must complete the Bagley College of Engineering Graduate Exit Survey (`https://www.bagley.msstate.edu/grad/forms/`) as well as the *National Science Foundation Survey of Earned Doctorates* (`https://sed-ncses.org/login.aspx`). The college-level signature on the ETDCA form will not be received without completion of both surveys; additionally, all committee members and the graduate program director must sign the ETDCA form before requesting the dean's signature. Follow the *Bagley College of Engineering Thesis/Dissertation Signature Page Checklist* to obtain the college-level signature. Note: The MSU Library requires that all faculty be listed on the signature page exactly as their name appears in the Graduate Faculty listing within the Graduate Catalog(`http://catalog.msstate.edu/graduate/faculty/`).

Dissertations must be submitted electronically to and approved by the Office of Thesis and Dissertation Format Review at MSU Libraries prior to graduation. Electronic submission of the dissertation document takes place through the zero-credit LIB 9010 course for which the student must enroll for the semester of graduation. See the relevant deadlines at `http://lib.msstate.edu/thesis/` as well as the submission process at`http://lib.msstate.edu/thesis/process/` for complete details.

It is required that the work leading to doctoral dissertation constitute a research contribution of sufficient novelty and significance to warrant submission of at least two articles to peer-reviewed archival journals.Specifically, doctoral students are required to have submitted at least one article to a peer-reviewed journalprior to the oral preliminary examination and another separate, distinct article to a peer-reviewed journal priorto the dissertation defense; a preprint of this second journal submission as well as proof of submission (e.g., aprintout of an email from the journal acknowledging receipt of the submission) must be submitted along with the *Department of Electrical and Computer Engineering Graduation Form*. All journal and conferencepublications (published, accepted, submitted, or in preparation) must be documented on both the *Department ofElectrical and Computer Engineering Graduation Form* as well as the Bagley College of Engineering GraduateExit Survey.

3.5 Graduate Committee

The graduate committee consists of:

- major professor
- minor professor (if applicable)
- committee members (3)

It is the responsibility of each graduate student to determine what area will be studied and to select a major professor to further guide them. The major professor must be selected from within the Department of Electrical and Computer Engineering. The student, working with the major professor, is responsible for selecting three other faculty to serve as committee members. Note that a faculty member from the minor area will serve on the student's graduate committee if a minor area is chosen. A doctoral committee thus consists of a total of 4 members if no minor is selected, and a total of 5 members if a minor is selected.

All committee members must hold graduate faculty standing. Graduate faculty are listed in the Graduate Catalog (`http://catalog.msstate.edu/graduate/faculty/`).

For full-time students, the major professor and graduate committee members are to be selected during the first semester of a student's graduate enrollment, and should be documented with the submission to the graduate program director of a *Committee Request* form signed by the student and his or her entire graduate committee (for part-time students, this form is submitted after completing 9 graduate credit hours). Changes to the committee require approval and must be documented with the submission to the graduate program director of a properly signed Request for *Change of Committee Members* form. *Failure to submit the Committee Request form in time and keep it up-to-date may result in the student not released to register for courses.*

3.6 Prerequisite Courses

It is required that all graduate students take the following courses for credit as required remedial undergraduate course work unless their transcript shows equivalent credit. Additional courses may be required.

- ECE 3413 Introduction to Electronic Circuits or ECE 3423 Circuits I
- ECE 3424 Intermediate Electronic Circuits or ECE 3244 Electronics I
- ECE 3443 Signals and Systems
- ECE 3714 Digital Devices and Laboratory
- ECE 3724 Microprocessors and Laboratory or ECE 4743 Digital System Design

3.7 Transfer Credit

Graduate course credit hours taken elsewhere and passed with a grade of B or higher are transferable upon request and approval by the department. Transfer credit may not constitute more than 9 credit hours of course work. All dissertation research hours must be taken at MSU. Credit may not be transferred from an institution outside of the U.S.

3.8 Sequential PhDECE Timeline

√	Task	When
☐	Submit *Committee Request* and *Program of Study* forms	First semester of enrollment
☐	Take and pass ECE 9100 at least twice	Before graduation
☐	Submit PhD portfolio	Every summer before graduation
☐	Pass qualifier	Within the first two years of full-time doctoral enrollment
☐	Schedule oral preliminary examination	At least three weeks before oral preliminary examination
☐	Submit dissertation-proposal document to graduate committee and to graduate program director	One week before oral preliminary examination
☐	Submission of first jounral article	Before oral preliminary examination
☐	Oral preliminary examination (dissertation-proposal defense)	Within 6 hours of completing coursework
☐	Major professor submits *Report of Examination Results and Admission to Candidacy* form to graduate program director	Immediately following oral preliminary examination
☐	Submit signed CAPP to graduate program director	Immediately following oral preliminary examination
☐	Enroll in LIB 9010	At the beginning of semester of graduation
☐	Apply to graduate	Early in semester of graduation (check Graduate Calendar for exact deadline)
☐	Schedule dissertation defense	At least three weeks before dissertation defense
☐	Announce dissertation defense to support@ece.msstate.edu	Three weeks before dissertation defense
☐	Dissertation read and approved by major professor	Two weeks before dissertation defense
☐	Submit finished dissertation to graduate committee	Two weeks before dissertation defense
☐	Submit finished dissertation to graduate program director via Canvas for similarity check	Two weeks before dissertation defense
☐	Submission of second journal article	Before dissertation defense
☐	Dissertation defense	Check Graduate Calendar for exact deadline
☐	Major professor submits *Report of Examination Results* form and *Department of Electrical and Computer Engineering Thesis and Dissertation Defense Evaluation Form* to graduate program director	Immediately following dissertation defense
☐	Submit the *Department of Electrical and Computer Engineering Graduation Form* to the graduate program director	Immediately following dissertation defense
☐	Complete Bagley College of Engineering Graduate Exit Survey (online)	Immediately following dissertation defense
☐	Complete NSF Survey of Earned Doctorates (online)	Immediately following dissertation defense
☐	Collect signatures on the ETDCA form	Prior to first submission of dissertation to MSU Library (check Graduate Calendar for exact deadline)
☐	Submit dissertation to MSU Library	Late in semester of graduation (check Graduate Calendar for exact deadline)

4. Distance Education ————————————————————————————

4.1 Overview

The Department of Electrical and Computer Engineering offers Master of Science and Doctor of Philosophy degrees in Electrical and Computer Engineering by distance education. In essence, the distance degrees are operated identically to their on-campus counterparts; distance students simply participate in the distance-campus sections of the classes they are taking. In particular, the admission requirements and the degree requirements are the same as detailed elsewhere in this document.

Courses use a variety of technologies to deliver course content to distance students, including websites, streaming video, and interactive video conferencing. Department-approved proctors may be required to administer examinations to distance students. Oral examinations (e.g., oral preliminary examination, thesis/dissertation defense) may be conducted via on-campus visit by the student, interactive video conferenc-ing, or some method subject to the approval of the student's graduate committee and the graduate program director.

4.2 Courses Offered by Distance Education

According to university policy, only courses that have been approved for distance offering can be offered by distance education. As of August 2023, the following graduate courses have been approved by the university for distance-education offering, and a varying subset of these courses is offered each fall and spring semester:

- ECE 6243 Physical Electronics
- ECE 6263 Intro VLSI Design
- ECE 6273 Microelec Device Design
- ECE 6293 Nano-eletronics
- ECE 6313 Antennas
- ECE 6323 Electromagnetic Compatibility
- ECE 6333 RF and Microwave Engineering
- ECE 6413 Digital Signal Processing
- ECE 6423 Introduction to Remote Sensing
- ECE 6433 Introduction to Radar
- ECE 6443 Sensor Processing for AVs
- ECE 6613 Power Transmission Systems
- ECE 6633 Power Distribution Systems
- ECE 6643 Power System Relay Control
- ECE 6653 Introduction to Power Electronics
- ECE 6713 Computer Architecture

- ECE 6743 Digital System Design
- ECE 6753 Introduction to Robotics
- ECE 6783 Visual Guidance for MAV
- ECE 6793 Literate Programming
- ECE 6813 Communications Theory
- ECE 6833 Data Comm Networks
- ECE 6853 Electro-Optics
- ECE 6990 Special Topic in ECE
- ECE 7000 Directed Individual Study
- ECE 8223 Analog Ic Design
- ECE 8273 VLSI Systems I
- ECE 8333 Radar Signal Processing
- ECE 8343 Microwave Remote Sensing
- ECE 8423 Adaptive Signal Processing
- ECE 8433 Statistical Signal Processing
- ECE 8443 Pattern Recognition
- ECE 8453 Introduction to Wavelets
- ECE 8473 Digital Image Processing
- ECE 8483 Image and Video Coding
- ECE 8493 Neural Networks
- ECE 8633 Control of DER Systems
- ECE 8673 Computer Meth Power
- ECE 8683 Power System Operation and Control
- ECE 8743 Advanced Robotics
- ECE 8803 Random Signals & Systems
- ECE 8813 Information Theory
- ECE 8823 Wireless Networks
- ECE 8833 Computational Intelligence
- ECE 8923 Non-Linear Control Systems
- ECE 8943 Optimal Control of Dynamic Systems
- ECE 8990 Special Topics
- ECE 9000 Research/Dissertation
- ECE 9100 Graduate Seminar

4.3 Distance-Education Proctors

It is up to the instructor of the course to determine the modality for the exams for distance students. Often, the instructor will require the distance students to secure a proctor for the exams.

In such cases that a proctor is required, it is the distance student's responsibility to find a proctor that is suitable to the instructor, and it is the instructor's responsibility to request whatever information is needed to ascertain that the proctor will uphold the academic-integrity standards of the course and the university. In short, the student needs to find someone with whom the instructor will be comfortable having serve as proctor.

Once the instructor and the student agree on the proctor, this agreement needs to be documented with the submission of the *Proctor Request Form* (`https://www.bagley.msstate.edu/wp-content/uploads/Proctor-Form.pdf`). A separate form must be completed for each class taken with a distance-education proctor. Proctors must provide an official institutional/company email address (i.e., no Gmail, Hotmail, Yahoo, etc., addresses are acceptable).

It is the responsibility of the distance-education student to locate a suitable proctor. Proctors from community-college or university testing centers and libraries are preferred. If one of these is not a viable option, other individuals to consider are:

- Public or private community-college or university faculty or staff within an academic department, distance-learning or independent-study office, or counseling or advising center; dean; registrar; official testing center; library; or HRM office

- Public or private K-12 principal or headmaster, vice-principal, guidance counselor, librarian, faculty or school superintendent

- Certified city or county librarian

- United States Armed Forces Education Officer

- Organizational supervisor or HRM officer

The proctor cannot be related to the student in any way. The above list offers suggestions for typically acceptable proctors; final approval of the proctor rests with the course instructor and the graduate program director.

The instructor may decide to use *Honorlock* online. Then the student should follow the instructions accordingly.

4.4 Distance-Education Research

Students enrolled in graduate programs offered via distance learning and requiring a thesis or dissertation must meet established research requirements which include the completion of ECE 9000 hours. Distance students engaged in research will be provided the same student-support services given to on-campus students, including access to Library resources, as well as thesis and dissertation workshops. Distance students may conduct thesis/dissertation research within on-campus research facilities, or, if appropriate, through remote access to on-campus systems. Alternatively, research may be conducted at an off-campus site.

The student's graduate committee must approve the procedures which the student will follow in order to ensure the quality and integrity of the research process at the proposal, data-collection/analysis, and final-defense stages. Should the student request, or be required, to conduct research at an off-campus research facility, the student must complete a *Distance Student Certification of Off-Campus/Non-MSU Research Facility* form. This form must be completed, and all necessary signatures obtained, *before* the distance student begins the research process. Normally, this form must be submitted at the start of the first semester in which the distance student takes ECE 9000 hours.

Note that the Library maintains a convenient Distance Education Information Portal (`http://guides.library.msstate.edu/distancelearners`) devoted to specific resources for distance students.