

Graduate Program Handbook

Department of Engineering Education
Herbert Wertheim College of Engineering
University of Florida

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1. INTRODUCTION

1.1. Definition of Engineering Education Research

Engineering education research (EER) aims to study and improve all learning and professional ecosystems pertaining to the formation of engineers throughout their lifespans (from K-12, undergraduate, graduate, workforce, retirement, certifications, upskilling, etc.). EER is conducted in an *inter-* and *multi-disciplinary* manner where disciplinary expertise, tools, techniques, methods, principles, knowledge, and/or research designs from social sciences, humanities, education, learning sciences, life sciences, psychology, and medicine are weaved with engineering research practices and approaches to acquire a foundational knowledgebase about contexts and factors impacting engineering (e.g., performance, persistence, motivation, professionalism, technical knowledge).

1.2 Brief History of Engineering Education Research

Between 1990 and 2005 (Adams et al., 2006), the National Science Foundation (NSF) selected a select number of colleges of engineering within U.S. higher education institutions to inspire bold, groundbreaking, and wide-ranging models for curricular change and reform of undergraduate engineering education (Frair & Watson, 1997). The purpose of the NSF Engineering Education Coalitions was to join universities and colleges of differing characteristics to collaborate, experiment, and implement engineering education change at large (Frair & Watson, 1997). One of the significant findings from these coalitions was the need for engineering colleges to move beyond traditional assessment and evaluation approaches, typically used for accreditation purposes, towards a more rigorous, evidence-based approach.

Consequently, a new disciplinary area of research arose: *engineering education research* (EER). Several coalition leaders convened and advocated for a more research-rigorous approach to engineering education so that findings from said studies could be transferable nationally and globally (Streveler & Smith, 2006). EER was launched between 2003 and 2005 via four approved Ph.D. programs housed within colleges of engineering (Purdue University, Virginia Tech, Clemson University, and Utah State University) (Benson et al., 2010; Murzi et al., 2015), with Purdue University graduating its first Ph.D. in EER in 2004. Today, the nation has multiple Ph.D. programs and models of EER, and they keep growing.

1.3 Engineering Education Research Types and Aims

EER scholars design and conduct rigorous and quality quantitative, qualitative, mixed-method, multi-method, and/or multi-modal studies to learn about discipline-spanning topics impacting the field of engineering (EER), issues that impact specific disciplines of engineering (discipline-based EER, known as DBER), EER or DBER scholarship of teaching and learning (SoTL; classroom-based investigations spanning assessment, evaluation, and evidence-based practices), or broader socio-technical, -humanistic, -political factors that influence engineering formation and success (Borrego, 2007; Streveler & Smith, 2006).

All EER aims for *translation*, the process by which research is transferred into practice. Practice can entail teaching, learning, outreach, informal or formal outreach programs, international programs, social media, podcasts, and others. The idea is that the impact of engineering education is *evidence-based* (informed by research methods and approaches used in social science and educational research), *boundary-spanning* (reaching not just the scientific and

engineering community but society as well), and *transformative* (aiming at informing policy and strategies for positive and impactful change).

1.4 Herbert Wertheim College of Engineering Department of Engineering Education

From 2016 to 2019, the University of Florida (UF) Herbert Wertheim College of Engineering (HWCOE) created the Institute for Excellence in Engineering Education (IE³), led by its founding director, Dr. Hans van Oostrom. IE³ served HWCOE by promoting the scholarship of engineering education and serving as a resource for the college of engineering faculty interested in SoTL. The success of IE³ formed the basis for the transformation of IE³ into the Department of Engineering Education (EEd), launched in June 2019 under the leadership of its founding chair, Dr. Hans van Oostrom. Dr. van Oostrom stepped down from his role in 2025, and the next chair, Dr. Idalis Villanueva Alarcón, oversees the department.

EEd specializes in EER and the delivery of innovative and effective instructional methods in engineering courses and assessment. The vision of the EEd is to transform engineering education “to create the global leaders and problem solvers of tomorrow”. Aligned with EEd’s vision, the goal is to support students in becoming researchers, practitioners, future leaders, and agents of positive change in the discipline.

EEd houses an undergraduate certificate in artificial intelligence fundamentals and applications, an undergraduate capstone industry-sponsored capstone (Integrated Process and Product Design- IPPD), directs the undergraduate computer engineering courses, a graduate certificate in engineering education, an M.S. in applied data science, an M.S. in artificial intelligence systems, and a Ph.D. in engineering education. EEd also supports the Electronic Delivery of Gator Engineering (EDGE) certification programs. The M.S. and Ph.D. in Engineering Education programs were officially launched in January 2023.

2. GRADUATE PROGRAM HANDBOOK

2.1 Purpose

The purpose of this EEd graduate program handbook is to serve as a guide and mentoring tool to support the success of current graduate students in the program. This handbook is directed at specific programs offered by EEd, more specifically:

- (1) Ph.D. in Engineering Education
- (2) M.S. in Engineering Education (thesis and non-thesis)
- (3) Graduate Certificate in Engineering Education

Future iterations of the handbook will include additional information about other graduate programs housed in EEd. Please note that the information provided in this handbook is subject to change. Please check the relevant websites for more detailed and up-to-date information on procedures and requirements. Also note that EEd is subject to the policies, procedures, and requirements established by the University of Florida, Graduate School, and HWCOE. Therefore, these entities' policies, procedures, and requirements supersede EEd's. Knowledge of existing or amended policies, procedures, and requirements related to academics or research is the responsibility of the graduate student and respective faculty advisor.

2.2 EEd Graduate Program Supports

To support the success of graduate students in EEd, leadership has established a set of departmental and college experts to serve as your point of contact and source of support. For this handbook, the roles and responsibilities of the experts are not comprehensive, and they focus specifically on matters that may impact graduate students in EEd. Specific names and contact information about these roles can be found on the EEd website.

Department Chair: The Department Chair holds a critical leadership position to increase the visibility of the department and its focal areas nationally and globally. They help increase the discipline's reputation through active leadership and advocacy roles in professional organizations, conferences, research, and public policy events. Alongside department faculty, they co-develop strategic directions to implement and assess curricula that directly align with college and university missions. Their vision and leadership contribute to the institution's reputation and impact on education, scholarship, and research by helping build relationships and collaborations with the university administration, industry, funding agencies, and other governmental entities to identify opportunities for growth and partnership.

The Department Chair actively engages in research and scholarly activities, promotes research collaborations, secures external funding, and fosters an environment conducive to innovation. They advocate for funding, grants, and endowments to enhance departmental capabilities. They manage departmental budgets and allocate resources and incentive programs for research, teaching, and facilities.

The Department Chair ensures a welcoming and supportive department culture for faculty, staff, and students through committed recruitment, development, mentoring, and retention efforts. When a conflict arises, the Chair mediates and resolves issues among faculty, staff, and students and makes decisions related to hiring, promotion, tenure, and academic policies. The Department Chair addresses student concerns, oversees academic and research advising, and supports student organizations as needed. Finally, the chair leads the Steering Committee, a group of faculty leaders within the department that oversees program-spanning policies and procedures.

Associate Chair for Academics: The Associate Chair for Academics oversees all teaching- and curriculum-related matters at the undergraduate and graduate levels, including certification programs. The Associate Chair for Academics leads the EEd Curriculum Committee, which handles all departmental requests for new submissions and curriculum modifications and conducts monthly committee meetings to oversee system updates, ensuring a smooth transition for requests. They support course section planning and course schedules to balance student enrollment needs and faculty requirements. They support the logistics of the EEd conference booth and schedules.

Associate Chair for Research: The Associate Chair for Research supports the Department Chair and oversees all research-related matters impacting faculty and graduate students. The Associate Chair for Research provides strategic planning, support, training, and research metrics tracking for the department. The Associate Chair of Research can coordinate with the Associate Chair for Teaching when matters related to research impact at the intersection of teaching and research coincide (e.g., Scholarship of Teaching and Learning).

The Associate Chair for Research leads the Graduate Affairs Committee and collaborates with the Graduate Coordinator, the Graduate Academic Advisor, and the Academic Assistant II, as needed. The Associate Chair communicates important research information to the department, such as policy changes, workshops, funding opportunities, and seminars. They may lead or facilitate special training and workshops for faculty and/or graduate students as needed. Finally, they can serve as a replacement signatory for the Graduate Coordinator on graduate student matters in the department.

Graduate Coordinator: The Graduate Coordinator oversees the Graduate Handbook changes, petitions, and updates. The Graduate Coordinator facilitates and follows through with admission decisions from the Graduate Affairs Committee. They support graduate-student recruitment and orientation events for prospective graduate students, as needed. Typically, the Graduate Coordinator works alongside the Associate Chair for Research, the Graduate Academic Advisor, and the Academic Assistant II to create, handle, or modify procedures, policies, and requests.

The Graduate Coordinator communicates to graduate students and faculty about important updates or requirements from the Graduate School. They are also primarily responsible for ensuring graduate programs conform to existing policy. The Graduate Coordinator signs and approves petitions from graduate students once they have been counseled by their supervisory committees or other such advisers as the department shall designate.

Graduate Academic Advisor: The Graduate Academic Advisor works closely with the Graduate Coordinator, the Academic Assistant II, and the Associate Chair of Research. The Graduate Academic Advisor assists graduate students by ensuring they meet their course requirements and complete their program of study and degree requirements. They support graduate course enrollments and petitions as needed. Note that each student must regularly check the Graduate Information Management System (GIMS) to ensure that their degree program and associated milestones are accurate; the Graduate Academic Advisor can support the graduate student in verifying GIMS.

Academic Assistant II: The Academic Assistant II supports all paperwork and administrative processes for graduate students in the program. These include but are not limited to documentation of prospective student application reviews, paperwork to handle transfer of credit requests, submission of admission letter to the graduate program (if admitted), registration of courses, handling of graduate student committee forms, candidacy forms, thesis or dissertation forms, processes related to petitions, handling of student questions, progress tracking, entering information into GIMS, among others. They support the Graduate Coordinator, the Graduate Academic Advisor, other departments, and university offices (e.g., the Graduate School).

Faculty Advisor: Faculty advisors support graduate students' career development. Faculty advisors provide information to graduate students on career choices and offer guidance and support in developing professional skills. Faculty advisors typically serve as principal investigators of a grant or funded project in which the graduate student is hired to support the goals and deadlines of said work directly. For employment purposes, a faculty advisor serves as the direct supervisor of

the graduate student assistant. As the supervisor, they are responsible for assigning duties, monitoring performance, approving time worked, and providing evaluations of the graduate student. Also, faculty advisors formally approve graduate students' programs of study, advise them on advancement to candidacy for higher degrees, and consider their petitions to change majors, among other academic or research-related matters.

While mentoring is an institutionally assumed role for a faculty advisor, it is essential to note that advising and mentoring differ. Advising offers professional or educational guidance and support for the graduate student-faculty advisor relationship. Mentoring involves a dual and long-term commitment and relationship (beyond the terminal degree) in which the graduate students and faculty advisors have a delineated and communicated set of expectations and boundaries of research and professional and personal domains. While it is often assumed that one faculty advisor should not be expected to be an all-encompassing mentor to a graduate student, discussions on ways a graduate student can seek a mentoring network are encouraged. Faculty advisors and graduate students must complete a yearly individual development plan (IDP, either from the Graduate School or self-created) per funding agency requirements. More details about the UF Graduate School IDP are: [IDP: Individual Development Plan - The Graduate School - University of Florida \(ufl.edu\)](https://www.ufl.edu/graduate-school/idp/).

Faculty advisors serve as the chair of the supervisory committee of graduate students. In some instances, they can be a co-chair with another faculty member upon agreement and proper procedures are completed at the department, college, and/or university level.

Supervisory Committee: A thesis or dissertation Supervisory Committee is crucial in guiding and evaluating a graduate student's progress during their examinations and dissertation process. Supervisory Committee members must have graduate faculty status in the home department (internal committee member and/or committee chair) or an external department at UF (external committee member).

The Supervisory Committee possesses knowledge, expertise, and skills that serve to support both the written and oral forms of the qualifying exam, the comprehensive (proposal) exam, and the dissertation exam, respectively. This committee helps monitor student progress and assess the structure, quality, rigor, contributions to knowledge, feasibility, communication effectiveness, and alignment of the thesis or dissertation topic to the program goals. They will evaluate whether students' understanding, autonomy, and leadership in their research can lead to the awarding of a terminal graduate degree. As needed, they can discuss and, along with the faculty advisory, agree and sign curriculum petitions pertaining to components of their degree progression or individual development plans if procedures do not supersede existing departmental, college, or university policy.

Academic Librarian: The academic librarian supports EEd by updating the LibGuide, helping graduate students and faculty with engineering education research (e.g., literature reviews), and supporting documentation of research metrics. Furthermore, the librarian can guide on matters of copyright, plagiarism, authorship, journal subscription requests, and other issues as needed. The LibGuide can be found on the EEd website and at [Getting Started @ The Libraries - Engineering Education & Research - Guides @ UF at University of Florida \(ufl.edu\)](https://www.ufl.edu/libraries/engineering-education-research-guides/)

Marketing and Communications Specialist: The marketing and communications specialists support department-wide and lab-specific social media and news posts to help increase the visibility of faculty and graduate students. They help announce essential events, highlighting the department's achievements (e.g., awards, completion of significant milestones, conferences, and community-building events) as needed. They manage the department website profile images and contact information updates.

EEd currently has two social media handles: one on LinkedIn (@UF-EED) and one on X (@UF_Eng_Ed). Faculty and graduate students are welcome to submit posts by including the department social media handles provided, as well as their lab or individual social media handles. You can also choose to contact the Marketing and Communications Specialist, who will create the post for you and/or forward your posts along. Posts can include teaching, research, or service initiatives from a lab, individual, or department, but must follow appropriate netiquette rules, codes of conduct, and professionalism as these posts represent the department, college, and institution.

Associate Director of Development: The Associate Director of Development supports the Department Chair and faculty and students in raising funds, endowments, scholarships, and other monetary sources of support. They derive information from the Marketing and Communications Director, social media posts, the Department Chair or Associate Chairs, or directly.

IT Helpdesk: Security, program updates, installations, and computer-related matters (e.g., ordering, troubleshooting) can be handled by the appointed IT staff in the department. The representative can be reached via email by opening a ticket with an explanation and evidence (e.g., screenshot) of the matter to resolve. The IT ticket can be opened by emailing servicedesk@ufl.edu.

2.3 EEd Updates, Suggestions, and Frequently Asked Questions

Any updates on the EEd graduate program, policies, procedures, handbook, and other related matters will be notified via email and updated on the department website within seven (7) business days of the emailed announcement.

Suggestions to improve the EEd program can be made by providing an anonymous note in the Comments Box outside the department's main office. The suggestions will be reviewed by department staff and directed to the respective representative in EEd. Comment boxes will be viewed every Friday at the end of the business day. Please note that some suggestions may be counter to the policies, procedures, and requirements established by the University of Florida, Graduate School, and HWCOE. As a reminder, policies, procedures, and requirements established by these entities supersede those of EEd. Matters and timelines may vary depending on the request.

For the sake of transparency, any matters identified as beneficial to the faculty and students of the EEd program will be included in a Frequently Asked Questions (FAQs) list that will be updated at least once a semester on the department website. Existing EEd FAQs can be found on the [PhD in Engineering Education Web page](#).

3. GENERAL GRADUATE STUDENT REQUIREMENTS

3.1 University Regulations

As stated previously, university, college, or Graduate School policies, procedures, and requirements supersede EEd's policies. The following requirements are stipulated for the academic course enrollments and drop/add periods established by the university. Graduate students are responsible for staying up to date on any university deadlines and requirements.

Course Registration: Students must register for at least one course by the regular registration deadline, generally 1-3 days before classes start. Students who register after the deadline will be assessed a late fee as stipulated by the university.

Course Drop/Add Period: Students who registered for at least one course during the Registration period may drop and add courses for no fee and without dropped courses appearing on their transcript. The drop/add period typically occurs during the first five days of classes during semesters and the first two days during summers.

Course Drops and Withdrawals: Students may drop a single course or withdraw from the semester by the drop/withdrawal deadline. Either will result in a W appearing on the student's transcript for the respective course(s). Students will be responsible for paying all fees associated with dropped courses. The drop/withdrawal deadline occurs around week 14 of the semester.

Course Drops and Withdrawals after the Deadline: Students may submit a petition to HWCOE for course drops and withdrawals after the deadline. Petitions are typically due by the last day of classes (before Reading Days). Please contact the EEd Graduate Academic Advisor or Graduate Coordinator for help with the necessary steps for this petition.

Upholding 0.5 Full-Time Equivalent (FTE) Requirement: Per Graduate School guidelines, effective Fall 2023, all recruited Ph.D. admittees who are promised state or non-state financial support must be appointed at 0.5 full-time equivalent (FTE) or half-time, which is 20 hours a week. Appointments exceeding 0.5 FTE are unusual because the required work can interfere with their focus on making progress toward their degree. Exceeding this amount of hours can come with several consequences:

1. Reduced course performance and ability to manage tasks and time
2. Reduction in assistantship or stipends to accommodate the 20-hour-a-week requirement
3. Violation of adherence to employment regulations for F-1 Visa holders
4. Impacts on eligibility for both Curricular Practical Training (CPT) and Optional Practical Training (OPT) for international graduate students
5. Imposition of an excess hour surcharge
6. Potential honor code violation as excess hours can interfere with academic responsibilities.
7. Increased risk for burnout

As such, it is recommended that both a faculty advisor and a graduate student discuss how time will be allocated and if times need to be adjusted to ensure that both the academic and research loads are properly situated.

Deadline for Admission to Candidacy: Per Graduate School guidelines, graduate students must be admitted to candidacy no later than the mid-point of the semester before the semester of graduation. This will ensure that the requirements for the two semesters prior to graduation are met.

Final Semester Ph.D. Degree Application: You must apply for graduation through ONE.UF by the deadline. All Graduate School Electronic Thesis and Dissertation deadlines are listed at <http://graduateschool.ufl.edu/editorial/deadlines>. The Graduate School final semester checklist provides guidelines for applying for graduation and helps verify all required information: <http://graduateschool.ufl.edu/media/graduate-school/pdf-files/graduation-checklist.pdf>.

Ph.D. Dissertation Initial Submission: You must submit the initial version of your dissertation by the deadline, along with the Transmittal Letter signed by your committee chair. These documents are submitted through the Graduate Information Management Systems ([GIMS](#)). This initial version should be complete, although it may be revised after initial submission.

Ph.D. Dissertation Final Submission: You must complete your dissertation defense, make all final revisions to the dissertation, and upload the final dissertation to GIMS by the deadline. Note that the dissertation cannot be uploaded to GIMS until all committee members have signed the Electronic Thesis and Dissertation (ETD) form and uploaded it to GIMS. *It is strongly recommended that students submit their final version of their dissertation two weeks before the published deadline to ensure time for graduate school review.*

Thesis First Submission (M.S. with thesis students): An M.S. student must submit the initial version of their thesis after it has been successfully defended orally. Therefore, the defense must occur before the first submission deadline for your intended graduation semester. The thesis is submitted through the Graduate Information Management Systems ([GIMS](#)). Note that you cannot submit your thesis until the department has submitted your oral defense information.

Thesis Final Submission (M.S. with thesis students): An M.S. student must upload the final version of their thesis to GIMS by the deadline. Note that the dissertation cannot be uploaded to GIMS until all committee members have signed the Electronic Thesis and Dissertation (ETD) form and uploaded it to GIMS. Students are strongly recommended to submit their final version of their thesis two weeks before the published deadline to ensure time for the graduate school review.

Final Clearance of Thesis or Dissertation (Approval): This is the last day the Grad School can approve your thesis or dissertation and acceptance for graduation in the current semester.

Clear Prior (to the upcoming term for graduation): Clear Prior allows students to complete all degree requirements but graduate in the following semester without having to register for classes the following semester. Clear Prior students must have met all the degree deadlines except for Final Submission and/or Final Clearance. The Clear Prior deadline is for final approval and acceptance by the Graduate School. Students planning to Clear Prior should complete their final

defense and submit their final dissertation at least five (5) business days before the published deadline.

3.2 Notification of Organizational Changes in the Graduate School

In the Summer of 2024, the UF Graduate School underwent various organizational changes. These new groups and teams are as follows:

1. **Graduate Academic Career Tracking.** They monitor graduate student progress and certify graduation. More details at [Graduate Academic Career Tracking](#)
2. **Graduate Admissions and Transfer Credit.** They handle requests for conditional or special exception admission and transfer of credits. More details at [Graduate Admissions and Transfer Credit](#)
3. **Graduate IT Systems** team, managing the Graduate School database operations and their synergy with larger systems campus-wide. Information found at [Graduate IT Systems](#)
4. The **Curriculum and Programs** team. They coordinate curricular changes, Graduate Council and Graduate Curriculum Committee proposals, and the Graduate Catalog. See more details at [Graduate Curriculum and Programs](#)
5. **Thesis, Dissertation, and Publication** team (formerly the Editorial Office) — an apropos fit, given the Graduate School's mission to enhance and expand the graduate student experience at UF. Refer to [Thesis, Dissertation, and Publication](#).

Additional teams, resources, and support systems by the Graduate School can be found at [Graduate Student Support - The Graduate School - University of Florida \(ufl.edu\)](#).

3.3. Graduate Student's Performance-Based Contract

Every semester, the student's advisor evaluates the graduate student's performance and documents instances of underperformance related to the work assignment, including specific examples and dates. Still, graduate students typically hold an annual appointment aligned with the academic year. In case the student's performance does not meet their advisor's expectations, the advisor will do one of the following:

- [1] The student is appointed and evaluated each semester to get feedback. If they are underperforming, they get guidance on how to get back on track. In this case, the graduate student will work with HR on specific issues related to the student's underperformance.
- [2] The advisor could also decide not to reappoint the graduate student; in such a case, they will send a 90-day no-reappointment notice before the end of an existing appointment if warranted. In egregious cases, the college can change an appointment through dismissal without a notice period, per GAU 4.7(a). The college reserves this path for severe circumstances.

College Standards for considering a Non-Reappointment: The current practice requires two consecutive evaluations with ratings of 'B' or 'C'. If improvement is not evident in the subsequent semester, the college may support a Notice of Non-Reappointment. In certain situations, conducting two evaluations may not be feasible. If sufficient documentation is provided and the

initial assessment is detailed, outlining all errors of underperformance, the HWCOE leadership may support a notice of non-reappointment without two consecutive unsatisfactory evaluations.

Note: Please note your evaluation is separate from your IDP, although there may be some overlap. Please refer to section 4.6 for additional details.

3.4. Graduate Student's vacation (or personal time off)

A Graduate Assistant receives five paid days at the beginning of each academic semester. Days are used in 1-day increments for various circumstances. They are not cumulative and are managed at the department level. Other leave options include leave of absence for research/internship purposes and medical leave of absence. Both types of leave of absence should be communicated to your respective HR staff to ensure that proper procedures are followed and that any required documentation is obtained. Currently, the Graduate Association Union (GAU) does not allow for a personal unpaid leave of absence. If a graduate student is absent for more than 5 days, the advisor will notify HR.

3.5. EEd Ph.D. Program Roadmap

Similarly, graduate students are encouraged to communicate continually with the faculty advisor and the Graduate Academic Advisor on the milestones needed to complete the Ph.D. degree promptly. Please refer to the EEd website (- [Department of Engineering Education \(ufl.edu\)](http://Department of Engineering Education (ufl.edu))) for more information and updates.

In the context of EEd, the graduate program roadmap generally includes these milestones:

Stage	Description	Milestones
First Year Transition into EEd graduate student status	The first year of your graduate degree is one of transition and adjustment. The demands of a graduate student may require a shifting of mindsets, schedules, and responsibilities. In this initial year, you are learning about the program and your faculty and department culture. It is recommended that both an individual development plan and an expectations conversation is started with your faculty advisor.	During this year, you will be expected to take a combination of engineering and engineering education core courses and responsible conduct of research trainings. This may require a period of adjustment as engineering education courses tend to be jargon-heavy and require a lot of reading and writing. Students are encouraged to be patient in this transition and to discuss with their faculty advisor of the challenges and strategies to cope with these transitions.
Second Year Developing a EEd professional identity	The second year involves becoming familiarized with the nuances and cultures of EEd including conference and journal writing, research designs and methods, as well as analysis and interpretation techniques. In this stage, students learn about the rigor,	By this stage, students are near completing their degree course requirements and may consider taking the pre- and practicum internship experiences. Also, the graduate student should begin to discuss the composition of the supervisory committee with their faculty advisor, amending the individual development

	quality, and ethics of conducting human subject research.	plans, their dissertation topic, and ensuring they are on the path to complete their degree.
Third Year + Leveraging and applying EEd expertise	The third year (or more) involves putting into practice and developing autonomy for designing, conducting, and interpreting an EEd study. The graduate student is in thesis or dissertation stages and would be transitioning from candidacy (post successful completion of the proposal exam) to obtaining their desired graduate degree.	By this point the graduate student should have completed all required courses, submitted and presented one first-author conference paper and have submitted or is close to submission of a first-author journal article. The graduate student should have near-completed data collection and analysis and should be preparing for the oral and written components of their dissertation.

Additional details and descriptive summaries of significant milestones for the EEd graduate program roadmap are summarized below, and details are found later in section 4 of the manual.

3.5.1 EEd Core Courses:

Fifteen credits of the program will include foundational knowledge about the philosophical underpinnings of engineering education and how these philosophical assumptions intimately relate to its research design, methods, and practices. Furthermore, students learn about learning theories, instructional design, and how these impact learning and teaching in engineering. The classes aim to provide an overview of how research translates to practice. While EEd does not provide an average time for academic time spent on these courses, please note that the transition to engineering education may require additional study time, as both jargon and the style of EEd courses include heavy reading and writing requirements. As a general, campus-wide rule of thumb, three (3) credit hours of a course equate to approximately 9 hours of study time, but given that these EEd courses may be different from what a graduate student may be accustomed to or could significantly differ from their graduate-level, disciplinary engineering core courses, these times may be higher. Suppose a student is struggling with the EEd course content or time allocation. In that case, they are encouraged to discuss with their respective course instructor and faculty advisor ways to manage time and receive tutoring or time management support. The Graduate Coordinator may also provide guidance.

3.5.2 EEd Experience Courses:

EEd program requirements include a research-to-practice experience that must be completed after the first academic year and before graduation. The experience can also be done after all EEd core coursework has been completed. Before or during the experience, students must take EGS6940, Preparation for Engineering Education Research to Practice Experience. Students are strongly recommended to identify the site and sponsor for the experience before taking EGS6940. Since EGS 6940 is listed as a pre-or co-requisite course, students can choose to be registered in EGS6949 dually, Research to Practice Experience in Engineering Education, which is the practicum experience. Note that for EGS 6949, students must obtain a placement letter from the sponsor before registering for this course. Students are expected to devote an equivalent of three hours a week to the experience for each credit they are enrolled in over a 15-week semester. Please note

that while sites external to UF may be permitted (e.g., industry), additional restrictions exist for international graduate students (described in more detail in the following section).

3.5.3 Disciplinary Engineering Core Courses:

Pathway 1: 15 credits of graduate work in computer science or a single engineering discipline outside of EEd.

Notes:

- At least 9 credits must be at the 6000 level.
- The courses must come from the same Engineering Department.
- The courses must start with the codes:
 - BME: Biomedical Engineering
 - CGN/CIV/CWR: Civil and Coastal Engineering.
 - EAS / EGM / EML: Mechanical & Aerospace Engineering.
 - EIN/ESI: Industrial & Systems Engineering.
 - Courses offered by the Department of Engineering Education cannot be used to satisfy this requirement. Therefore, the courses starting with the codes EGN/EGS are not accepted.
- If the Engineering Department offers a minor, the courses must be eligible for completing that minor.
 - The student is not required to complete the minor.
- If the Engineering Department selected for the 15 credits does not have a minor, the student can select the graduate courses without restriction.
- It is the student's responsibility to identify the appropriate courses.
- Typically, graduate courses offered by other Engineering departments have prerequisites. PhD students who seek to take those courses must contact the Professor teaching that class and ask to accept their enrollment without these prerequisites. Once the professor confirms they can be enrolled, the EEd graduate student must work with the EEd Academic Assistant II on their enrollment in the course.

Pathway 2: 9 Engineering Credits + 6 Cognate courses

Notes:

- The Engineering courses must be at the 6000 level, and satisfy the same requisites as mentioned in pathway 1.
- The cognate courses:
 - Must be equivalent in quality to Engineering courses with a target towards a competency connected to the educational component of said course (e.g., computer science versus computer science education course)
 - Cohesive area (in other words, there is a clearly justified rationale for taking the pairing of courses selected for their research and/or career interests)
 - Aligned with the student's individual development plan (IDP) and professional goals.
 - The courses must be approved by the student's committee (the advisor and other members).
 - The approval must be notified to the EEd's academic assistant and the graduate coordinator.

In any of the pathways, the disciplinary engineering core credits should be tied to the graduate student's individual development plan, including career development and post-graduation plans.

Pathway 3: The student is admitted to the EEd PhD program with a master's degree in engineering or computer science discipline and graduates from it within up to 7 years of admission to the EEd PhD program. In this case, the Engineering Disciplinary requirement can be waived.

Note: For the transfer of credits from the Master's to the PhD, the student will contact the academic assistant starting the second semester of their program and present the case. This process could take around 12 months to be completed since the Graduate School would verify the validity of the Master's degree.

3.5.4 EEd Elective Courses

Graduate students can take up to 6 credits of graduate courses related to their dissertation topic and/or career goals. These courses must be approved by their faculty advisor.

3.5.6 Publication Requirement

Ph.D. students must submit one journal article as first author to a peer-reviewed journal, and have one published and presented peer-reviewed conference proceedings paper related to a research topic, aligned with one of the projects of your current Ph.D. faculty advisor/committee chair. However, students can publish in other areas with their advisor's consent. If self-funded, the student can publish in different venues of interest as long as the publication is peer-reviewed, the student is the first author, and it aligns with their career interest (i.e., IDP). In case of a change in research topic/advisor, conference paper publications can be on previous topics. Still, the journal article should be connected to one of your current Ph.D. faculty advisor/committee chair projects. The venues and authorship ordering for both forms of dissemination must be generated and approved by the student's supervisory committee chair. For a graduate student to be listed as an author on any disseminated work, they must make a significant, identifiable, original intellectual contribution to the research and not just participate in collecting, cleaning, or analyzing data. The student should also be involved in the research design, interpretation of results, writing, and editing process. Other dissemination venues for publication (e.g., articles, conferences, workshops) stemming from a course or a non-funded research topic must be consulted with your faculty advisor first. Recommendations for authorship order can be found in the EEd Libguide under the "Writing and Citing" tab:

- [Getting Started @ The Libraries - Engineering Education & Research - Guides @ UF at University of Florida \(ufl.edu\)](#)

Before graduation, the Ph.D. candidate must show proof of submission of said journal article, and the conference paper should be submitted to the Graduate Coordinator or faculty advisor and signed off as completed.

3.5.7 Examinations Overview

Per Graduate School guidelines, all three graduate examination stages (the qualifying exam, the proposal exam, and the dissertation exam) include an oral and written component. Below is a summary of these exams. Additional information is provided in the Examination section later described in the manual.

1. Qualifying Exam: The qualifying exam aims to support your identification, justification, and narrowing down of your research topic. It typically occurs in the semester after completing all required core EEd coursework. Note that your dissertation topic may change by your defense date as discussions with supervisory committee members occur. The qualifying exam consists of an initial, unofficial introduction of the proposed topic to the supervisory committee so that these committee members can create a set of written questions for the student to answer in a follow-up meeting. Each supervisory committee member will provide one question (with or without sub-parts) to the committee chair for verification, editing, or approval. The committee chair will share the final set of questions (including their own) with the student, who will have 3 weeks to provide a written response (with proper citations) to the committee member's questions. A week later, the student will meet with the committee members to discuss the student's response orally (can be in a presentation or the form of a discussion). Upon satisfactory completion of the written and oral justification of the student responses, the supervisory committee will sign a form submitted by the Academic Assistant II to the Graduate School. A qualifying exam generally should have been completed within two years of entering the graduate program, with up to two attempts to pass the qualifying exam. This qualifying exam could be taken earlier or later as determined by the student and their faculty advisor, but before going this route, it is recommended that you verify with the Graduate Academic Advisor and the Graduate School to ensure all procedures, policies, and timelines are being met. Please note that the qualifying exam completion form will be routed for signatures from the committee, but these will be used only for internal department tracking purposes.

2. Proposal Exam: The proposal exam is a precursor to the dissertation document (written component) and the dissertation defense process (oral component). This type of exam is sometimes called a comprehensive exam in other departments. The proposal exam typically occurs the semester after the qualifying exam or during a break period in which the student was enrolled at least in one of the terms of the break period. While the specific timing of the qualifying exam and the proposal exam may vary by department, it is generally possible to take the qualifying exam and proposal exam during a summer term (e.g., Summer A and Summer B, respectively). Otherwise, the proposal exam will be associated with the term immediately following the break period after successfully passing the qualifying exam.

The proposal exam (sometimes called a comprehensive exam) demonstrates how your justifications for methodology, research design, and methods weave into the narrative of your proposed research topic. Typically, proposal exams elaborate and intertwine elements of the qualifying exam with a tentative outline of the steps to follow, such as how participants will be selected, a description of the study location, and how data will be collected, analyzed, and interpreted. The goal is for the graduate student to paint a landscape of the entire research study before being approved by the supervisory committee.

Once the qualifying exam and proposal exam are completed to the satisfaction of the supervisory committee, the Academic Assistant II will route a document to the supervisory committee for signatures. Once signatures are collected, the form will be entered into GIMS, at which point the student will be recorded as having advanced to candidacy status per Graduate School guidelines. Please note that it is only at this stage that the signed forms for the proposal exam completion form sent to the committee are entered into GIMS.

3. Dissertation Exam: The dissertation exam marks the culmination of the proposed study from conception to design to collection to interpretation. It also consists of a written component following formatting guidelines required by the Graduate School and an oral component in which the graduate student presents the work to the committee and a general audience. Dissertation exam oral presentations are open to the public, and audience members can ask questions to the graduate student candidate. However, once the audience has asked their questions and received responses, they are asked to step away for a private session with the supervisory committee, where additional questions will be asked. After the graduate student has provided all responses, they are asked to step away for a few minutes while the supervisory committee decides if the student has successfully completed their graduate degree or not. Successful passing of the oral presentation (with signed forms of the committee that are submitted into GIMS) plus the completely revised written dissertation document, approved by the Graduate School and submitted by their required timelines, to ensure the students have achieved final clearance of the thesis or dissertation. Graduate students have the right to request a verification of candidacy by completing a Verification of Degree Candidate Status Form signed by the supervisory committee chair, department chair, college dean, and Graduate School Thesis, Dissertation, and Publication team (formerly the Editorial Office), which is then given to the Graduate Student Records for verification and processing. Note that even though a graduate student may have fulfilled all academic requirements, the degree is not awarded until the Graduate School certifies the degree to the University Registrar, and these are done at the end of fall, spring, and Summer C terms for all students who completed their degree requirements and had applied to graduate.

In EEd, there are two options for the written dissertation document: a Traditional Format and a Three-Chapter Format. The traditional format considers dissertation research as a single study that may include multiple phases or parts. The three-chapter format includes three pilot studies that together form a cohesive singular study; for this option, the graduate student is cautioned to follow appropriate copyrighting requirements and become familiar with fair-use guidelines for their published or presented studies to be used in the final dissertation document. Refer to the Dissertation Exam section below for additional information.

3.6 University policies for International Graduate Students

UF provides its most updated policy guidance on the Curricular Practical Training (CPT) at this [link on the International Center web page](#). Below, you will find specific implications related to our program. In the event of conflicting information, the UF's most current policy will be the one to consider.

3.6.1 Curriculum Practical Training (CPT) Authorization for EGS 6949

EEd international graduate students will need additional requirements to fulfill the degree requirements, particularly for the research-to-practice experience. Considerations for each type of visa status are summarized below. The students are encouraged to consult with the International Center and their faculty advisor for additional information.

1. F-1 International Graduate Students: F-1 international students must be registered full-time (9 credits in fall and spring semesters, each) to fulfill the registration requirements of their visa. International students may take a maximum of 3 credits of 100% online credits per semester as part of their full-time course load. If registering in summer C, students must register six (6) credits,

or they can also register three (3) credits in summer A, and three (3) credits in Summer B. For complete details and the most up-to-date information, please read the following:

- [MAINTAINING F-1 STATUS](#)
- [REGISTRATION REQUIREMENTS](#)
- [EMPLOYMENT or TRAINING](#)

2. CPT Approval Process for EGS 6949: Research to Practice Experience in Engineering Education: International graduate students have special requirements for EGS 6949. The graduate student is encouraged to contact their international student advisor in the UF International Center (IC) before engaging in any field experiences, training activities, employment, volunteering, etc. Field experiences/training activities may include and are not limited to alternate work/study, internships, externships, shadowing, cooperative education, practicums, clerkships, clinicals, rotations, etc., whether required or optional, paid or unpaid/volunteer, part-time or full-time, on-campus or off-campus, on-site or remote. Please keep in mind that the student must register for EGS 6949 prior to applying for CPT authorization.

3. CPT Eligibility: If the graduate student holds an F-1 visa, they may be required to apply for Curricular Practical Training (CPT) to engage in any field experiences, training activities, employment, etc. The following link on [CPT](#) includes more detailed information. Eligibility includes:

- Being enrolled as a full-time graduate student (9 credits) for at least one full academic year of study (fall and spring semesters only) at their current degree level, maintaining legal student immigration status.
- Being registered for CPT internship credits, which must count towards degree completion, and formally being offered and accepted for an internship.
 - **Note 1:** Summer semesters are generally considered vacation time for international students and may not count toward a full academic year of study. The international graduate student should plan to receive an orientation from both the faculty advisor and the F-1 advisor if a CPT includes a summer semester, and they are enrolled in EGS 6949 in that term.
 - **Note 2:** If an international graduate student is eligible for CPT but has failed to apply for and obtain CPT authorization from their [F-1 International Student Advisor](#) to engage in the field experience/training activity or employment before starting the field experience/training activity or employment, this may result in a violation of their F-1 visa status. It is recommended that graduate students obtain more orientation and receive answers to their questions using the available [F-1 International Student Advisor's Virtual Office Hours](#) (VOH) to discuss eligibility and any questions they may have about the process. For VOH, international graduate students are encouraged to have their offer or placement letter available and any other pertinent paperwork, as it will greatly help their F-1 Advisor's ability to aid.
 - **Note 3:** All F-1 students must apply for CPT authorization after registering for EGS6949. Evidence of authorization to take EGS6949 must be provided to the EEd

Graduate Academic Advisor and Academic Assistant II by the start of the semester in which EGS6949 is intended to be taken. Failure to provide that authorization will result in EGS6949 being dropped from the student's schedule.

- **Note 4:** CPT approval may take 4-6 weeks, so course registration and CPT authorization applications should be completed as soon as advance registration opens. Also, note that the faculty advisor must provide information certifying said CPT experience as part of the CPT application process. The information asked can include the number of hours completed to date in your Ph.D. program, the total number of Ph.D. credits required by the program, and the duration of CPT experience.

4. Determining if CPT authorization is not required: Several criteria must be met for an international graduate student to not require CPT authorization.

1. The student has an up to 20-hour research assistant position on campus with their advisor, and the 3-credit course is one of their 9 required credits in the semester.
2. The 3-credit course is EGS 6949 Research to Practice Experience, and it is mentored by a UF professor in a UF setting [on campus; no off-campus duties (other than where the student simply chooses to do their homework as would any student); and the student is not paid in spring or fall semesters].

Note 5: If a third party is involved, you need a CPT authorization.

3. The student does not have any other on-campus work/training that, combined with the assistantship or Research-to-Practice Experience, would result in the student working/training more than 20 hours a week.

Note 6: Regarding the latter point, the student may not need CPT unless they are engaged in other work that already exceeds 20 hours per week, or when engaged in the EGS6949 research to practice experience and the total exceeds 20 hours per week. Some examples of these include if the international graduate student is working on a campus Gator Dining job of 15 hours/week and on-campus UF EGS6949 (research-to-practice experience) of 10 hours/week, totaling 25 hours/week, which will require CPT authorization.

Note 7: If the experience occurs outside of UF on an external site, these external field experiences will require a CPT application and approval before engaging in the research-to-practice experience course.

5. Determining if CPT authorization is required: If an F-1 student is unsure if they need CPT authorization, they are encouraged to inquire with their F-1 advisor in the International Center. When meeting with their F-1 advisor, they should have the following:

1. Position/job title
2. Start date and end date of the training/work
3. The number of hours expected to train/work per week
4. Indicate if you are working in any other training or work on the UF campus, and the number of hours you are working in this UF position (if applicable)
5. The exact physical address (street, suite # if any, city, state, and zip/postal code) where the student will train/work

6. A general description of duties (3-5 sentences or bullet points, for example)
7. The prospective supervisor's name, title, and telephone number

Note 8: Please note that an international graduate student must receive authorization on their I-20 before beginning any training/work! They must not engage in any training/work without first obtaining CPT approval. Failure to obtain CPT approval before beginning any training/work activity that requires CPT authorization will result in the international graduate student falling out of status, with serious consequences. Please refer to the International Center website and/or consult with your F-1 advisor for more details.

5. F-2 International Graduate Students: F-2 visa holders are allowed to study part-time at a Student and Exchange Visitor Program (SEVP)-certified school or program at the postsecondary level. However, they may not engage in any field experiences, training activities, or employment, whether paid or unpaid, required, or optional. Full-time enrollment or pursuing a degree or certificate program is not permitted for F-2 visa holders. Additional details can be found at [F-2 / M-2 Part-time Study Guidance | Study in the States \(dhs.gov\)](#).

6. J-1 International Graduate Students: If the international graduate student holds a J-1 or J-2 visa, it is recommended that they contact their [J Advisor](#) regarding obtaining authorization to engage in any field experiences, training activities, or employment. If an international graduate student holds any other immigration status, they are encouraged to contact an immigration attorney to determine eligibility to register for EGS6949 and whether or not this course would be categorized as [academic training](#) while enrolled in the program. While enrolled in the program.

7. Part-time CPT and OPT Eligibility: Please note that the part-time CPT does not impact OPT eligibility. Even a full-time CPT experience of less than 1 year (aggregate 364 days or less) does not affect OPT eligibility. However, full-time CPT for one full year (365 days or more) will result in the international graduate student losing the ability to request OPT upon graduation. Additional information can be found in:

[Curricular Practical Training \(CPT\) | International Center University of Florida \(ufl.edu\)](#)

3.4.1 Volunteer Experiences for International Graduate Students

University departments and academic units that engage international graduate student volunteers must enter each volunteer into the UF Volunteer Tracking system in myUFL annually to document the volunteer engagement. Volunteer services expire annually, 365 days (about 12 months) from the service start date. Departments and academic units oversee all volunteer activities and assess risks associated with the volunteer services.

No volunteer authorization is needed from the International Center or the home college of international graduate students to participate in a single-day event, as this volunteer activity is not viewed by the Department of Homeland Security (DHS)/USCIS as unpaid labor. However, single-day event volunteers may be tracked either by the volunteer tracking system at myUFL or via a single-event form that is internally kept by the home department. Any volunteer experiences exceeding a single-day event will require authorization from the International Center. Note that

volunteering experiences outside UF must be consulted with their F-1 advisor to determine if authorization is needed.

If the volunteer is working under an H-1B visa, they may be eligible to volunteer only if the work would typically be performed by unpaid volunteers. Immigration Compliance Services in UFHR must be contacted before any volunteer services' approval from your respective department or academic unit. Current J-2 visa holders are also prohibited from any volunteer services unless they have employment authorization/EAD card.

Additional information about permissible and non-permissible volunteer experiences can be found in:

- [Volunteers – Regulation and Policy Hub \(ufl.edu\)](#)
- [Volunteering | International Center University of Florida \(ufl.edu\)](#)

3.5 Income Tax Filing for Graduate Students

Graduate students may require different types of income tax filing, especially if they are US-born or international, resident or non-resident, or have received a fellowship/scholarship (e.g., NSF GRFP). It is recommended that a graduate student consult with a tax filing expert or use tax filing software to ensure accurate tax filing. While the recommendations are not comprehensive, some considerations may include:

US-Born Graduate Student Tax Filing with a Fellowship, Scholarship, or Grant: The student will need to identify if the fellowship, scholarship, or grant is considered tax-free or taxable before filing their taxes. Tax-free income constitutes monetary amounts used for tuition, fees, and required supplies used for educational purposes that are directly tied to their degree program. Taxable income is composed of incidental expenses such as room and board, travel, optional equipment, and payments received for teaching, research, or other services required for a grant. Any taxable income will require an estimation of the tax payments to be made annually on the additional income. Additional information can be found at [Topic no. 421, Scholarships, fellowship grants, and other grants | Internal Revenue Service \(irs.gov\)](#).

International Graduate Student Tax Filing: International students who were physically in the United States on an F or J status anytime between January 1 and December 31 of the year of filing must file Form 8843 with the Internal Revenue Service (IRS), even if they did not earn any income. Also, they would need to file a federal tax return (Form 1042) with the IRS if they earned more than \$0 of taxable US source income (e.g., wages, university salary). State taxes may or may not need to be filed depending on where the student is residing in the U.S. F-1 or J-1 international students are considered non-residents for their first five calendar years in the U.S. If an international student has been in the U.S. longer than the specified period, they will need to complete a Substantial Presence Test to determine tax residency. If an international student has received a scholarship, fellowship, or grant from a country that has a tax treaty with the U.S., the international student may also need to file Form 1042-S with the IRS. Filing can be done in Sprintax, a tax preparation software for nonresident students and scholars in the U.S. Remember that every individual circumstance may vary, so they may need to consult with their faculty advisor

or Graduate Coordinator for additional guidance. Also, additional information can be found at: [Filing Nonresident Taxes | International Center University of Florida \(ufl.edu\)](#).

3.6 EEd Graduate Student Organizations and Councils

EEd faculty participate in several student organizations. Concerning engineering education, there are the American Society for Engineering Education student chapter and professional society-specific organizations (e.g., American Society of Mechanical Engineers). Graduate students are encouraged to discuss with their faculty advisor and/or Graduate Coordinator for additional information on how to participate while meeting university policies and regulations. Graduate students may also be interested in participating in college-level and university-level graduate student councils. More information can be found in:

- [Resources | Student Government \(ufl.edu\)](#)
- [Engineering Graduate Student Council - Graduate Student Affairs \(ufl.edu\)](#)

3.7 Testing Accommodations

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, <https://www.dso.ufl.edu/drc>) by providing appropriate documentation. Once registered, students will receive an accommodation letter to be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Delays in the qualifying exam, proposal exam, dissertation exam, and M.S. thesis defense due to extenuating circumstances can be approved by the supervisory committee if proper documentation and timely requests are made. Said approvals should be communicated to the EEd Graduate Coordinator, Graduate Academic Advisor, and Academic Assistant II for proper record-keeping. Delays for the M.S. non-thesis project can be approved by the EEd Graduate Coordinator.

3.8 Mental Health and Wellness

EEd recognizes that transitioning from an engineering or computer science degree into engineering education research can be daunting and overwhelming. Please do not hesitate to reach out to your faculty advisor or the Graduate Coordinator, as well as make use of all the UF services to help you maintain balance, bolster stamina, and resolve problems while you pursue your personal best in and out of the classroom or lab:

- [GradCare](#)
- [Counseling & Wellness Center](#)
- [GatorWell Health Promotion Services](#)
- [Recovery Support and Services](#)
- [RecSports Nutrition Services](#)
- [U Matter, We Care](#)

For emergency, urgent, and medically necessary health care regardless of ability to pay, please go to [Financial Assistance - Billing, Insurance and Costs - UF Health](#) and fill out a financial assistance application. Financial Assistance policies apply to United States residents. Non-United States residents may be reviewed on an exception basis (emergent, urgent, or traumatic care, but may not apply to aftercare/follow-up services).

For additional information and resources for self-care and wellness, click here: [UF Grad Self-Care & Wellness](#).

3.9 Petitions

Graduate students are expected to be familiar with the program requirements described in the Graduate School and this handbook. When filing any petition, graduate students should consult with their faculty advisor, Graduate Academic Advisor, Graduate Coordinator, Academic Assistant II, or appointed department representative about their academic needs or concerns and procure the appropriate procedures (or forms) for petitioning. Note that a Petition must be appropriately justified, documented, and approved through the proper department, college, Graduate School, and university channels. It is always advisable to request a Petition with ample time in advance (prior to the deviation, over 45 business days) to avoid miscommunications and issues if the Petition is denied.

The approval process for the Petition depends on the nature of the request. A Petition to department policies described in this handbook can be requested via the Graduate Coordinator, who will submit the petition for review by the Graduate Affairs Committee for a full committee vote. These votes, once made, are considered final.

Petitions to deviate from graduate school guidelines would involve additional steps, including internal petitions to their faculty advisor, graduate academic advisor, graduate coordinator, academic assistant II, or appointed department representative. Then, it will require approval by the Department Steering Committee, followed by HWCOE, and then the Graduate School. Note that the Graduate School rarely permits guideline deviations and only does so under extraneous circumstances. Note that some guidelines (e.g., graduation, GPA requirements, and total credit hours requirements) cannot be petitioned as these are university-wide mandates.

3.10 Grievances

A grievance is defined as “dissatisfaction occurring when a student believes that any decision, act, or condition affecting him or her is illegal, unjust, or creates unnecessary hardship. Such grievances may concern but are not limited to, the following: academic problems (excluding grades, except when there is an allegation of illegal discrimination or where a grade penalty has been imposed without proper authority), mistreatment by any University employee, wrongful assessment of fees, records and registration errors, student employment, and violation of University of Florida Regulation 1.006” ([Grievance Procedure – Regulation and Policy Hub \(ufl.edu\)](#)). Before invoking grievance procedures, it is important to first understand the types of grievances and the proper channels to pursue. Listed below are the two main types of grievances.

Person-to-Person Grievances: Unless the concern is related to conduct, ethics, harassment, safety, or other matters requiring university involvement that may cause harm or lead to unfair treatment if unattended, the student should first make a demonstrable effort to work through the differences with their fellow student, faculty advisor, course instructor, student, staff, departmental faculty, or individual. The affected student(s) and individual(s) should explore possible options for addressing the concerns toward a reconciliation before making a final decision to file a grievance.

After making demonstrable efforts to work out differences, if a student would still like to report the concern, the student is encouraged first to fill out a departmental complaint form. This

complaint form must be in writing, signed, and dated by the aggrieved student. The complaint must also have the student's contact information (phone number, email, and address). Note that oral, anonymous, or complaints submitted on behalf of another individual will not be considered a formal complaint and will not be processed. The complaint must also apply to currently enrolled or employed individuals at UF.

The complaint form will be sent to the department's Graduate Coordinator and Associate Chair for Research (if the complaint is of a serious research nature) or Associate Chair for Teaching (if the complaint is of a serious academic nature). The appointed faculty will review the complaint and respond to the student in writing within 45 business days of receipt of the complaint. The student may be contacted for additional clarification and/or information when appropriate. If the complaint requires a deeper investigation, additional time may be required, thus extending the 45 days previously mentioned. Please note that the appropriate offices (e.g., the Ombudsman) should handle more severe forms of grievances, as outlined in the next section.

Department-Person Grievances: Students who feel they have been treated unfairly or who may deem that a departmental complaint may complicate matters can also seek support from the college, especially their Associate Dean for Academic Affairs. This individual can handle complaints related to a faculty advisor in a lab and conflicts with a department chair or other department leadership, staff, or faculty members. These individuals, depending on the nature of the grievance, may be referred to university offices to handle the matter (e.g., Ombudsman, Provost). Regardless of the grievance, it is recommended that a graduate student also seek orientation about the procedures and timeline of a resolution.

College-Person or Campus Unit-Person Grievances: If the complaint is against college leadership, a specific campus unit, or personnel, the complaint should be communicated to university-wide offices such as:

- a. The [UF Ombuds](#) can serve as a neutral party in finding solutions to concerns.
- b. Cases of sexual discrimination, harassment, assault, or violence should be reported to the [UF Office of Title IX Compliance](#).
- c. Grievances over working conditions as specified in your letter of appointment or the [graduate student contract](#) can be submitted to [Graduate Assistants United](#), the graduate student union.
- d. The Office of the Vice President for Enrollment Management ([Grievance Procedure – Regulation and Policy Hub \(ufl.edu\)](#)). The Vice President will review the appeal and respond to the student in writing. The Vice President's decision, whether in the student's favor or not, constitutes final University of Florida action.
- e. The [Provost's](#) office may work alongside these offices to handle said grievances and complaints.

3.11 Academic Misconduct

The University of Florida takes academic dishonesty very seriously. UF students are bound by The Honor Pledge, which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received

unauthorized aid in doing this assignment.” [The Student Honor Code and Student Conduct Code](#) specify several behaviors that violate this code and the possible sanctions. Furthermore, you must report any condition that facilitates academic misconduct to appropriate personnel. Please consult the faculty advisor or supervisory committee member if you have any questions or concerns. If you do not have a supervisory committee established yet and the concern is with your faculty advisor, please consult the Department Chair, Associate Chair for Research, or Graduate Coordinator in your home department for additional information.

Gen-AI: With the advent of generative AI (Gen-AI) tools such as ChatGPT and others, it may be tempting to want to rely on these tools for context, grammar, and content. While the department cannot stop a graduate student from engaging in said activities, the student is encouraged to use these tools in a limited manner and small capacity for the sole purpose of fact-checking, identifying inaccuracies, or inspiring ideas.

For EEd, it is important to keep in mind that independent of the type of research (e.g., qualitative, quantitative, mixed, multi), philosophical assumptions and positionality stances are central as they will always position the scholar to serve dual roles as a researcher and a participant in coursework and/or research, even if objective distancing to the research participants is attempted. This means that graduate students’ unique experiences, voices, and worldviews guide research design, data collection, and interpretations of the findings; thus, this first-hand experience must be properly communicated in any submitted material (in class, as a peer-reviewed article, conference proceeding, and dissertation). As such, EEd expects transparency about the ways that Gen-AI has been used by a student or faculty in provided materials (e.g., highlighting the content generated from Gen-AI), documents with evidence of its use (e.g., screenshots with timestamps, citations, etc.), and explaining how a person’s unique ideas, experiences, or thoughts were not biased as a result of AI involvement. This transparency will help ensure that the individual is still being held accountable by the Honor Code and that they are abiding by the university’s academic integrity rules and guidelines.

Regarding coursework, the student and faculty are reminded that they still must abide by the Institutional Review Board and Family Educational Rights and Privacy Act (FERPA), as applicable. More details can be found at the University Registrar at [Institutional Review Board » University of Florida \(ufl.edu\)](#); [FERPA - Office of the University Registrar \(ufl.edu\)](#).

If a student or faculty’s scope centers around gathering validity and reliable evidence for creating an AI tool or technique and it is central to the completion of their degree requirements, they will need to make sure they are meeting proper university and Graduate School policies such as ethical, copyrighting, intellectual property, authorship, and fair use guidelines and written, documented evidence should be included in said publication or degree document. Additional information can be found on the library webpage: [Copyright Concerns of Students - Copyright and Fair Use - LibGuides at Atla](#) and UF Innovate at [Home - UF Innovate \(ufl.edu\)](#).

3.12 Guidelines for Research and Publications

All research must be conducted ethically and in accordance with the university Honor Code, IRB, and mandates responsible conduct of human research (e.g., CITI). Ethics in research include protection of human subjects, protection of copyrightable and patentable material, appropriate inclusion of co-authors, and selection of reputable publication venues. Some resources are listed:

- [A Guide to Responsible Conduct in Research](#)

- [The responsible conduct of research, including responsible authorship and publication practices](#)
- [Tips for determining authorship credit \(apa.org\)](#)
- [Caught in the Trap: The Allure of Deceptive Publishers, Predatory Publishing](#)

Determining who should be included as co-authors on publications and the authorship order can be especially difficult. In general, co-authorship should be restricted to those who have made an intellectual contribution and worked on the given publication. Different disciplines have varying expectations on what counts as authorship. For example, in some disciplines, a person who only collected data would not be included as a co-author, while in other disciplines, they would. The best practice is to discuss what counts towards co-authorship with your faculty advisor at the beginning of any project, not at the time of publication preparation, to ensure expectations are clear to all research team members. In all cases, courtesy authorships should be avoided at all times during your program. For example, members of a Ph.D. or M.S. supervisory committee typically should not be listed as co-authors as a part of serving on that committee, unless the student and faculty advisor agree that their contribution has been substantial. EEd has created a LibGuide that includes information about authorship, including authorship agreements and proper acknowledgment of contribution to a given publication: [Getting Started @ The Libraries - Engineering Education & Research - Guides @ UF at University of Florida \(ufl.edu\)](#).

4. EEd-SPECIFIC PH.D. REQUIREMENTS

4.1 EEd Ph.D. Course Requirements

For the EEd Ph.D. degree, at least 90 credit hours beyond the bachelor's degree are required. These hours include EEd master's degree work taken at the University of Florida or, if approved, up to 30 credit hours of master's degree work earned at another approved university outside UF. Course substitutions must be petitioned, and restrictions may apply if your undergraduate degree was attained outside the U.S., the degree has exceeded 7 years from the time of receipt, or there is a disciplinary college transfer (see section 4.2). In these cases, the student is recommended to first receive orientation from the department, the Graduate School, and the University Registrar on the procedures for handling these types of transfers.

The approved EEd courses and descriptions are available in the [Graduate Catalog](#). Petitions to change these courses must be sent to the Graduate Coordinator (with faculty advisor prior knowledge), who will send the request to the Graduate Affairs Committee, which will review the petition and vote. The Graduate coordinator will notify the petitioner about the outcome of the Petition, and will send such result to the Academic Assistant II, who will keep the file of this student and if needed, will notify further this result to the Graduate School and, will follow other university approval procedures, if applicable.

As mentioned above, students must complete a total of 90 Credits for graduation, of which 41 credits are required courses.

EEd Core Courses (15 credits)

- EGS 6050: Foundations in Engineering Education (3 credits)
- EGS 6054: Cognition, Learning, and Pedagogy in Engineering Education (3 credits)
- EGS 6051: Instructional Design in Engineering Education (3 credits)
- EGS 6020: Research Design in Engineering Education (3 credits)
- EGS 6012: Research Methods in Engineering Education (3 credits)

EEd Experiential Courses (5 credits)

- EGS 6930: Engineering Education Seminar - required registration for one semester, attendance required for the entire program (1 credit)
- EGS 6940: Preparation for Engineering Education Research to Practice Experience (1 credit)
- EGS 6949: Research to Practice Experience in Engineering Education (3 credits*)

Some important notes on the Graduate Seminar and the Research-to-Practice Courses:

EGS 6930 is a 1-credit, registered graduate EEd seminar course offered every semester. See additional details about the seminar in section 4.3

** EGS6940 is a corequisite of 6949; therefore, students can take it before or concurrently with EGS6949.*

** EGS 6949 is a variable credit course, which means a student can take three (3) credits in one semester, one (1) credit for three (3) semesters, or another combination if the total number of credits completed for this course is three (3) credits. If the student opts to take this route, they need to first consult with their faculty advisor and then initiate an approval process to ensure the number of credits is appropriate with the Graduate Academic Advisor and the Graduate Coordinator.*

EEd Elective Requirement (6 credits)

Students must take six (6) credits of graduate courses related to their dissertation research topic and/or career goals. The courses must be approved by the student's faculty advisor.

Disciplinary Engineering Core courses (15 credits)

This requirement may be waived if a student is admitted with a master's in an engineering discipline or computer science. The student must petition this waiver with the Academic Assistant II, who will forward the petition to the Graduate School for their approval. This process could take up to a year.

Option 1:

Students must take 15 credits of graduate courses in a single engineering or computer science engineering discipline. At least nine (9) credits must be at the 6000 level. The courses must come from the same engineering department and be valid for completing a minor in that engineering discipline. The student is not required to complete the minor; however, they must ensure that the 15 credits will be accepted toward their minor. Finding the courses and requirements is the students' responsibility.

Option 2:

Engineering core courses: Students must take at least 9 credits of graduate courses in a single engineering or computer science engineering discipline. All these credits must be at the 6000 level. Similar to option 1, courses must come from the same engineering department and be valid for completing a minor in that engineering program.

Cognate courses: students must obtain their advisor's approval and take 6 credits through courses in a non-engineering department at the 6000 level or higher.

In addition to the 41 required credits, students must complete 49 additional credits that include:

EEd Advanced Research for Doctoral Dissertation (3 to 99 credits)

- Advanced Research Credits are open to doctoral students who have not yet been admitted to candidacy, which occurs after successfully completing the proposal exam.
- Students must complete at least three credits in EGS 7979
- Students enrolled in EGS 7979 during the term they qualify for candidacy will stay registered at this level unless the academic unit elects to change their enrollment to Research for Doctoral Dissertation (EGS 7980). Consult the EEd Graduate Coordinator if you would like to be considered for this change.

EEd Research for Doctoral Dissertation (3 to 99 credits)

- Students must approve a minimum of 3 credits in EGS 7980.

Optional: Students can take credits in disciplinary courses outside of the EEd Department.

- Courses must be aligned with a student's research area, as approved by the faculty advisor.
- Students may petition the graduate affairs committee to approve substitutions for coursework and credits.

*** Recall that the proposal exam and the dissertation defense must be in different semesters and must follow Graduate School guidelines and timelines.**

Notes:

See the Proposal Exam sections for details on admission to candidacy and refer to the Graduate School for candidacy procedures.

Doctoral students can enroll in EGS 7979 at any time before being admitted to candidacy. If they qualify for candidacy while enrolled in EGS 7979, they will remain in this course unless the department changes their enrollment to EGS 7980 for students admitted to candidacy.

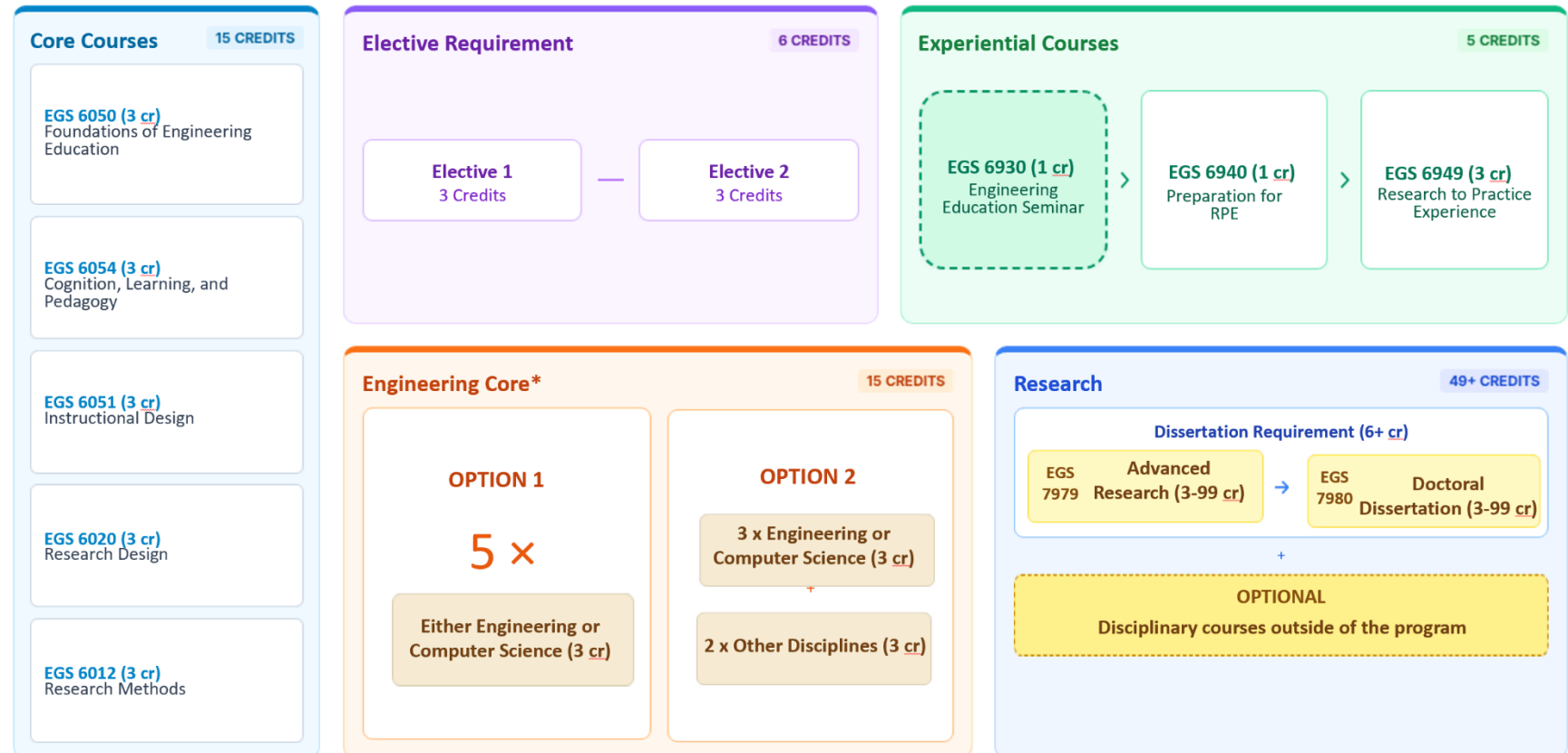
Both EGS 7979 and EGS 7980 are variable credit courses, offering up to 12 credits per semester. These courses are graded on a satisfactory/unsatisfactory (S/U) basis instead of letter grades. All credits from these courses count towards the degree.

If a doctoral student transfers between departments at UF, they may need to petition to transfer these credits. Generally, the Graduate School does not approve transfers of courses without letter grades. For more details, refer to the Graduate Catalog under Doctoral Requirements: [Graduate Degrees < University of Florida \(ufl.edu\)](https://www.ufl.edu/graduate/degrees/).

Below, in Figure 1 you can find a visual representation of the course required to complete the PhD in Engineering Education.

PhD in Engineering Education

90 Credits Total



* Engineering Core course selection requires faculty advisor approval based on chosen concentration track.

Doctoral Degree Overview Diagram

Figure 1 – Overview of the PhD in Engineering Education requirements

4.2 EEd Experiential Courses

Like a capstone course, the goal of EGS 6940 and EGS 6949 is to provide graduate students with the opportunity to practically apply what they have learned in class to a real engineering education environment. This experience should also allow the student to gain additional professional and lifelong skills, such as effective communication, collaboration, professional etiquette, and project/time management. During the experience, students are expected to translate what they have learned in core EEd and/or elective EEd courses (e.g., educational theory, research design) into practice experiences (e.g., classroom, industry, government/ policy, or consulting experiences). The experiential experience can occur at UF or an external site (industry, government agency, non-profit, etc.). See the restrictions for international graduate students on this matter, which were previously mentioned in the handbook.

This experiential experience must be completed after the first academic year but before graduation. The experience can be done after all EEd core coursework has been completed. Before or during the experience, students must be enrolled in EGS6940, Preparation for Engineering Education Research to Practice Experience. Also, students must be registered in EGS6949, Research to Practice Experience in Engineering Education, have obtained a placement letter from the sponsor, and have had faculty advisor approval prior to registering for this course. Please note that time taken away from the experiential experience must be discussed with the faculty advisor to ensure that the graduate student is still meeting the 20-hour/week requirement and not exceeding it (see section 3.1). It is generally recommended that these types of experiences should not exceed the number of credit hours the graduate student enrolled for in that semester (e.g., one credit hour is equivalent to 1-3 hours of effort), but it is best to discuss with the faculty advisor first. Further details of the requirements and assessments for the research-to-practice experience are provided in the EGS 6940 and EGS 6949 syllabi.

4.3 EEd Graduate Seminar Course

Graduate seminars inform students of new developments in engineering education and the breadth of research conducted. It is also a venue for the department to provide professional development that can be included in your yearly IDP and career formation (section 4.6). It is critical to the success of our department that all seminars are well attended in person. Therefore, Ph.D. students are expected to register for the EEd Graduate Seminar at least once during their PhD and to attend the EEd Graduate Seminar (EGS 6930) whenever it is offered while they are enrolled in the program. Students will receive seminar announcements from department staff; however, they are expected to regularly check their UF email accounts to stay informed about upcoming seminars. Ultimately, students are responsible for their own attendance.

The graduate seminar may vary by semester, depending on the faculty leading the seminar. In general, it can include several training options such as (but not limited to) in-campus training, in/out-of-campus invited speakers, graduate student talks, faculty talks, and special guests or panels. These opportunities are career-forming and enlightening as future career goals are considered and IDPs are completed. Graduate students are welcome to propose invited speakers to the seminar by speaking with the faculty appointed to lead the seminar for a given

semester. Earlier proposals for speakers before the semester start are welcome, as guests may have scheduling conflicts or need alternate accommodation (e.g., virtual) to attend.

4.4. Transferring Credits to Meet EEd Course Requirements

If you're a UF graduate student and want to transfer credits earned **after** being admitted to your program, here's what you need to know:

1. How to Start the Petition

- Submit your request through your department, typically to the Academic Assistant II (Also might be submitted through the Graduate Coordinator, Associate Chair of Research, Academic Advisor, or Supervisory Committee Chair). The request needs to be sent to the students' faculty advisor, and the faculty advisor will then make the request for the credits to be transferred.
- They request the appropriate mechanism for course transfer (e.g., Master's Degree Acknowledgement) in coordination with the college and Graduate School for review and approval.
- You must include:
 - A full course description of the courses you want to transfer
 - A transcript showing the grade earned in English
 - Any other supporting documents

Note: You cannot submit this petition on your own. It must go through department channels. Allow enough time for processing; it could take a minimum of a year.

2. What Can Be Transferred

- You can transfer **up to 30 credit hours** from a UF master's degree (not awarded by the EEd department) toward your Ph.D.
- If you have a master's and additional Ph.D. coursework from another school, you may be able to transfer **up to 15 more credits**, but the total cannot exceed **30 credits**.
- Only courses with a grade of **B or higher** are eligible.
- Grades from transferred courses **won't affect your UF GPA** unless the courses are taken at UF.

3. Special Cases

- Courses taken as an **undergraduate, postbaccalaureate, or non-degree-seeking student** may be transferred if:
 - They were not used for another degree
 - You provide proof of this
- You can transfer up to **15 credits** of UF/EDGE non-degree graduate coursework.

4. Restrictions

- Courses older than **7 years** from your admission date may not count.
- Courses from **continuing education or non-degree programs** usually cannot be transferred.

- Credits **cannot** be used to meet the **49 Advanced Research for Doctoral Dissertation** credit requirement.
- If your previous school used a trimester system, credit hours may be adjusted (e.g., 3 trimester credits = 2 UF credits).

5. More Info

- Always check the latest Graduate School policies, which may override department rules.
- For full guidelines, visit: Petitions - The Graduate School - University of Florida.

[Graduate Degrees < University of Florida \(ufl.edu\)](https://grad.ufl.edu).

4.5 EEd Ph.D. Course Progress Tracker

It is recommended that all students create a course progress tracker and/or ask the Graduate Academic Advisor for a template to use. We recommend Excel or a simple-to-use and share program, as the graduate student may need to present this tracker document to their faculty advisor and Graduate Academic Advisor each semester.

The following representative example assumes the course progression of an EEd graduate student whose first semester was in the fall term. These schedules may vary, so the student is encouraged to share with their faculty advisor and the Graduate Academic Advisor.

	Fall	Spring	Summer
Year 1	EGS 6050 (3 cr) EGS 6020 (3 cr) EGS 6054 (3 cr)	EGS 6051 (3 cr) EGS 6012 (3 cr) Disciplinary (3 cr)	Disciplinary (3 cr) Research (3 cr)
Year 2	Disciplinary (3 cr) Elective (3 cr) Research (3 cr)	Research Credits (9 cr)	Elective (3 cr) Research (3 cr)
Year 3	<u>EGS</u> 6940 (1 cr) Disciplinary (3 cr) Seminar (1 cr) Research (4 cr)	EGS 6949 (3 cr) Disciplinary (3 cr) Research (3 cr)	Research (6 cr)
Year 4	Research Credits (9 cr)	Research Credits (9 cr)	

4.6 Individual Development Plan

Individual Development Plans (IDP) are required for UF Ph.D. students. The IDP is required to be updated annually per UF policy. The policy and deadlines, along with templates and guidelines, can be found here: <https://grad.ufl.edu/work/idp-policy/>.

An IDP should be viewed as a dynamic document periodically reviewed and updated throughout an individual's training. IDPs are of proven value at any stage, from the undergraduate to the postdoctoral level. The individual development plan (IDP) is a tool to help in this planning process and to facilitate communication between mentees and mentors. While it is not a formal requirement, EEd recommends that the graduate initiate one or more progress meetings with the supervisory committee members and chair during a period between the proposal exam and the Ph.D. dissertation, as they allow. These meetings can be not just about the progress of obtaining the Ph.D., but can be used as a mentoring guide to support any future career plans and to inform later iterations of the IDP. Please consult with your faculty advisor before initiating any meetings with the committee members.

4.7 Required Training and Certifications

In the Department of Engineering Education, graduate students are expected to complete the required and relevant Institutional Review Board certifications (IRB-01, IRB-02, and/or IRB-03) for human subjects or clinical research. Training information can be found in [myIRB at Required Training for UF IRBs » Institutional Review Board » University of Florida \(ufl.edu\)](#), and [CITI RCR Training – RCR \(ufl.edu\)](#). UF CITI Responsible Conduct of Research Trainings may need to include Social and Behavioral Research Investigators and Key Personnel, as well as Responsible Conduct of Research for Social and Behavioral Science Trainings per federal agency mandates. Please provide evidence of completion of these trainings and certificates to their faculty advisor, as they will need to keep a copy for grant auditing purposes. Also, graduate students should consult with their faculty advisor on additional training or certifications required for their labs.

4.8 Doctoral Dissertation Supervisory Committee

All graduate degrees must have a graduate faculty (supervisory committee chair) overseeing a student's program of study and progress in the student's home department. This oversight authority is accomplished by a formal supervisory committee, which the Graduate School monitors as part of degree certification using information entered by the Graduate Information Management System (GIMS). Doctoral degree-seeking students must establish a supervisory committee by the end of their second semester in the program. Students must complete the EEd Supervisory Committee Form and submit it to the Academic Assistant II. The following section describes who is eligible to serve on supervisory committees, adapted from UF's Graduate Degrees (once on the Graduate Degrees webpage, follow this path: [Graduate Catalog < Graduate Degrees < PhD and other Doctoral degree requirements \(ufl.edu\)](#)).

The supervisory committee for a doctoral candidate comprises at least four members if the PhD student has no minor, and five if they have a minor. These members must have Graduate Faculty Status ([see the UF membership key terms and policies here](#)):

- A chair (who must have graduate faculty status in the Department of Engineering Education)
- A co-chair or member (who must have graduate faculty status in the Department of Engineering Education)
- A member (who must have graduate faculty status in any UF unit, including the Department of Engineering Education)

- An external member (who must have graduate faculty status in any UF unit except for the Department of Engineering Education)
- Faculty, experts, or other people outside of UF may be made official members of a student supervisory committee through the special appointment process. The chair of the student's supervisory committee requests the special appointment via GIMS. Members appointed by special appointment do not count toward the minimum number of supervisory committee members. For more detailed information, please consult the UF Graduate School, [Graduate Policy Manual](#).
- If the PhD student has a minor, the committee must include a representative from the student's minor. If the PhD student elects more than one minor, each minor area must be represented on the supervisory committee.

[Special appointments](#) enable qualified individuals who do not have graduate faculty status at UF to serve as guest experts on supervisory committees. They are made individually, on a case-by-case basis, per request to the Graduate Coordinator, who submits the request for vote and approval of the EEd Graduate Affairs Committee. Special appointments do not count toward the required minimum of members for a valid supervisory committee (which must be filled by current UF faculty with graduate faculty status), and they cannot serve as chairs, co-chairs, or externals on supervisory committees (only as members).

If the graduate student, as part of their IDP and career goals, intends to pursue a disciplinary minor along with the Ph.D. degree, one of the supervisory committee members must have graduate faculty status in that minor's home unit. If the graduate student is pursuing more than one disciplinary minor along with the Ph.D. degree, the supervisory committee must have a graduate faculty member from each minor's home unit.

Changes to the supervisory committee must be made in consultation with the supervisory committee chair and/or the Graduate Coordinator. Changes are allowed up to the midpoint deadline of the semester when the student plans on graduating, so long as their final defense has not taken place. No changes are allowed after the defense. If a student would like to change their supervisory committee chair to another faculty member within EEd, they will need to follow the same process above, unless there are reasons for concern in communicating with the supervisory committee chair, at which point the Graduate Coordinator and/or Associate Chair for Research may need to be involved. If a student is interested in changing their supervisory committee chair to someone without graduate faculty status in EEd, they must consult with the Graduate Coordinator about policies to admit said faculty member into said graduate faculty status. Note that pursuing an alternate supervisory committee chair may result in changes to funding status.

4.9. EEd Ph.D. Exams Procedures

During the Ph.D. process, you will complete three exams: a qualifying exam (private, closed to supervisory committee members), a proposal exam (private, closed to supervisory committee members; sometimes known as the comprehensive exam), and a Ph.D. dissertation exam (public for general audiences with a private component with supervisory committee members). Per Graduate School guidelines, all three graduate examination stages (the qualifying exam, the proposal exam, and the dissertation exam) include an oral and written component. Each exam is designed to support graduate students' progression until degree completion. However, there are some considerations to make for each stage of the process.

4.9.1 Policy on Physical Presence for all graduate degree examinations (e.g., qualifying, proposal, and dissertation)

Following the [UF Graduate School policy](#), which affirms the value of in-person participation in the examinations noted, while acknowledging current transitions in educational delivery modes, and since the PhD program is offered on campus and in general uses a traditional in-person mode for the delivery of curriculum content, the final examination is preferred to be in-person. However, the qualifying Oral proposal and the oral defense of the dissertation may be conducted using video and/or other appropriate forms of telecommunication. Still, the candidate and the supervisory committee chair or committee co-chair must be physically present together at the same location. With the approval of the entire committee, other members may attend the defense remotely, using modern communication technology.

4.9.2 Policy on Citation Styles used for Ph.D. examinations. APA or IEEE Citation style, the two primary citation styles for research in our discipline, is expected throughout the written portion of the response document, and it is recommended that a citation manager be used when converting between citation styles (e.g., EndNote, Zotero, Mendeley, Sciwheel, etc.). Discuss with your dissertation chair and supervisory committee the appropriate style to use for this document.

4.9.3 Qualifying Exam (#1)

Purpose: The qualifying exam is aimed at supporting your identification, justification, and narrowing down of your research topic.

Eligibility & Timeline: The qualifying exam typically occurs in the semester after all EEd core courses have been completed, but it can be taken earlier or later as determined by the student and their faculty advisor. The student should consult with their faculty advisor to schedule the exam and devise a plan to prepare for it.

A qualifying exam should generally have been completed within 2 years of entering the graduate program, with up to 2 attempts to pass. This qualifying exam may be taken earlier or later, as determined by the student and their faculty advisor. Before going this route, it is recommended that the graduate student verify with the Graduate Academic Advisor and the Graduate School to ensure all procedures, policies, and timelines are met.

Process: The EEd Qualifying Exam, prepared and evaluated by the full supervisory committee or the major and minor academic units and under the leadership of the supervisory committee chair, is written and oral and covers the major and minor subjects. This exam process involves a white paper and written and oral responses to supervisory committee questions.

Specifically, the qualifying exam process consists of an initial, unofficial introduction of the proposed topic to the supervisory committee so that these committee members can create a set of written questions for the student to answer in a follow-up meeting. Typically, the student will submit a 1-to 2-page white paper to their supervisory committee at least 1-2 weeks before the initial meet-and-greet convening. The white paper should describe the graduate student's research motivation for the topic, the intended population, the tentative research questions, and/or the hypothesis. While not required, it is recommended that the graduate student include a few sentences about the preliminary research design (it is suggested that this preliminary research designed is no longer than 3 additional pages). This will ensure doctoral students receive targeted questions from the supervisory committee to inform and equip them for the next exam (the

proposal exam). Content derived from the qualifying, as applicable, can be used in proposal and dissertation documents.

During the initial meet-and-greet convening that was scheduled by the graduate student in coordination with the supervisory committee, the student will provide a brief overview of the research topic. The faculty advisor, as needed, will explain the examination procedures to the supervisory committee and the steps to follow. Each supervisory committee member can ask questions in this informal meet-and-greet, but with the understanding that this initial meeting is unofficial. The supervisory committee members will then have a week to propose some questions that they would like the graduate student to respond to in writing.

Supervisory committee questions should be broad and open-ended, requiring the student to demonstrate knowledge of the literature and a holistic understanding of engineering education theory, methodology, methods, and topics. Typically, question topics are connected to or can expand beyond the scope of the dissertation topic. These questions may be multi-part to ensure the question's intent is clear. The supervisory committee's questions will be screened by the supervisory committee chair for appropriateness. One question (with or without sub-parts) per committee member, including questions from the supervisory committee chair, would be sent to the student. The students will have 3 weeks from the moment they have received all supervisory committee questions to provide a written response (with proper citations) addressing the supervisory committee members' questions. The student may consult books, literature, and other written sources, but may not collaborate with other people, including the members of their supervisory committee. Please note that students are not expected to work only on the qualifying exam during this time, but they are still expected to participate in their classes, attend meetings, and/or continue with their other responsibilities.

Written answers are submitted to the dissertation chair and supervisory committee by the exam's due date (3 weeks post the initial meet-and-greet convening). The response document should include a 3-5 page response to each question; the document in its entirety should be single-spaced, 12-point font, and have a 1-inch margin all around.

The student should have also pre-identified an agreed-upon date with the supervisory committee to meet and discuss the response document orally. No more than 1-2 weeks from the moment the student provides the written response document, the oral presentation should take place. The qualifying exam portion will be an oral summary of the student's response document (in either a presentation mode or in the form of an informal conversation) with the supervisory committee. The supervisory committee will ask questions to clarify or expand on the student's answers to assess the student's depth of knowledge. The exam meeting typically takes 60-90 minutes. The committee will decide if the student has passed, conditionally passed, or failed. Upon satisfactory completion of the written and oral justification of the student responses, the supervisory committee will sign pertinent forms routed by the Academic Assistant II to the Graduate School.

- **Pass:** The student has successfully passed the qualifying exam.
- **Conditional:** Answers require revisions to be satisfactory. The committee has the discretion to determine the scope and timeline for revisions.
- **Fail:** The committee has deemed the answers sufficiently lacking to fail the student. If this is the first attempt at the qualifying exam, the student will have a second opportunity to take the qualifying exam in the next semester. In this case, the qualifying

exam questions may differ from those on the first attempt. If the student fails the second attempt, they will not be admitted to candidacy and will no longer be in the Ph.D. program.

Withdrawal Policy: Students who have begun the qualifying exam may withdraw their attempt up to one week before the submission deadline. The early withdrawal will not count against the student as one of their two attempts at the qualifying exam, but a student may only employ the withdrawal option once and must wait until the following semester to take the exam again.

4.9.4 Proposal Exam (#2)

Purpose: The proposal exam (sometimes referred to as a comprehensive exam) serves two purposes: (1) to demonstrate how your methodology, research design, and methods tie to your proposed research topic, typically built upon from the qualifying exam, and (2) to outline data collection and analysis strategies of the proposed study. The goal is for the graduate student to paint a landscape of the entire research study before being approved by the supervisory committee. The proposal exam is a precursor to the dissertation document (written component) and the dissertation defense process (oral component).

Eligibility & Timeline: The proposal exam typically occurs the semester after the qualifying exam or during a break period in which the student was enrolled at least in one of the terms of the break period. While the specific timing of the qualifying exam and the proposal exam may vary by department, it is generally possible to take the qualifying exam and proposal exam during a summer term (e.g., Summer A and Summer B, respectively). Otherwise, the proposal exam will be associated with the term immediately following the break period after successfully passing the qualifying exam. Per Graduate School guidelines, graduate students must be admitted to candidacy no later than the mid-point of the semester before the semester of graduation. This will ensure the requirement of two semesters prior to graduation is met.

Once the qualifying exam and proposal exam are completed to the satisfaction of the supervisory committee, the Academic Assistant II will route a document to the supervisory committee for signatures. Once signatures are collected, the form will be entered into GIMS, at which point the student will be recorded as having advanced to candidacy status per Graduate School guidelines.

A graduate student is considered a Ph.D. candidate after completing the proposal exam and submitting the pertinent documentation from the department and the Graduate School. Please note that students must be admitted to candidacy for at least two semesters before graduation. Students can count the semester they are admitted to candidacy if they complete their oral qualifying exam by the midpoint deadline of a semester. The midpoint of the term is determined by the Graduate School and is published in its “Deadline Dates.”

Process: The proposal exam consists of a written and oral component. The structure of the written proposal is flexible and can be tailored to meet the specific needs of the student’s proposed research. To help you situate the research process that should be documented in this proposal exam, a general map of the research process (Figure 2) is summarized below (provided with permission from Dr. Villanueva Alarcón). Please note that not all elements described in this research process (Figure 2) must be outlined in this way. The graduate student is encouraged to discuss with their faculty advisor the best approach for the proposal exam:

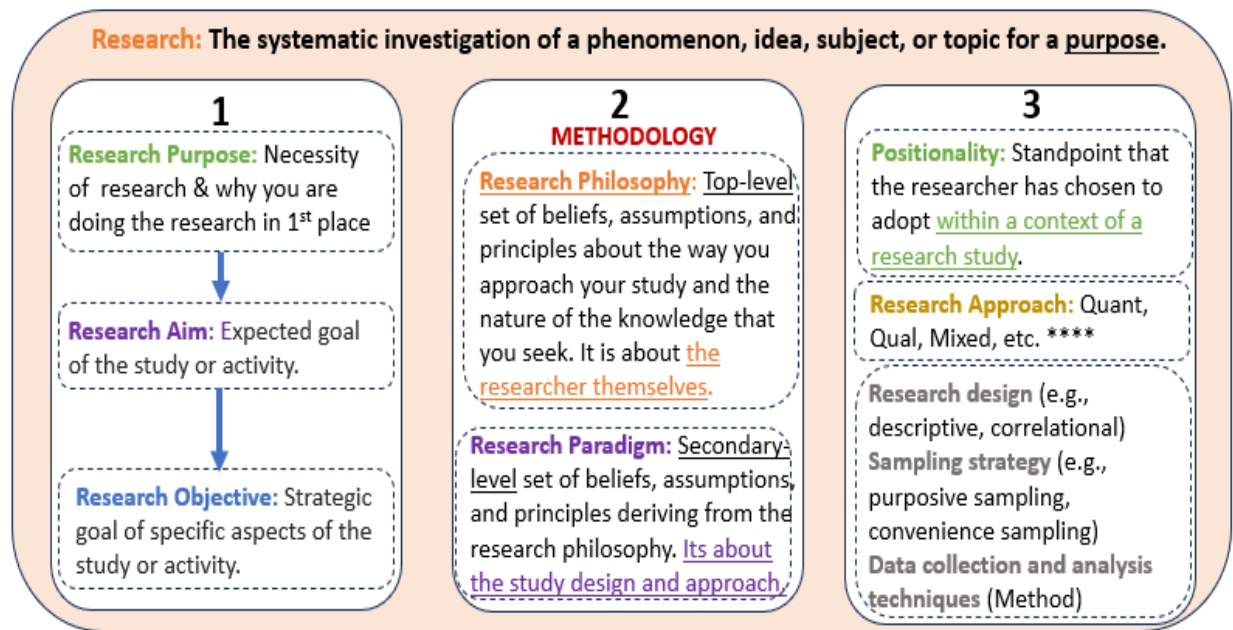


Figure 2. An overview of the research process applicable to engineering education; note that asterisks represent an intermediate step (literature review) and are shown in Figure 2.

In general, the sections of the written proposal exam should address the following:

- **Research Purpose or Motivation**– Why is the research project important? How might it contribute to engineering and computing education?
- **Literature argument** – What work has previously been done in this area? Where will the project be situated in the literature once completed? How will the project enhance and/or shape the literature?
- **Theoretical, conceptual, or other types of framework (as appropriate)** – How does a particular theory or combination of theories (theoretical framework) help the student frame and conduct the project? How are these frameworks visually represented (conceptual framework) to show relationships and pathways of identified constructs? What other frameworks (e.g., analytical, methodological, pedagogical) may represent the study design and topic you are seeking to better understand? Refer to the following documents as starting points:
 - Borrego, M., Foster, M. J., & Froyd, J. E. (2014). Systematic literature reviews in engineering education and other developing interdisciplinary fields. *Journal of Engineering Education*, 103(1), 45-76. <https://doi.org/10.1002/jee.20038>
 - Magana, A. J. (2022). The role of frameworks in engineering education research. *Journal of Engineering Education*, 111(1), 9-13. <https://doi.org/10.1002/jee.20443>
- **Pilot Study (as appropriate)** – What preliminary work has been conducted to support the research plan? How does this work guide the research design? Alternatively, what would a pilot study look like in your dissertation? What would this pilot study entail?
- **Research Question and/or Hypothesis**- What is the research question and/or hypothesis you are aiming for in your study?

- **Research design** – How will the study be conducted? What are the methodology, sampling, methods for data collection, and data analysis plans? How will the student ensure appropriate research quality, validity, and/or reliability? What is the project timeline?

For the literature argument section of the proposal exam, the graduate student must select and properly justify the type of literature review chosen. The reference below provides an overview of the main types of literature reviews (this is not a comprehensive list but rather a starting point):

- Borrego, M., Foster, M. J., & Froyd, J. E. (2014). Systematic literature reviews in engineering education and other developing interdisciplinary fields. *Journal of Engineering Education*, 103(1), 45-76.
- Kitchenham, B. (2004). Procedures for performing systematic reviews. *Keele, UK, Keele University*, 33(2004), 1-26.
- Paré G, Kitsiou S. Chapter 9: Methods for Literature Reviews. In: Lau F, Kuziemy C, editors. *Handbook of eHealth Evaluation: An Evidence-based Approach* [Internet]. Victoria (BC): University of Victoria; 2017 Feb 27. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK481583/>
- Peterson, J., Pearce, P. F., Ferguson, L. A., & Langford, C. A. (2017). Understanding scoping reviews: Definition, purpose, and process. *Journal of the American Association of Nurse Practitioners*, 29(1), 12-16.
- Fernandez, K., Buhler, A. G., & Rivera-Jimenez, S. M. (2023, June). Methods for Conducting a Scoping Literature Review on Institutional Culture and Transformational Change in Engineering Education. In *2023 ASEE Annual Conference & Exposition*.

Further support for literature reviews can be coordinated with the EEd Academic Librarian. Also, refer to the EEd libguide under the “Searching the Literature” tab for more assistance:

- [Getting Started @ The Libraries - Engineering Education & Research - Guides @ UF at University of Florida \(ufl.edu\)](#)

Please note that, depending on the topic's exploratory nature, this literature review process can be considered part of the Ph.D. dissertation document's pilot study. Please consult with your faculty advisor regarding the appropriate placement of said literature review.

Misconceptions Note: Please note that a research design is not a research approach! A research approach in engineering education can constitute a quantitative, qualitative, mixed-methods, multi-method, or multi-modal approach. A research design includes additional elements based on the research approach. Examples of qualitative research designs can include narrative inquiry, case study, grounded theory, phenomenology, and others. A quantitative research design can be a truly experimental, quasi-experimental design, or a non-experimental design. A mixed-methods design can be concurrent, sequential, explanatory, sequential exploratory, among others. Please note that for each research design, there are specific philosophical assumptions, theories or theoretical frameworks, conceptual frameworks (if applicable), framing of research questions and/or hypothesis, validity and reliability evidence and threat considerations, procedures for data collection and analysis, ethical guidelines, and guiding practices that need to be followed according to the recommended literature.

Also, a methodology is not a method! A methodology is a clearly justified and cited rationale for the connections between elements of the research process, including the research

design, its approaches, and methods. Again, please use proper terminology and connected literature to describe these important components.

Length of Written Proposal Exam: There is no required length for the proposal. Students should work with their advisors and dissertation committee to determine the exact length. The proposal exam typically occurs in the semester after the qualifying exam is completed, but can be done later as determined by the student and their faculty advisor. Students are strongly encouraged to consult their advisor and supervisory committee while writing the proposal. Students are encouraged to follow APA style guidelines as they write the proposal exam.

Oral Proposal Exam Component: The oral proposal exam should be a summary of the written proposal exam in an oral presentation format and should be shared with the committee two weeks before the pre-established oral presentation date. It is the student's responsibility to schedule the time and location of the oral proposal exam. The proposal exam oral presentation should be scheduled for 90 minutes, at a minimum. All supervisory committee members must physically be present per Graduate School guidelines (section 4.9.1).

For the oral component of the proposal exam, the supervisory committee chair and members will ask the graduate student additional questions that may have come up as they read the written proposal document. Once the supervisory committee has finished asking questions and the graduate student has provided their responses, the student will be asked to leave the room while the committee discusses the results, including the written proposal document. Possible results are:

- **Pass:** The student has successfully passed the proposal defense and is admitted to Ph.D. candidacy.
- **Conditional:** The written proposal requires revisions to be satisfactory. The committee has the discretion to determine the scope and timeline for revisions.
- **Fail:** The committee has deemed the oral defense and/or written proposal insufficient to admit the student to the Ph.D. candidacy. In this case, the student will have a second opportunity to write the proposal and orally defend it in the next semester.

Once the qualifying exam and proposal exam are completed to the satisfaction of the supervisory committee, the Academic Assistant II will route a document to the supervisory committee for signatures. Once signatures are collected, the form will be entered into GIMS, at which point the student will be recorded as having advanced to candidacy status per Graduate School guidelines. Note

Students must be admitted to candidacy for at least two semesters before graduation. Students can count the semester they are admitted to candidacy if they complete their oral qualifying exam by the midpoint deadline of a semester. The midpoint of the term is determined by the Graduate School and is published in its "Deadline Dates."

4.9.5 Dissertation Exam (#3)

Purpose: The dissertation exam marks the culmination of the proposed study, from conception to design to collection to interpretation. Successful completion of the dissertation, in addition to meeting other department, college, and university requirements, marks your completion of the degree.

Eligibility & Timeline: There are several requirements to meet before the dissertation exam. First, the student demonstrate that they have completed all other degree requirements within the semester when the examination is held: all coursework on the Plan of Study will need to be completed with grades of C- or higher, and both the Plan of Study GPA and the overall GPA must be a 3.0 or higher by the end of the semester. Because some of the problem situations with deficient grades or credits require retaking courses or adding credits, the Plan of Study should be examined at the beginning of the semester in which a student plans to take the Final Examination. Second, the student should have attained candidacy status. Graduate students have the right to request a verification of candidacy by completing a Verification of Degree Candidate Status Form signed by the supervisory committee chair, department chair, college dean, and Graduate School Thesis, Dissertation, and Publication team (formerly known as the Editorial Office), which is then given to the Graduate Student Records for verification and processing. Third, they must be deemed ready to defend by the supervisory committee chair.

The typical duration of a final oral defense is, at most, two hours. The oral exam includes a discussion of the dissertation document, i.e., objectives, research design, and analytical procedures. The public presentation of dissertation research (including general audience questions) may be attended by faculty outside the supervisory committee, students, and guests as approved by the supervisory committee chair. This defense portion is recommended to last 45-60 minutes, with the remainder for questions. After public questions, the public will be asked to leave for a closed questioning period in which the PhD candidate will answer more questions from the Ph.D. dissertation committee. Once completed, the PhD candidate will be asked to leave while the committee deliberates. The PhD candidate will return to the room to be informed of the decision to pass/fail.

Process: The dissertation is the third and culminating exam of the Ph.D. degree. It consists of a written component where the graduate student (now a Ph.D. candidate) writes the entire dissertation according to the department and Graduate School requirements. This document is sent to the committee at least 2 weeks prior to the defense date. This allows the supervisory committee time to read the dissertation document and come ready with questions for the Ph.D. candidate on the date of the oral defense.

The dissertation defense is the oral exam component where the Ph.D. candidate summarizes the work provided in the written dissertation document to the supervisory committee and general audience. The oral presentation of the dissertation exams is open to the public, and audience members can ask the Ph.D. candidate questions at the end of the oral presentation. Since dissertation exams are open to the public, these dissertations must be advertised as soon as the exam is scheduled with the Graduate School. Students must submit their dissertation abstract (150-300 words) and their professional biography (50-100 words) to the Graduate Coordinator when they send the request to the Graduate School. The Graduate Coordinator then sends the announcement once the time and date are confirmed.

Once the public has asked their questions and received responses, the public is asked to step away for a private question-and-answer session with the supervisory committee. After the Ph.D. candidate has provided all responses to the supervisory committee, the Ph.D. candidate is asked to step away for a few minutes while the supervisory committee decides if they have completed the requirements of the Ph.D. degree. If applicable, the supervisory committee will

suggest some recommendations about the written dissertation document to attain full approval from the supervisory committee and the graduate school.

To pass the dissertation exam, the Ph.D. candidate must have a favorable vote with unanimous approval of the examining committee. If a committee member does not approve the dissertation, upon the faculty member's request, a written dissenting opinion can be bound with the final document. Successful passing of the oral presentation (with signed forms of the supervisory committee that is submitted into GIMS by the Academic Assistant II) plus the completely revised written dissertation document, approved by the Graduate School, and certified to the University Registrar, marks the official Ph.D. designation. Note that the Graduate School certifications for the Ph.D. degree to the university Registrar are done at the end of fall, spring, and summer C terms for all students who have completed their degree requirements and have applied to graduate.

Notes about the Written Dissertation Document: In EEd, there are two options for the written dissertation document: a Traditional Format and a Three-Chapter Format. The traditional format considers dissertation research as a single study that may include multiple phases or parts. The beginning and end of the dissertation include chapters that speak about the study conducted and its findings and implications. The three-paper dissertation format includes three peer-reviewed publications that together form a cohesive singular study; for this option, the graduate student is cautioned to follow the appropriate copyrighting requirements of their published or presented studies to be used in the final dissertation document. Refer to the Dissertation Exam section below for additional information. Below are more specific details about the written dissertation document per option.

- ***Basic Format Requirements for the Written Dissertation Document for both options:***
The Department of Engineering Education thesis or dissertation format will follow the basic format specifications for theses and dissertations at the University of Florida. For detailed information and examples about **the dissertation** specifications and the types of pages that must be included, please go to this [link at the Graduate School](#).
- **Option 1. Ph.D. Dissertation (Traditional Format):** The traditional format considers dissertation research as a single study that may include multiple phases or parts. As a minimum, the dissertation chapters should address the following aspects:
 - 1. Introduction:** This section should capture the motivation behind the research and clearly define the problem being addressed. Situating the gap in the literature on a national scale using national reports and existing literature is recommended.
 - 2. Literature Review:** Comprehensively reviews existing literature, presenting arguments, and discussing relevant studies. Properly categorize and justify the type of literature review conducted, as previously discussed in the handbook. This section should include relevant theories and frameworks pertaining to the study as previously discussed.
 - 3. Methodology:** Provide the following sections with proper justifications of their selections: Research question/hypothesis; Research design; Philosophical assumptions and interpretive paradigms; Positionality (stance) of the researcher; Ethics- specifically the ways that the researcher accounted for their biases and properly handling of participant information; IRB; Grant Funding the dissertation (if applicable); and any other information informing the conception of the study.

- 4. Methods:** Describe in detail all the study's steps, from sample size selection to participant population, to study context, to analytical approaches, and any other item integral to the study's conduct.
- 5. Results:** Discuss the results of the dissertation study by research question/hypothesis with graphs, tables, quotes, or other representations to support the findings.
- 6. Discussion:** Present the research findings and discuss their implications and significance.
- 7. Limitations:** Discuss the limitations in terms of generalizability/transferability, study population and/or site, sample size, methods, results, scope, or any other item identified by the Ph.D. candidate throughout.
- 8. Implications for Practice:** While EEd recognizes that not all work can be generalizable, it is expected that the Ph.D. candidate discusses the utility of the findings of the dissertation to the context of the study and infer ways it can impact the practice of teaching, learning, professional development, and/or other elements that represent the field of engineering and its disciplinary focus (if applicable). Include a section called “Recommendations” aimed at making suggestions on how the dissertation study can be improved in the future.
- 9. Conclusions:** Summarize the overview of the study, including key findings, implications, and recommendations for the future.

In collaboration with the supervisory committee, the Ph.D. candidate and their faculty advisor(s) could define the exact chapter titles, subtitles, and the number of chapters.

- **Option 2. Ph.D. Dissertation (Three-Paper Dissertation Format):** If a Ph.D. candidate decides to pursue this option, it *must be approved and signed by the Faculty Advisor and Supervisory Committee before proceeding*. The Academic Assistant II will route the signatures upon request.

The peer-reviewed publication format consists of several peer-reviewed publications (e.g., conferences, journals) that, when presented cohesively, form a collective contribution (refer to Figure 1) to the engineering education field, answering a larger research question. It is expected that UF PhD students will follow the guidelines provided for thesis formatting, not the style guidelines of the target publication venue. According to the [template offered by the Graduate School through UF IT](#), the basic requirements for a “Three-Paper Dissertation” are:

- Only one abstract that captures all elements of the entire dissertation document
- Only one list of references for the entire dissertation document
- A separate introductory chapter that weaves all pilot studies and articles into one cohesive justification
- A separate conclusion chapter that captures the main, cohesive points of the three studies
- Per Graduate School guidelines, for this option, a review of the current literature on the subject is included, whether it is a stand-alone chapter or a section of the introduction.

Below is a more detailed description of some of those sections:

1. **Introduction:** This section should capture the motivation behind the research and clearly define the problem being addressed. Situating the gap in the literature on a national scale using national reports and existing literature is recommended. This section should be presented as a common thread between the subsequent article-like chapters.
 2. **Literature Review:** The literature review section (which encapsulates the main point of the three articles) weaves literature from the three articles, presenting arguments and discussing relevant studies. Properly categorize and justify the type of literature review conducted from the three articles (if applicable). This literature review section should include encapsulating theories and frameworks that tie the three articles together, using the guidelines previously described in the handbook.
 3. **Subsequent Chapters (Minimum three):** Each chapter will briefly introduce the sub-questions or objectives that each article-like chapter addresses, as well as a condensed methodology, methods, and results section as described in Option 1.
 4. **Discussion:** Present the cohesive findings extracted from the three articles. The findings aim to capture the cohesive interpretation of the findings and how they connect with the literature review presented in the dissertation.
 5. **Limitations:** Discuss the limitations in terms of generalizability/transferability, study population and/or site, sample size, methods, results, scope, or any other item identified by the Ph.D. candidate throughout the three articles.
 6. **Implications for Practice:** While EEd recognizes that not all work can be generalizable, it is expected that the Ph.D. candidate discusses the utility of the findings of the dissertation to the context of the three articles and infer ways the findings across the three articles can impact the practice of teaching, learning, professional development, and/or other elements that represent the field of engineering and its disciplinary focus (if applicable). Include a section called “Recommendations” aimed at making suggestions on how dissertation studies can be improved in the future.
 7. **Conclusions:** Summarize the overview of the entire study across the three articles and include key findings, implications, and recommendations for the future. For this three-paper dissertation, the Ph.D. candidate should be aware that at least one of the articles must be published in a journal. Remember that as an EEd program requisite, at least one published paper is required for graduation. The remaining must be published, accepted, or submitted by the time of the defense. However, the Ph.D. candidate is encouraged to ensure that copyright agreements are properly handled. If unsure, refer to the Academic Librarian and LibGuides provided in the handbook for more information.
- **Basic requirements to submit dissertation document (either option):** The final document at the time of submission should follow the stylistic guidelines defined by the Graduate School. Students must submit their dissertation documents using GIMS, the Graduate Information Management System. For guidance on preparing the dissertation, see:
 - [Electronic Theses and Dissertations](#)
 - [UF Graduate Success Center](#)
 - [UF Computing Thesis and Dissertation Support](#)
 - [Theses & Dissertations - Copyright on Campus - Guides @ UF at University of Florida \(ufl.edu\)](#)

- **Basic Publication Requirements:** The dissertation will be published by UF through the UF Electronic Thesis and Dissertation Repository and [ProQuest](#). As part of this process, the student completes two publishing agreement forms. The UF publishing agreement specifies any embargo period on releasing the dissertation. This form is completed through GIMS. The ProQuest publishing agreement permits ProQuest to provide access to the dissertation after the embargo period. This form is completed by going to <https://www.etsadmin.com/login>.
- **Basic Copyright Information:** It is relevant to remember that under the U.S. Copyright Act, the copyright of a dissertation belongs to the PhD student. However, if the student publishes a manuscript in a conference or journal, typically, editors ask the authors to transfer the copyright of the paper to them. If that is the case, the Ph.D. student must first review the agreement signed with the publisher to see if it allows them to reprint the article in their dissertation. If such a reprint is not clearly stated, the PhD student must request permission from the publisher to “reprint” part or all of the article's content in their dissertation. Some publishers’ policies concerning reusing PhD students’ written articles in a dissertation are provided by Atla’s RIM repository ([see this link](#)). Also, if the published papers or dissertation is tied to funded work proposed by your faculty advisor, it is recommended that you both discuss intellectual contribution and authorship agreements after completion of your Ph.D. The student must acknowledge and cross-reference the original published work and outline the differences or adaptations in the dissertation document. For more information on copyrights, see <https://guides.uflib.ufl.edu/copyright/copyrightgradstudents>.

5. M.S. with Thesis Requirements

5.1 Course Requirements

For the M.S. degree with a thesis, at least 30 credit hours beyond the bachelor’s degree are required. These hours include, if approved, up to nine (9) hours of master’s degree work earned at another approved university outside UF. Course substitutions must be petitioned and are considered on a case-by-case basis.

Required courses are in the following areas:

- EEd Core Courses: 15 credit hours
- Research Requirement: 6 credit hours
- Elective Requirement: 9 credit hours

The courses associated with each of these areas are given below. Course descriptions are available in the [Graduate Catalog](#).

EEd Core Courses (15 credits)

- EGS 6050: Foundations in Engineering Education (3 credits)
- EGS 6054: Cognition, Learning, and Pedagogy in Engineering Education (3 credits)
- EGS 6051: Instructional Design in Engineering Education (3 credits)
- EGS 6020: Research Design in Engineering Education (3 credits)
- EGS 6012: Research Methods in Engineering Education (3 credits)

Research Requirement (6 credits): Students must take six (6) credits of EGS6971, Research for Master's Thesis. Note that the Graduate School will only count a maximum of 6 credits of 6971 towards a master's-level degree.

Elective Requirement (9 credits): Students must take nine credits of graduate courses related to their thesis research topic and/or career goals. The courses must be approved by the student's advisor. Note the following Graduate School rules: A graduate student at UF may take no more than 5 credits each of 6910 (Supervised Research) and 6940 (Supervised Teaching). Students who have taken 5 credits of 6910 cannot take 7910; the rule also applies to 6940 and 7940. Courses numbered 7979 and 7980 are not eligible to count toward a master-level degree program.

Suggested course schedule:

	Fall	Spring	Summer
Year 1	EGS 6050 (3 cr) EGS 6020 (3 cr) EGS 6054 (3 cr)	EGS 6051 (3 cr) EGS 6012 (3 cr) Elective (3 cr)	EGS6971 (6 cr)
Year 2	Elective (3 cr) Elective (3 cr) EGS6971 (3 cr)*	EGS6971 (9 cr)*	

*Required for full-time status for students whose funding requires full-time status, but will not count towards the degree.

5.2 Supervisory Committee

All graduate degrees must have a graduate faculty oversee a student's program of study and progress. This oversight authority is accomplished by a formal supervisory committee, which the Graduate School monitors as part of degree certification using information entered by the Graduate Information Management System (GIMS).

M.S. with thesis degree-seeking students must establish a supervisory committee by the end of their second semester in the program. Students must complete the EEd Supervisory Committee Form and submit it to the department's graduate advisor. The following section describes who is eligible to serve on supervisory committees, adapted from UF's Graduate Catalog (https://gradcatalog.ufl.edu/graduate/degrees/#Master_Degree_Requirements).

The supervisory committee for an M.S. with thesis candidate comprises at least two members selected from the approved Graduate Faculty:

- A chair (who must have graduate faculty status in the EEd)
- A member (who must have graduate faculty status in any UF unit, including the EEd)

Special appointments (e.g., individuals with a fully administrative role) enable qualified individuals who do not have graduate faculty status at UF to serve as guest experts on supervisory committees. They are made individually, on a case-by-case basis, per approval of the EEd Graduate Affairs Committee. Special appointments do not count toward the required minimum of members for a valid supervisory committee (which must be filled by current UF graduate faculty),

and they cannot serve as chairs, co-chairs, or externals on supervisory committees (only as members).

Changes to the supervisory committee must be made in consultation with the committee chair and/or graduate coordinator and are allowed to make such changes up to the midpoint deadline of the semester when the student plans on graduating, so long as their final defense has not taken place. No changes are allowed after the defense.

If pursuing a minor, one of the members of the supervisory committee must have graduate faculty status in that minor's home unit. If pursuing more than one minor, the supervisory committee must have a graduate faculty member from each minor's home unit.

5.3 Thesis

Format: The format of the thesis may be in either the traditional (chapter) or journal article format. The traditional format considers thesis research as a single study that may include multiple phases or parts. The chapters would capture the motivation, literature argument, research design and theory, results and discussion, future work, implications, and general conclusions. The exact chapter titles and the number of chapters should be defined by the student and their advisor, in collaboration with the committee. The journal article format consists of several chapters that each describe a complete study. If using the journal article format, the thesis must describe a set of connected studies and will typically include an introduction chapter that describes the goals of the entire thesis and a conclusion chapter that develops conclusions from the entire thesis. The final document at the time of submission should follow the stylistic guidelines defined by the Graduate School. Students must submit their dissertation documents within GIMS, the Graduate Information Management System.

For guidance on preparing the thesis, see:

- [Electronic Theses and Dissertations](#)
- [UF Graduate School Editorial Office](#)
- [UF Computing Thesis and Dissertation Support](#)

Evaluation of Final Thesis: At least two weeks prior to your scheduled thesis defense date, the student should submit their thesis to their Supervisory Committee members. The Supervisory Committee will evaluate the quality of the thesis by examining the extent to which the student has achieved mastery of knowledge and/or skills.

Copyrights: If a manuscript or conference paper was peer-reviewed and published, and it contains significant detail that will be used in the written thesis, the student is primarily responsible for obtaining the required copyright release from the publisher and understanding copyright rules and restrictions put in place by the publisher, with confirmation by the graduate faculty advisor. The student will need to acknowledge and cross-reference the original published work and outline the differences or adaptations in the thesis document. For more information on copyrights, see <https://guides.uflib.ufl.edu/copyright/copyrightgradstudents>.

Thesis Publication: The thesis will be published by UF through the UF Electronic Thesis and Dissertation Repository and [ProQuest](#). As part of this process, the student completes two publishing agreement forms. The UF publishing agreement specifies any embargo period on releasing the thesis. This form is completed through GIMS. The ProQuest publishing agreement provides permission for ProQuest to provide access to the thesis after the embargo period. This form is completed by going to <https://www.etdadmin.com/login>.

Thesis Defense: The thesis defense serves as the final oral exam of the M.S. with thesis program during which the student presents and defends their thesis document. The oral exam includes, but is not limited to, a discussion of the thesis document, i.e., objectives, research design, and analytical procedures. The exam tests originality, independence of thought, the ability to synthesize and interpret, and the quality of research presented.

Prior to scheduling the defense, the student must receive approval from the supervisory committee chair. The chair will determine if the thesis draft is of merit before proceeding with scheduling the defense. To schedule the defense, the student completes the EEd thesis defense form and submits the draft thesis to the supervisory committee at least 2 weeks prior to the requested defense date.

The typical duration of a final defense is at most two hours. The public presentation of thesis research (including questions) may be attended by faculty outside the supervisory committee, students, and guests as approved by the supervisory committee chair. This defense portion is recommended to last 45-60 minutes, with the remainder for questions. The public will be asked to leave for a closed questioning period. The closed questioning period is limited to the supervisory committee and the student. Once complete, the student will be asked to leave while the committee deliberates. The student will then be informed of the decision to pass/fail.

After the defense, all committee members sign the Final Examination form. Unanimous approval is required. This examination must be given within six months of graduation per UF Graduate School policy. Be sure to follow the instructions outlined in sections 3.1 and 8.2 about your exit plan once you complete your Ph.D. degree requirements.

6. M.S. without Thesis Requirements

6.1 Course Requirements

For the M.S. degree without a thesis, at least 30 credit hours beyond the bachelor's degree are required. These hours include, if approved, up to 9 hours of master's degree work earned at another approved university outside UF. Course substitutions must be petitioned and are considered on a case-by-case basis.

Required courses are in the following areas:

- EEd Core Courses: 9 credit hours
- Elective Requirement: 21 credit hours

The courses associated with each of these areas are given below. Course descriptions are available in the [Graduate Catalog](#).

EEd Core Courses (9 credits)

- EGS 6050: Foundations in Engineering Education (3 credits)
- EGS 6054: Cognition, Learning, and Pedagogy in Engineering Education (3 credits)
- EGS 6051: Instructional Design in Engineering Education (3 credits)

Elective Requirement (21 credits): The courses must be approved by the graduate advisor. Note the following Graduate School rules: A graduate student at UF may take no more than 5 credits each of 6910 (Supervised Research) and 6940 (Supervised Teaching). Students who have taken 5 credits of 6910 cannot take 7910; the rule also applies to 6940 and 7940. Courses numbered 7979 and 7980 are not eligible to count toward a master-level degree program. A student enrolled in this

program can opt to take additional M.S. or Ph.D. courses within our department, engineering, or computer science courses, and/or EEd-approved cognate courses at a 6000 level or higher as an elective.

Suggested course schedule

	Fall	Spring	Summer
Year 1	EGS 6050 (3 cr) EGS 6054 (3 cr) Elective (3 cr)	EGS 6051 (3 cr) Elective (3 cr) Elective (3 cr)	
Year 2	Elective (3 cr) Elective (3 cr) Elective (3 cr)	Elective (3 cr) Elective (3 cr)* Elective (3 cr)*	

*Required for full-time status for students whose funding requires full-time status but will not count towards the degree.

6.2 Comprehensive Examination

In conjunction with the student's advisor, who can be the Graduate Coordinator or a faculty member with graduate faculty status in the student's home department, the student will design a culminating experience related to the student's career goals. Possible experiences include teaching a class period, writing a position paper on a policy issue, writing a literature review, etc. Note that this list is not intended to be complete, and students are encouraged to design the experience creatively. The graduate coordinator must approve the experience and will be evaluated by the student's advisor. Any submitted documents should be properly documented and evidenced.

The comprehensive exam will be a submitted written document, in which the student submits the following items:

- A 2-3 page reflection report that explains how the process they have participated in supported their future professional goals
- An appendix that includes:
 - A representative example of an old resume
 - A representative example of a revised resume because of the M.S. degree
 - A representative job posting
 - Evidence of using campus services and resources to apply to the example job provided (e.g., Career Connections)
 - A completed Individual Development Plan regarding their future career goals

The report will be submitted to the graduate coordinator, who, in coordination with a faculty advisor (if applicable), will designate the final passing/failing grade for the graduate school and representative campus entities.

Without Thesis



With Thesis

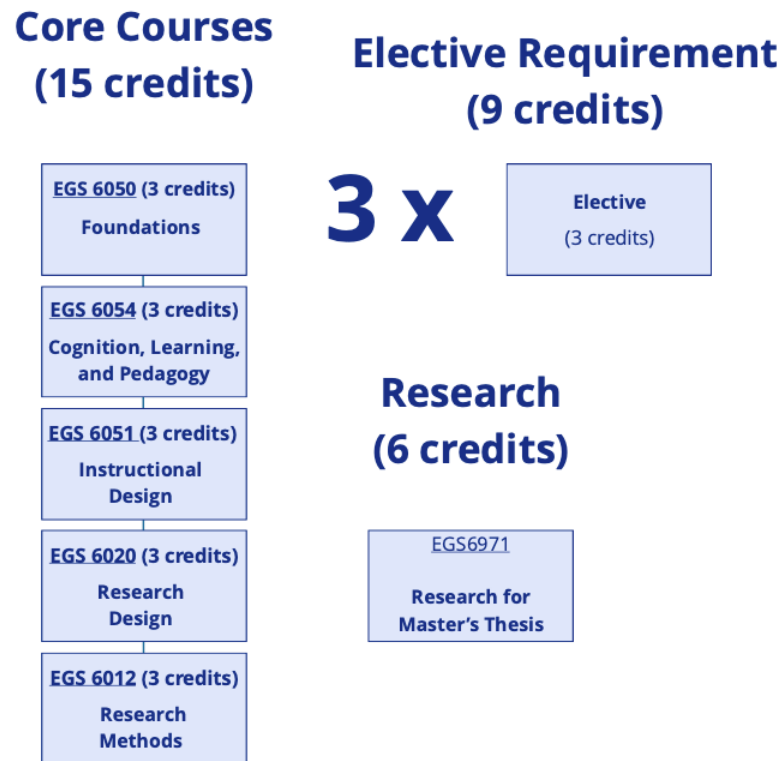


Figure 2 - Overview of the M.S. in Engineering Education requirements

7. Engineering Education Graduate Certificate

The department offers a graduate certificate in engineering education program to graduate students within and outside the college who work on engineering education or related issues. Graduate students who are outside the college must formally send a request to the respective EEd Graduate Coordinator and/or Academic Assistant II to get orientation and permission to apply and enroll for the certification. *Active EEd graduate students may not be eligible for the certificate, although some exceptions (discussed in section 8) could apply.*

General Process

To obtain a certificate, you must first apply to the Graduate Certificate Program at least one semester before attaining the requirements for the certificate. To enroll, please go to <https://admissions.ufl.edu> (Apply. 1. Explore our degree programs >>More Options). Currently enrolled students must identify as such when applying for the certificate.

General Requirements

For students seeking the certificate, at least 9 credits are required (depending on the courses selected, a student may take more than 9 credits).

Please note that EEd is working on refinements to the certificate, and the most recent changes to the certificate will be found on the [Graduate Certificate in Engineering Education - Department of Engineering Education \(ufl.edu\)](#) webpage. Once you are admitted (the process may take up to 10 business days or more), the Academic Assistant II will notify you that you have been admitted to the EEd certificate. To request the certificate to be awarded for your graduation, be sure to request this at the start of the semester of your graduation by going to **one.uf** following the same steps you would when requesting to receive your degree.

Course Requirements

Course requirements include 9 credits for a combination of the following courses.

Take both of the following:

- EGS 6050 Foundations of Engineering Education (3 cr)
- EGS 6056 Learning and Teaching in Engineering (1 cr)

Take a total of 2 credits of one of the following, which may be taken across multiple semesters:

- ABE 6940 Supervised Teaching
- BME 6940 Supervised Teaching
- ECH 6940 Supervised Teaching
- CGN 6940 Supervised Teaching
- CIS 6940 Supervised Teaching
- EEL 6940 Supervised Teaching

- EIN 6940 Supervised Teaching

Take one of the following:

- EGS6054: Cognition, learning, and pedagogy
- EGS6051: Instructional Design
- EGS6020: Research Design
- EDF 6400 Quantitative Foundations of Education Research Overview (3 cr)
- EDF 6475 Qualitative Foundations of Educational Research (4 cr)
- EDF 7491 Evaluation of Educational Products and Systems (3 cr)
- EDG 6356 Teaching, Learning, and Assessment (3 cr)
- EME 5207 Designing Technology-Rich Curricula (3 cr)
- EME 6059 Blended Learning Environments (3 cr)
- SCE 5765: Data-Driven Science Instruction (3 cr)

After completing the course requirements and formally applying to graduate, you must complete an assessment online by enrolling in a Canvas course hosted by the department and offered by the Graduate Coordinator in your graduation semester. In this course, you will be asked to complete an online assessment. Once you complete the assessment, the Graduate Coordinator will notify the Academic Assistant II, who will enter your information to document your certification completion.

8. Early Withdrawal or Completing the M.S. or Ph.D program

8.1 Early Withdrawal of EEd M.S. or Ph.D. Program

It is sometimes the case that a student may decide for various reasons (personal or professional) that they would not like to pursue their M.S. or Ph.D. degree anymore. Assuming a student is enrolled in the EEd Ph.D. program, they have several options. It is always advisable to discuss with your faculty advisor to ensure a proper exit strategy is identified. The first option is to leave with an M.S. with a thesis option (section 5). The second option is to leave without an M.S. with a thesis option (section 6). The third option is to leave with a graduate certificate in EEd. (section 7). The fourth option is to leave without any other degree exit plan. For an M.S. thesis exit, you can opt for the non-thesis route (section 6) or the certificate (section 7). For an M.S. non-thesis option, a graduate certificate may be an option (section 7).

For the first three options, it is recommended that you plan an exit strategy (spanning a semester or longer) with your faculty advisor, as it may require additional steps such as formally applying to the degree program (<https://admissions.ufl.edu> (Apply. 1. Explore our degree programs >>More Options) and selecting ‘currently enrolled application’. Follow the pertinent steps outlined in sections 6 to 8. For each case, a degree audit will need to be conducted in the department by the Graduate Academic Advisor and/or Academic Assistant II before determining your exit options. For all options, you will need to formally submit a letter of resignation to the appropriate human resource representative for the college. Also, you may be asked to participate in an exit interview with the Graduate Coordinator. Additional steps to exit (e.g., turning in keys,

removing your building access) may need to be discussed with your faculty advisor, and a checklist must be completed with the Academic Assistant II before departing.

8.2 Completing the EEd M.S. or Ph.D. Program

Congratulations on completing the EEd M.S. or Ph.D. program! We hope your experience has been a meaningful one for your future career. Before completing the program, ensure you have met all Graduate School requirements (see section 3), completed your dissertation requirements, formally requested your graduation, and completed any missing deliverables with your faculty advisor. As you plan your exit, you must clear out your office space and leave any UF laptops, tablets, computers, and other materials (e.g., books) with the Academic Assistant II. You must coordinate with the Academic Assistant II to complete an exit checklist for the department (e.g., turning in keys and removing building access). Similarly, you must complete an exit interview with the Graduate Coordinator before departure. Finally, be sure to verify that all items of section 3.1 regarding university regulations for completion are met.