

Ingram School of Engineering Doctoral Student Handbook

Welcome to the Doctoral Program in Engineering. This handbook is designed to serve as your primary resource for understanding the structure, expectations, and opportunities within the Ph.D. program, including information about available concentrations and areas of specialization. In addition to this handbook, we encourage you to regularly consult the University's <u>Graduate Catalog</u> and the <u>Graduate School website</u> for the most up-to-date policies and procedures. As a doctoral student, it is your responsibility to be familiar with and adhere to all program, university, and Graduate School requirements.

While these resources provide essential guidance, we recognize that the path to a Doctorate in Engineering is a unique and transformative journey for each student. Our faculty and staff are dedicated to supporting your academic and professional growth. Whenever questions arise...and they will...your faculty advisor or dissertation chair should be your first point of contact. Depending on your stage in the program, this Engineering Doctoral Student Handbook is for you

We hope you find this handbook helpful and invite your feedback or suggestions for improvement. Your success is our highest priority, and we look forward to supporting you throughout your doctoral studies. to use as a guide.

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1 - Program Description

The Ingram School of Engineering (ISoE) at Texas State University offers advanced degree programs designed to prepare students for leadership roles in academia, industry, and government. The school offers a Master of Science (M.S.) in Engineering, as well as three Doctor of Philosophy (Ph.D.) degrees which are in Civil Engineering (CE), Electrical Engineering (EE), and Mechanical and Manufacturing Engineering (MME).

The link to the ISoE M.S. in Engineering program is:

https://www.gradcollege.txst.edu/programs/engineering.html

The links to the ISOE PhD programs are:

CE https://www.gradcollege.txst.edu/programs/ceng-phd.html

EE https://www.gradcollege.txst.edu/programs/electrical-engineering-phd.html

MME https://www.gradcollege.txst.edu/programs/mech-and-manufacturing-eng.html

Each program provides rigorous training in advanced engineering fundamentals, research methodologies, and interdisciplinary collaboration. Students benefit from close mentorships with distinguished faculty and engage in cutting-edge research projects, developing the expertise and professional skills necessary for impactful careers across a variety of sectors.

Note that although this Handbook focuses on the CE, EE, and MME Ph.D. programs, the Ingram School of Engineering is also part of the College-wide Ph.D. program in Materials Science, Engineering, and Commercialization (MSEC). More information on the MSEC program can be found with these links

- ...https://www.gradcollege.txst.edu/programs/msec-phd.html
- ...https://www.msec.txst.edu

In total, these programs are dedicated to cultivating innovative researchers, industry leaders, and future faculty who will drive advancements in engineering knowledge and practice.

The Ingram School of Engineering is committed to producing highly skilled, diverse, and motivated professionals who are equipped to lead technological innovation and address society's most complex challenges. Students are encouraged to consult the Graduate Catalog and collaborate with their faculty advisor to develop a personalized degree plan that aligns with their academic interests and professional aspirations.

2 – Mission

The Texas State University Ingram School of Engineering educates future leaders in the fundamentals of engineering in an environment of world-class research. We stress an interdisciplinary approach and a broad understanding of underlying global issues. Collaborations across the campus and beyond strengthen our development of technological advances that address challenges of vital importance to us all.



3 – Learning Outcomes

The curriculum in the Doctoral Program at the Ingram School of Engineering is designed to ensure graduates achieve the following outcomes:

Outcome 1: Advanced Knowledge and Critical Evaluation

Graduates will demonstrate world expertise on their dissertation topic in their engineering discipline by understanding, synthesizing, and critically evaluating theoretical frameworks, empirical research, and technical literature. This advanced knowledge will inform scholarly inquiry, evidence-based decision-making, and the advancement of professional engineering practice.

Outcome 2: Research Competency and Scholarly Synthesis

Graduates will demonstrate the ability to independently identify, formulate, and conduct original research in engineering. They will evaluate complex engineering problems through comprehensive literature reviews, define and analyze the theoretical and methodological foundations of selected topics, synthesize and compare findings from peer-reviewed studies, and identify gaps or opportunities for further research and innovation.

Outcome 3: Effective Communication and Professional Engagement

Graduates will effectively communicate complex engineering concepts and research findings to diverse audiences, both orally and in writing. They will contribute to the advancement of the engineering profession by disseminating original research, engaging in interdisciplinary and collaborative projects, and participating in professional and scholarly activities.

Outcome 4: Ethical Responsibility and Societal Impact

Graduates will demonstrate ethical and professional responsibility in research and practice, with an awareness of the global, societal, environmental, and economic impacts of engineering solutions. Their work will reflect a commitment to ethical conduct, sustainability, and the betterment of society.

4 – Milestones and Timeline

The Doctor of Philosophy (Ph.D.) program at the Ingram School of Engineering is structured around a series of academic and research milestones that guide students through their doctoral journey. While individual timelines may vary depending on a student's background, research progress, and enrollment patterns, full-time students typically complete the program in **four to five years** (fall and spring semesters only). The following outlines the key milestones and general timeline for full-time Ph.D. students:

Year 1–2: Coursework Completion

- Enroll in core engineering courses, technical electives, and research methodology classes relevant to your area of specialization.
- Begin exploring potential research topics and faculty advisors.
- Develop relationships with faculty and potential committee members.
- Students taking summer courses may accelerate progress and complete coursework earlier.

Expected Milestone: Completion of the majority of required coursework by the end of Year 2.

Year 3: Final Coursework & Comprehensive Examination

• Complete all required coursework.



- Prepare for and take the **Qualifying/Comprehensive Examination**, typically in the final semester of coursework.
- The exam includes:
 - o A meeting with the advisory committee
 - o Submission and defense of a written literature review or research proposal
 - o An oral exam covering advanced topics in the chosen discipline

Expected Milestone: Successful completion of the comprehensive exam by the end of Year 3.

Year 3–4: Dissertation Proposal and Advancement to Candidacy

- Form a dissertation committee (if not already established).
- Develop and submit a formal dissertation proposal.
- Defend the proposal in an oral presentation before the committee.
- Upon passing the proposal defense and completing all coursework (excluding dissertation credits), apply for **Advancement to Candidacy**.

Expected Milestone: Attain candidacy status (ABD – All but Dissertation) by the beginning of Year 4.

Year 4-5: Dissertation Research and Defense

- Conduct independent, original research under the guidance of your dissertation chair and committee.
- Present research findings at conferences and submit papers to peer-reviewed journals.
- Prepare the dissertation manuscript in accordance with university guidelines.
- Schedule and complete the **dissertation defense**, which includes a public presentation and oral examination by the dissertation committee.

Expected Milestone: Successful defense and submission of the final dissertation by the end of Year 5.

Additional Notes:

- Continuous enrollment in dissertation credits is required after advancement to candidacy.
- Students are encouraged to engage in professional development, teaching, and interdisciplinary collaboration throughout the program.
- Timely completion depends on early research engagement, clear academic planning, and proactive advising.

5 – Faculty & Staff

Information may be obtained by contacting the appropriate level Advisors/Coordinators.

6 – Advising

Students in the Doctoral Program at the Ingram School of Engineering benefit from structured, ongoing faculty advising, which is central to the program's mentorship model. Advising roles are designed to support students at every stage of their doctoral journey, with faculty members providing guidance, oversight, and professional development.

Advising Roles:

• Graduate Advisor:

All doctoral students have access to the Graduate Advisor (who may also serve as the Program



Director) for matters involving communication with The Graduate College and general program administration.

• Initial Advisor:

Upon admission, each student is assigned an Initial Advisor who assists with onboarding, course selection, and academic planning during the first year.

• Program Advisor:

By the end of the first year, students select a Program Advisor who provides academic and professional guidance through the completion of coursework and the comprehensive exam.

• Research Mentor:

During the early research phase (typically from the end of the first semester through the third semester), students may work with a Research Mentor to develop research skills and identify potential dissertation topics.

• Comprehensive Exam Committee Chair:

As students approach the comprehensive exam, they select a Committee Chair to guide them through the exam process, including preparation, proposal development, and defense.

• Dissertation Chair:

After successful completion of the comprehensive exam, students select a Dissertation Chair who leads the dissertation committee and provides mentorship from proposal development through the dissertation defense.

While these roles have distinct titles and responsibilities, they all function as "advisors" and may sometimes be filled by the same faculty member or by different individuals, depending on the student's needs and research interests. Students are encouraged to engage with multiple faculty members throughout the program to benefit from diverse perspectives and expertise.

The Advising Relationship:

Doctoral advising at the Ingram School of Engineering is an active, collaborative process. Students are expected to meet regularly with their advisor/chair for guidance on course selection, registration, research planning, and professional development. Advisors assist with monitoring academic progress, signing required forms, guiding committee selection, writing letters of recommendation, and serving as advocates within the program.

Beyond administrative support, advisors and chairs provide critical mentorship as students transition into professional engineering and scholarly roles.

Changing Advisors:

Students may request a change of advisor or chair at any time, whether due to a shift in research interests, availability, or other considerations. To do so, students should submit the Advisor/Committee Member Change Request Form and consult with the Graduate Advisor or Program Director as needed.

7 – Professional Expectations

Professional Expectations, Dispositions, and Academic Integrity



Doctoral students in the Ingram School of Engineering are expected to uphold the highest standards of professionalism, ethical conduct, and academic integrity, in accordance with both the codes of the engineering profession and Texas State University policies.

Professional Conduct

As emerging scholars and professionals, students are expected to demonstrate integrity, accountability, and respect in all academic and professional environments—including classrooms, laboratories, research sites, assistantships, and conferences. Students should adhere to the ethical standards established by leading organizations such as:

- National Society of Professional Engineers (NSPE)
- American Society of Civil Engineers (ASCE)
- Institute of Electrical and Electronics Engineers (IEEE)

Academic Integrity

All doctoral students must comply with the Texas State University Honor Code and the Code of Student Conduct. Academic misconduct—including plagiarism, data falsification, cheating, or misuse of intellectual property—will not be tolerated and may result in disciplinary action, up to and including dismissal from the program.

For more information, refer to:

- Texas State Honor Code
- Code of Student Conduct
- Graduate Catalog

Faculty Support and Mentorship

Faculty in the Ingram School of Engineering are dedicated to fostering a learning environment rooted in ethics, professionalism, and scholarly growth. By upholding these standards, students not only advance the engineering profession but also contribute to the reputation and excellence of Texas State University.

8 – Internship & More

Independent Study, Internship, Practicum, and Directed Research Process

Doctoral students interested in pursuing an Independent Study, Internship, Practicum, or Directed Research must follow the process outlined below to ensure academic alignment and program approval:

1. Initial Consultation

Begin by consulting with your faculty advisor or dissertation chair to discuss your interest and determine the relevance of the experience to your academic and research goals.

2. Faculty Supervision

With your advisor's approval, identify and contact a faculty member within the Ingram School of Engineering whose expertise aligns with your proposed area of study or research. Request their supervision and confirm their willingness to oversee your work.

3. Program Approval

After securing a supervising faculty member, obtain permission from the program administration and the program director to enroll in the appropriate course section under that faculty member.



4. Proposal Development

In collaboration with your supervising faculty member, prepare a detailed proposal that outlines:

- The scope and purpose of the experience
- Learning objectives and research activities
- Expected deliverables and a timeline

The proposal must be reviewed and approved by the supervising faculty member before enrollment can be finalized.

5. Course Expectations

To successfully complete the experience, students must:

- Maintain regular communication with the supervising faculty member
- Meet all agreed-upon objectives
- Submit required deliverables, such as progress reports, research summaries, or final presentations, as specified in the approved proposal

9 - Course Registration

Timely registration is essential for maintaining academic progress and securing a seat in required courses. Students should register as soon as the registration period opens to avoid delays or scheduling conflicts.

Steps to Register:

1. Consult Your Advisor or Dissertation Chair

Before registering, meet with your **faculty advisor or dissertation chair** to review your degree plan and determine the appropriate courses for the upcoming semester.

2. Requesting Enrollment Approvals

For any courses that require instructor or departmental approval (e.g., Directed Research, Independent Study, Practicum), email the **program administrator** and **CC your advisor or chair**. Be sure to include:

- Your name and student ID
- Course number and title
- Semester of enrollment
- Supervising faculty (if applicable)

3. Complete Registration

Once the necessary permissions are granted, register for your approved courses through the **Texas State registration system** (Self-Service Banner).

Prompt and coordinated communication with your advisor and the program office will help ensure a smooth registration process each term.

10 – Comprehensive Exam

As noted in 4 – Milestones and Timeline above, Year 3: Final Coursework & Comprehensive Examination

- Complete all required coursework.
- Prepare for and take the **Qualifying/Comprehensive Examination**, typically in the final semester of coursework.



- The exam includes:
 - o A meeting with the advisory committee
 - o Submission and defense of a written literature review or research proposal
 - o An oral exam covering advanced topics in the chosen discipline

11 - Dissertation

Dissertation Committee

The dissertation committee must include approved doctoral graduate faculty from the Ingram School of Engineering and may also include faculty from related disciplines when appropriate.

To formally establish the committee, students must complete the <u>Dissertation Committee Request Form</u>, which requires signatures from:

- The student
- All committee members
- The committee chair
- The doctoral program director
- The department chair

The completed form must then be submitted to the Dean of The Graduate College for final approval.

Dissertation Proposal and Defense

Students must submit both a written dissertation proposal and the <u>Dissertation Proposal and Proposal</u> <u>Defense Form (Form D)</u> to their dissertation committee.

If the proposed research involves human subjects, approval or exemption from the Institutional Review Board (IRB) at Texas State University must be obtained before submitting Form D. The IRB approval or exemption letter must be included with the proposal documentation.

After a successful proposal defense, the following individuals must sign Form D:

- All committee members
- The doctoral program director
- The department chair

The signed form and a copy of the approved proposal must be submitted to the Dean of The Graduate College before the student may proceed with dissertation research.

Dissertation Enrollment and Credit

Doctoral students may begin enrolling in dissertation credits after completing all required coursework. The number of credit hours each semester should reflect the student's level of engagement in dissertation work. The advisor or committee chair is responsible for ensuring students are making satisfactory progress.

Once advanced to candidacy, students must enroll in at least one hour of dissertation credit each fall and spring semester, and during summer if receiving supervision or using university resources, until the dissertation is completed and approved by The Graduate College.

Note: Dissertation timelines vary by research scope. Students may enroll in additional hours if needed, with approval from the committee chair.

Dissertation grading options include:

• **PR (Progress):** Satisfactory progress



- CR (Credit): Awarded upon final approval and submission of all requirements
- **F** (Failing): For unsatisfactory progress
- W (Withdrawal): If officially withdrawn

The **CR** grade is awarded only after submission of the Survey of Earned Doctorates and final dissertation approval by The Graduate College.

Students must be enrolled in dissertation credit during the term or Summer I session in which the degree will be awarded.

Dissertation Preparation and Final Defense

Detailed requirements for formatting, submission, and approval are provided by The Graduate College and can be found at: <u>Thesis & Dissertation Resources</u>

When the advisor and a majority of the committee agree that the dissertation is ready for defense, the student—under guidance from the chair—should schedule a two-hour Dissertation Defense at a time agreed upon by all committee members.

Any committee member with significant concerns should raise them with the student and the chair prior to scheduling the defense.

Final approval of the dissertation requires affirmative votes from the advisor and a majority of the committee.

12 - Graduate Assistantships

A prospective graduate assistant must be enrolled as a regular, degree-seeking student in The Graduate College at Texas State University. Graduate assistants may serve in one of the following roles, which are available to both master's and doctoral students (as eligibility allows):

- Graduate/Doctoral Teaching Assistant (GTA/DTA)
- Graduate/Doctoral Instructional Assistant (GIA/DIA)
- Graduate/Doctoral Research Assistant (GRA/DRA)
- Graduate/Doctoral Assistant (GA/DA)

Each role may be classified as exempt or non-exempt under the Fair Labor Standards Act (FLSA). For full university policies, refer to <u>UPPS 07.07.06</u> and the <u>Graduate College Assistantships webpage</u>. Graduate/Doctoral Teaching Assistants (GTA/DTA)

- Employed by an academic department and may serve as the instructor of record for undergraduate courses in engineering or related technical fields.
- Paid from faculty salary lines and receive a faculty contract for the semester or academic year.
- Paid monthly.
- Exempt from FLSA under the learned professional exemption.
- Responsible for course planning, instruction, assessment, and grade assignment.
- Doctoral students may be eligible to serve as instructor of record; graduate (master's) students typically assist with instruction under faculty supervision.

Graduate/Doctoral Instructional Assistants (GIA/DIA)

- Support instruction but are not the instructor of record.
- Typically assigned to undergraduate engineering labs, activity sessions, or recitations.



- Assist with instruction and grading under faculty supervision but may not access or grade graduate student work, nor serve as an evaluator in graduate-level courses.
- May be assigned to undergraduate labs or courses and may be paid from course fees collected for lab-based instruction.
- Appointed by semester or academic year and paid monthly.
- Exempt from FLSA under the learned professional exemption.
- In rare cases, a GIA/DIA may assist in a master's-level course with approval from the Dean of The Graduate College, provided no conflict of interest exists.

Graduate/Doctoral Research Assistants (GRA/DRA)

- Support faculty-supervised research as part of their graduate or doctoral training.
- Typically work in engineering laboratories, participate in grant-funded research, and contribute to experimental design, data analysis, or scholarly publications.
- Employed by a department or university research unit and may be funded through grants or university accounts.
- Appointments may last a semester, academic year, or the duration of a research project.
- Paid monthly.
- Exempt from FLSA under the graduate research exemption.
- Per Chapter 10 of the U.S. Department of Labor Field Operations Handbook, GRAs/DRAs must be performing research as part of their degree program under faculty supervision in a university research setting.

Graduate/Doctoral Assistants (GA/DA)

- May be employed by academic departments or university offices to perform technical, research-support, or administrative functions.
- Duties may include equipment maintenance, software support, technical documentation, data management, or institutional projects not directly supervised by faculty as research for academic credit.
- May be funded through grant or institutional sources.
- Students with access to academic records must complete FERPA training and sign a confidentiality agreement.
- May not access records of graduate students in their own degree-granting department.

Exempt GA/DA

- Not subject to minimum wage or overtime under FLSA.
- Working time is recorded on an exception basis.
- Not eligible for paid leave, including holidays.

Non-Exempt GA/DA

- Subject to FLSA wage and overtime provisions.
- Must record actual hours worked.
- Paid 1.5x for overtime hours exceeding 40 hours per week.
- Cannot hold exempt and non-exempt positions concurrently.

The Office of Human Resources determines the exemption status of all assistantship roles.

13 – Travel Support

Professional Travel Support



Doctoral students in good standing at the Ingram School of Engineering may be eligible for funding to support professional travel related to their degree programs, such as presenting research at conferences or participating in technical workshops. The process for requesting and receiving travel support is outlined below:

1. Proposal Acceptance

To qualify for travel funding, students must be presenting or co-presenting an authored or co-authored paper, poster, or technical presentation at a recognized professional conference or meeting. After your proposal is accepted, you will receive an official acceptance notification (email or letter) from the conference organizers. This acceptance must be included with your travel funding request.

2. Travel Request Form

Complete the <u>Graduate Student Travel Funds Request form</u>. This form must be typed; handwritten forms will not be accepted.

3. Submission and Departmental Approval

Submit both the completed Travel Request Form and your acceptance letter as a single PDF to the Program Administrator. If your travel is international, you must also submit a <u>T-4 Release of Liability and Assumption of Risk for Foreign Travel Form</u>. The Program Administrator will review your documents for accuracy and completeness and forward them to the Department Chair and College Dean for approval. All travel requests must be submitted at least four weeks prior to the planned travel date.

4. University-Level Approval

Once approved by the Department Chair, College Dean, and The Graduate College, the Program Administrator will submit your travel request to the University Travel Office for final approval. The Travel Office will notify both you and the Program Administrator of the decision.

5. Receipt Submission

After your trip, submit all receipts electronically as a single PDF within seven days. Paper receipts will not be accepted. Receipts must clearly display the traveler's name, correct dates, method of payment, and amount. Refer to the University's <u>Travel Office Policies and Procedures</u> for detailed receipt requirements. The Program Administrator will verify your receipts and prepare an expense report for submission to the University Travel Office.

6. Traveler Approval of Expense Report

Once the expense report is prepared, you will receive an email with instructions to review and approve your expenses.

7. University Approval and Reimbursement

After your approval, the expense report will be routed to the University Travel Office for final review, in accordance with State of Texas and Federal regulations. Reimbursement processing may take up to 10 business days after final approval.



14 – Internal Funding

Internal Funding Resources

Internal Source	Scholarships, Fellowships, and Awards	Amount
The Graduate College	Celebrity Classic Scholarship	\$1,500 per
		semester
	Graduate College Scholarship	\$1,000 per
		semester
	Graduate College Thesis Research Support Fellowship	up to \$2,000
	Graduate College Doctoral Research Support Fellowship	up to \$5,000
	Texas State Graduate Merit Fellowship	\$2,500 first year
	Texas State Doctoral Merit Fellowship	\$9,000 first year
Office of Disability Services	Jaska Scholarship	\$500
	Nesenholtz Memorial Scholarship	unknown
Center for Diversity and	Graduate Gender Studies Scholarship	\$1000 split
Gender Studies		fall/spring
The Writing Center	Essay Contest- Graduate courses 5000-7000 level	unknown
Student Government	The Rising STAR Travel Grant	up to \$500
	The Student Government University Bookstore Scholarship	\$300 to \$500
Academic Affairs: International Office	Wilson Latin American Research Scholarship	\$1,000
Financial Aid	Good Neighbor Scholarship	Unknown
	FAFSA	varies