Ingram School of Engineering

Mechanical and Manufacturing Engineering (MME)
Ph.D. Program

Program Handbook

2025-2026

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https://www.gradcollege.txst.edu/programs/mech-and-manufacturing-eng.html
  ISoE MME Ph.D. Program Website:
https://www.engineering.txst.edu/programs/mme-phd.html

1. Introduction

• About Texas State University

○ *Mission*

Texas State University is a public, student-centered research institution dedicated to excellence, discovery, and innovation. We create new knowledge, embrace a diversity of people and ideas, foster cultural and economic development, and educate our students to participate fully and freely in the communities of Texas, the nation, and the world.

○ *Shared Values*

In pursuing our mission, we, the faculty, staff, and students of Texas State University, are guided by a shared collection of values:

- Teaching and learning based on research, student needs, and the free exchange of ideas in a supportive environment;
- Research and creative activities that encompass the full range of academic disciplines;
- Meaningful student engagement built on active involvement, accessibility, and intentional educational experiences;
- The cultivation of university community that consistently practices integrity, civility, compassion, and respect;
- A shared commitment to creating a sense of belonging across unique communities, identities, ideas, and contributions;
- A welcoming spirit and a global perspective;
- Dedication to service and leadership for the public good;
- Responsible stewardship of our resources and environment; and
- Continued reflection and evaluation to ensure that our strengths always benefit those we serve locally and globally.

○ *Goals*

- Supporting student success.
- Advancing academic excellence.
- Expanding discovery, innovation, creativity, and research.
- Enriching community, collaboration, and partnerships.
- Developing infrastructure and resources.

• About the College of Science and Engineering

The College of Science and Engineering (COSE) prepares undergraduate and graduate students for careers in the natural and physical sciences, mathematics, computer science, engineering, and engineering technology. The faculty and staff in COSE are committed to preparing students to be leaders in a world characterized by the rapid pace of emerging technologies and new scientific discoveries. They do this by immersing students in a robust curriculum and applied learning

experiences in laboratory research, field study, and design. A hallmark of the College is the high-quality research of its faculty. State-of-the-art research findings are shared with students in the classroom and benefit the state of Texas and the nation. Many of the faculty are collaborative and interdisciplinary researchers, and they are able to bring the important skills of leading a team and participating as a team member into the classroom.

The College of Science and Engineering has a threefold mission:

- To teach core concepts and promote literacy in science and mathematics while providing students with advanced knowledge and skills for careers in science, technology, engineering, mathematics, and related fields including education.
- To support high-quality teaching and internationally recognized research programs in an accessible environment for students, staff, and faculty.
- To serve the citizens of Texas and the nation with educational and research programs that embrace opportunities for innovation in solving regional and global challenges.

• About the Ingram School of Engineering

The Ingram School of Engineering (ISoE) has five undergraduate degree programs in Electrical, Civil, Mechanical, Manufacturing, and Industrial Engineering. It offers master's and Ph.D. programs across various engineering disciplines. Our graduate programs provide our students with the necessary knowledge, skills, and hands-on experience. Our world-class faculty supervises graduate students' dissertations and theses based on their cutting-edge research. Students in the program have access to a significant portfolio of state-of-the-art equipment, instruments, and labs.

- ***Mission***

    - To provide students with an exceptional education in various disciplines of engineering,
    - To establish, through dedicated faculty, a nationally recognized research program, preparing interested students to achieve excellence in graduate studies and research, and
    - To serve the State of Texas and the nation by creating highly skilled, diverse, and motivated professionals capable of technological innovation and dedicated to the improvement of society.

- ***Vision***

The Ingram School of Engineering will be a nationally recognized institution of higher education, serving students and employers with a complete set of accredited engineering programs supported by a faculty which maintains high standards of teaching, research, and service. To accomplish this vision, we will:

- Engage undergraduate and graduate students with innovative, multidisciplinary, and nationally recognized funded research programs,
- Emphasize quality undergraduate and graduate education using a practical, interactive, and contemporary learning environment,
- Produce first-generation professional college graduates as part of an HSI-designated university; be recognized for exceptional community service; and create tight bonds with alumni who will serve as professional mentors, sponsors, and advisors, and
- Promote a student-centered culture based on collegiality, scholarship, enthusiasm, integrity, and mutual respect among diverse faculty, staff, and students.

• Students' Rights, Privileges, and Expectations

Texas State believes that the primary purpose of higher education is to promote learning and to stimulate inquiry for truth in an atmosphere of freedom. Accordingly, Texas State encourages students to exercise the rights of citizenship. However, these rights are subject to reasonable limitations necessary for the orderly operation of the university. Texas State expects faculty, staff, and students to accept their responsibilities as citizens and members of a scholarly community. Paramount among these responsibilities is respect for the rights of others, academic and personal integrity, and adherence to federal, state, and local law as well as university regulations.

The faculty and administration are genuinely concerned with the physical and ethical welfare of students. To that end, Texas State has established rules of conduct and has published these in a **Code of Student Conduct** and **Honor Code**. These regulations guide students in achieving personal and academic goals and help the university function in an orderly way. Since students voluntarily associate themselves with Texas State, they should know that these rules are honestly and faithfully enforced. The rules include clear prohibitions against sexual discrimination and racial harassment.

Texas State has established a grievance procedure for the prompt and equitable resolution of complaints related to illegal discrimination or harassment. Texas State, to the extent not in conflict with federal or state law, prohibits discrimination or harassment on the basis of race, color, national origin, age, sex, religion, disability, veterans' status, sexual orientation, gender identity, or expression. This grievance procedure is described in University Policy and Procedure Statement 04.04.46, Prohibition of Discrimination. The Texas State University System Sexual Misconduct Policy outlines our policy and procedure related to Title IX (sexual misconduct). Students should follow the procedures for reporting instances of discrimination or harassment. The administration and faculty encourage students to participate in participating the management of Texas State through its system of advisory councils and committees. Students are invited to serve as voting members on many of these groups and are expected to contribute actively to their success.
Students may submit recommendations for changes in policy, not only through the committee

structure, but also through their own student government.

- ## Student Data, Privacy, and Communications
  - ***Correct Data***

All students are responsible for making certain Texas State has correct demographic data. A student's name will appear on official records as it is stated on the application for admission, unless a student has previously attended Texas State under a different name. Changes in name, local and/or permanent address, telephone number, marital status, etc., should be reported immediately to the office of the University Registrar. Texas State is not responsible for loss of correspondence credits due to unreported name changes. Address changes can be submitted at https://www.registrar.txst.edu/

  - ***Family Educational Rights and Privacy Act of 1974 (FERPA)***

FERPA protects the privacy of educational records, establishes the right of students to inspect and review their educational records, and provides guidelines for the correction of inaccurate or misleading data. Students also have the right to file complaints with the FERPA Office concerning alleged failures by Texas State to comply with the Act. University policy UPPS No. 01.04.31 explains in detail the procedures to be used in complying with the Act. The policy is available at https://www.registrar.txstate.edu/legislative-policies/ferpa.html . The Dean of Students and the University Registrar both presume that each student is independent of their parents when dealing with the student's educational records. Procedures for establishing dependency status are available in both offices.

  - ***Communications***

Most university offices use Texas State email as the official means of communication. Students are expected to set up their Texas State email and check it at least once a day.

- ## Academic, Grading, Probation and Suspension Policies

  - **Grades**

Texas State grades are assigned as follows "A," excellent; "B," good; "C," passing (not at the doctoral level); "D," passing (not at the graduate level); "F," failure; "I," incomplete; "U," unearned "F"; and "W," withdrawn passing. Only course grades of "B" or better can count towards the PhD degree. In specific cases, a grade of "C" in a prerequisite course must be repeated with a grade of "B" or better. A grade of "PR," in most instances, may be temporary and non-punitive, but may be assigned in selected courses where the required clock hours needed to complete requirements extend beyond the regular term or summer session. A grade of "CR" is assessed when credit only is given for a course, as in the case of the thesis course, after completion of the thesis. For a complete list of grades currently and previously used at Texas State visit the University Registrar's website. PR grades are assigned in all MME Ph.D. dissertation courses (MMIE 7X99) and are changed to CR when the student successfully completes their dissertation.

- **Incomplete Grade**

If any course work is incomplete during any term, the work must be completed by an indicated deadline arranged between the student and the course instructor. The “I” grade may be assigned when, due to unusual circumstances beyond the student’s control, a significant portion of a course, such as a term paper or final examination, has not been completed. An “I” grade from Texas State will not count as hours completed until another grade is substituted for the “I”. After incomplete deadline date the "I" grade will automatically change to “F”.

- ***Withdrawal Grade***

A “W” grade is assigned only if a student drops a course by the published deadline. See also “Registration and Course Credit” section under “Withdrawal”.

- ***Change of Grade***

An individual course grade may be changed when the involved faculty member certifies to the Office of the University Registrar that an error was made in computing the original grade. The grade change must be approved by the department chair/school director and the appropriate college dean.

- ***Grade Appeal Procedure***

Students who wish to protest a grade earned in a course should first discuss the grade with the instructor. If no resolution is reached, the student may appeal the grade to the department chair For complaints about MME Ph.D. courses, students should appeal to the MME Ph.D. Director. If no satisfactory conclusion can be reached at this level, the student may appeal to the college dean in which the course is offered, whose decision is final. In accordance with Texas State’s records retention policies, a student appeal for a change of grade must be filed no later than two years after the grade is issued.

- ***Grade Point Average (Four-Point System)***

The GPA is the number of grade points earned divided by the number of semester hours attempted. Term grade symbols have the following values:
A = 4 points
B = 3 points
C = 2 points
D = 1 point
U/F = 0 points

Grades are not calculated for “I,” “CR,” “PR,” or “W.”

- ***Probation and Suspension***

A graduate student is required to maintain a 3.0 cumulative grade-point average (GPA) for all Texas State University 5000-, 6000-, and 7000-level courses (excluding required leveling

courses) listed on a student's degree audit for a graduate degree. Cumulative GPAs are computed at the end of each academic period (fall, spring, and summer) in which a student is enrolled.

If a graduate student's cumulative GPA falls below 3.0 during any term of enrollment at Texas State, the student will be placed on academic probation. In the next term of enrollment, the student must raise their cumulative graduate GPA to 3.0 or above; otherwise, they will be suspended from further graduate study at Texas State. When a student has achieved a cumulative GPA of at least 3.0 at the end of the probationary term, they will be removed from probation status. In the event that a student has enrollment with no punitive grades for the semester, such as W or I grades, their academic standing from the previous semester will remain unchanged. When a non-punitive grade is changed, the academic standing rules apply, and updates are made to the student's record.
More details are available at:
https://mycatalog.txstate.edu/graduate/academic-grading-policies/probation-and-suspension/

- ***Readmission***

A student on suspension may petition the graduate dean for permission to re-enroll in The Graduate College. An appeal form for the graduate dean is available on The Graduate College's website. This written appeal should include additional supporting documentation. The appeal will be reviewed by the graduate advisor and subsequently by the dean of The Graduate College. Each readmission decision is made on an individual basis and the dean of The Graduate College's decision is final. If a reinstatement is approved, the date of the reinstatement depends on the timing of the appeal, program policies, and/or conditions of the reinstatement. If a student is readmitted after being suspended, the student must maintain a 3.0 cumulative GPA or be suspended again. Individual graduate programs may also impose additional cumulative GPA or course restrictions for their students.

- ***Change of Major***

Graduate students on probation may not change programs or admission status without a recommendation and request from the prospective department. The dean of The Graduate College will review the request when making the final decision. If a suspended student wants to pursue a different program, the student must first submit an appeal to be reinstated to the dean of The Graduate College. The written appeal should include a justification. If the dean of The Graduate College grants permission to a student to pursue a different program, the student must submit an application for admission in the online application portal and comply with instructions as identified under the degree-seeking admission requirements section of the catalog. This procedure must be completed in ample time to meet the admission deadlines. Acceptance in one program does not guarantee acceptance in another program.

- ***Financial Aid***

If a student is receiving financial aid, the student must also meet the satisfactory academic progress requirements for financial aid. See the Financial Aid Section under General Information for further details.

- ## MME Doctoral Student Expectations

In addition to the student expectations listed above, MME Ph.D. program faculty and staff expect students to accept and follow the responsibilities listed below.

- ***Communication***

All matters related to the MME Ph.D. program will be communicated via email. Students are expected to check their Texas State email at least daily and reply in a timely manner when required. When a response is needed urgently, staff from the MME Ph.D. program may contact students via phone. MME doctoral students are encouraged to discuss preferred communication methods and frequency with their dissertation chair and committee members. In the case of courses, the course instructor will dictate the preferred method of communication that will be used in the course.

- ***Attendance***

Students are expected to attend and participate in all scheduled lecture and laboratory classes. If a class session is to be missed, the student must notify the course instructor prior to the start of the class session. Failure to do so may result in the absence being considered unexcused. Make-up of any missed material such as in-class projects, quizzes, and exams are at the discretion of the instructor. The current excused attendance policy covers typical life events and emergencies (e.g., illness of student, illness or death of an immediate family member, military deployment of an immediate family member) and formal/official documentation needs to be provided to the course instructor. If a student anticipates an important life event other than the typical or emergency situations listed, they should notify the course instructor as soon as possible to discuss whether altered class expectations are possible. Each instructor will establish criteria in the course syllabus addressing specific class participation expectations and missed work. Should a student miss class, it is the student's responsibility to obtain the missed information and meet with classmates to discuss/practice missed material. Responsibility for make-up of missed work or evaluation criteria for excused absences is the responsibility of the student.

- ***Student Progress Report***

In order to foster communication between students and their research advisors and to help ensure that students remain on-track for timely graduation, each student is required to meet regularly with their research advisor for a formal evaluation of progress. The format and frequency of these meetings will be determined by the program and these details communicated to students and faculty when available. A key part of these meetings will be student self-assessment of progress and clarification of expectations for both the faculty and student regarding what is required to complete the dissertation.

- ***Training and Development***

Hazardous waste and hazard communication trainings are required annually for all MME doctoral students who access research labs at Texas State. Trainings are required by State and Federal regulations for hazardous waste management and must be documented. The courses explain the hazardous waste management program at Texas State and provide information on

proper procedures for waste generation, waste storage and waste disposal. Important details concerning waste storage supplies and Environmental. Health, Safety, Risk and Emergency Management (EHSRM) services are provided by the EHSRM office. Other research-specific training, such as radiation hazard training, Collaborative Institutional Training Initiative (CITI) - human subjects protection training, etc., may also be required. Students should check with their research advisor to determine what (if any) additional training is necessary. Students whose training certifications are not current may lose access to laboratory facilities and risk losing their assistantships.

- ***Maintenance of a Clean and Safe Learning Environment***

Smoking on university property is prohibited on the campuses of Texas State as the university is all tobacco use (Tobacco Free Campus). University property includes buildings, vehicles, outdoor grounds, parking areas, and personal vehicles parked on campus property. Tobacco products include all types of tobacco, cigarettes, cigars, smokeless tobacco, electronic cigarettes, vaporizers, pipes and hookahs. Students are expected to keep their belongings orderly to avoid cluttering the classroom, lab, and office areas. Students will need to return any lab equipment or supplies to the appropriate storage area and discard any waste materials to ensure that lab and office rooms remain orderly at all times.

- ***LinkedIn***

MME doctoral students are expected to create a LinkedIn account and join the Texas State University MME Ph.D. Program group. News, job opportunities, and program related information will be shared on this page.

• MME Doctoral Student Resources

- ***Office Space***

Based on space availability, MME doctoral students may be provided space to work on school-related duties. Carrels may be available to MME doctoral students; priority is given to students who 1) have not selected a research advisor, 2) do not have desk space provided by their research advisor and 3) have DIA tasks in the Ingram Hall (IGRM). It is the student's responsibility to maintain the cleanliness of the carrel and common area at all times. To request a carrel, students should contact Engineering's admin and sign the check-out form.

- ***Business Cards***

The MME Ph.D. program may provide one set of Texas State business cards per doctoral student. Contact information will be requested during the MME Ph.D. program orientation. Additional requests may be granted at the discretion of the MME Ph.D. Director if funds are available.

- ***MME Polo Shirts***

The MME Ph.D. program will provide a polo shirt to students during MME Ph.D. student orientation. Additional requests may be granted upon availability.

- ***Engineering Laptops***

ISoE has a limited number of laptops available for check-out by MME Ph.D. students on a semester long basis. The laptops cannot be used to run research software programs. Interested students should contact engineering staff for more information about accessing the laptops.

- ***New Student Orientations***

MME Doctoral Student Orientation
The MME Ph.D. Program provides an orientation for all first-year doctoral students the week prior to the start of the fall semester; details will be shared with all first-year students as they become available. All first-year students are required to attend.

New Graduate Student Orientation
Additionally, the Graduate College holds New Graduate Student Orientation (NGSO) for all graduate students. This event is typically held approximately 1.5 weeks prior to the start of the fall semester. It provides valuable information about resources available to graduate students as well as important guidelines and deadlines. For more information, please see: https://www.gradcollege.txst.edu/events/involvement/orientation.html

F-1 International Student Immigration Check-In
F-1 regulations (8 CFR 214.2) require F-1 international students in initial SEVIS status to report to the International Students and Scholar Services (ISSS) "as soon as possible upon admission into the United States but no later than the Initial Session Start Date (start of classes) as listed in SEVIS." All F-1 students must report to ISSS by completing an Immigration Check-In within 15 days of arrival in the U.S. to submit immigration documents; failure to do so will jeopardize the student's F-1 status. For more information, please go to: https://www.international.txst.edu/new-f-1-students/f-1-international-student-immigration-check-in.html It is the student's responsibility to schedule their Immigration Check-In around the MME Ph.D. and Graduate College orientation events if dates conflict.

• Funding Opportunities

- ***Doctoral Instructional Assistantships (DIA)***

Assistantships are offered on a competitive basis to full-time students enrolled in the MME Ph.D. program. In general, full-time students admitted to the program will be offered a two-year assistantship that pays $36,000 over 9 months each year, as long as performance expectations are met.

- ***Graduate Research Assistants and Doctoral Research Assistants (GRA/DRA)***

Research advisors may choose to support MME doctoral students on a Doctoral Research Assistantship (DRA) or Graduate Research Assistantship (GRA) at any time, including their first semester. DRA and GRA rates and duration are negotiated with the student's research advisor; the funding rate for these positions may be different from the MME DIA rates.

Eligibility Criteria
To meet and maintain assistantship eligibility, students must:
- Be in good academic standing (no probation or suspension)
- Be enrolled in at least 9 graduate hours during Fall/Spring and Summer semesters as advised
- Maintain a minimum 3.0 Texas State University grade point average in coursework leading toward the completion of the doctoral degree

Important: Conditionally admitted students, or those on academic probation or suspension, are **not eligible** for graduate assistantships (page refers).

- ***Graduate College Scholarships & Fellowships***

The Graduate College offers a variety of scholarships and fellowships for new, continuing, and prospective graduate students at Texas State University. Other internal funding opportunities may be available within the College of Science and Engineering, the Ingram School of Engineering, or the MME Ph.D. program. There are also external scholarships and fellowships available from entities outside of Texas State, which can be accessed via a Funding Database page.
https://www.gradcollege.txst.edu/funding/external/databases.html

Some of the Scholarships and Fellowships at Texas State University include:
- Graduate College Doctoral Research Support Fellowship (up to $5000)
- Graduate College Scholarship ($1000 per semester)
- Texas State Dissertation Completion Fellowship (Provides stipend and tuition support (for up to 21 total credit hours)

Complete list and details of the Scholarships and Fellowships are at:
https://www.gradcollege.txst.edu/funding/scholarships.html

• Mechanical and Manufacturing Engineering (MME) PhD Program Overview

The Doctor of Philosophy degree with a major in Mechanical and Manufacturing Engineering (MME) is student-focused, multi-disciplinary, and collaborative. Applicants with a B.S. or M.S. degree in Mechanical Engineering (ME), Manufacturing Engineering (MFGE), Industrial Engineering (IE), or closely related engineering fields are the main audience for this program. This program is unique in two aspects: First, the graduates from program will be equipped with conventional engineering technical knowledge augmented with advanced skillsets in disruptive technologies such as the ones associated with Industry 4.0 and Industry 5.0, including Artificial Intelligence (AI), Advanced Robotics and Automation, Additive Manufacturing (AM), Cybersecurity, Data Analytics, Augmented and Virtual Reality (AR and VR), Digital Twins (DT), and Cyber-Physical Systems (CPS). Second, the program will have a strong focus on commercialization, entrepreneurship, and innovation.

- **Mission and Vision**

The MME Ph.D. program is a cornerstone of ISoE's mission and vision by:

- Educating students to become innovators and scholars,

- Expanding research that elevates ISoE's national standing,
- Empowering a diverse body of students to solve complex problems using disruptive technologies, and
- Enriching the broader community through knowledge, innovation, and service.

Table below illustrates the MME Ph.D. program alignment with the ISoE Mission & Vision

ISoE Mission and Vision	Ph.D. MME Program Contribution
Mission 1: Provide exceptional education in engineering disciplines	Offers advanced coursework and research opportunities in mechanical, manufacturing, and industrial engineering; supports mastery of disruptive technologies and cutting-edge developments.
Mission 2: Establish a nationally recognized research program	Faculty-supervised dissertations produce original contributions; students engage in funded, peer-reviewed research projects aligned with national and global challenges.
Mission 3: Serve Texas and the nation with diverse, skilled professionals	Prepares graduates with in-demand skills and leadership in innovation.
Vision 1: Engage students in innovative, multidisciplinary, nationally recognized research	Projects integrate smart manufacturing technologies such as AI, analytics, machine learning, robotics, digital twins; students collaborate across disciplines and contribute to high-impact research outcomes.
Vision 2: Use of practical, interactive, contemporary learning	Students work in state-of-the-art labs with hands-on exposure to industrial tools and software; participate in industry-sponsored and faculty-led experiential learning opportunities.
Vision 3: Produce first-generation graduates, perform community service, and engage alumni	Offers support systems for first-generation students; fosters mentorship opportunities and encourages students to engage in applied research that benefits society and local communities.
Vision 4: Student-centered culture with diversity, integrity, and respect	Fosters strong faculty-student mentorship, interdisciplinary research teams, emphasis on professional development, and active participation in conferences and outreach initiatives.

- **Program Learning Outcomes**

  The following program learning outcomes define the key competencies and skills that MME Ph.D. students are expected to achieve upon successful completion of the program.

- Students will be able to apply disruptive technologies to solve complex engineering problems.
- Students will create knowledge in the field of mechanical, manufacturing, or industrial engineering.
- Students will demonstrate a deep understanding of the latest developments in their selected field.
- Students will demonstrate effective written and oral communication skills.

2. Program Administration

- **Program Structure**

The Mechanical and Manufacturing Engineering (MME) Ph.D. program was established with a shared commitment from the founding faculty to ensure fair benefits for all faculty members across the three distinct disciplines of Mechanical, Manufacturing, and Industrial Engineering. The program will bring together faculty from ME, MFGE, and IE programs, who will contribute to teaching, research, and advising activities.

- **MME Ph.D. Graduate Faculty**

MME Ph.D. faculty are predominantly faculty from the ME, MFGE, and IE programs who are granted graduate appointments in the MME Ph.D. program. There are three types of graduate faculty with different levels of responsibilities.

 Regular Graduate (Core Faculty): Research active and generally externally funded faculty. May chair doctoral committees and master's committees; may serve as a member of doctoral and Master's committees; may teach doctoral and master's courses; may supervise internships.

 Associate Graduate: May chair master's committees; may serve as a member of doctoral and master's committees; may teach doctoral and master's courses; may supervise internships.

 Courtesy Graduate: May serve as a member of doctoral and master's committees; may teach doctoral and master's courses; may supervise internships. Committee members external to the university are typically appointed in this category.

Graduate faculty changes frequently. For a current list of MME Doctoral Faculty, please check the website: https://www.engineering.txst.edu/programs/mme-phd/mme-faculty.html

- **MME Ph.D. Program Coordinator**

The MME Ph.D. Program Coordinator plays a critical leadership role in the administration, development, and continuous improvement of the PhD program in Mechanical and Manufacturing Engineering. This position serves as the central point of coordination among faculty, students, university administration, and external stakeholders. The key responsibilities are listed in Appendix 1.

- **Graduate Studies Committees**
    - **Program Coordination Committee:** A representative (preferably the program lead) from each of the ME, MFGE, and IE programs will be responsible for:

        - planning course offerings and rotations, balancing faculty loads, and ensuring timely availability of core and elective courses in alignment with a five-year course offering plan.

- providing strategic guidance to align instructional capacity with enrollment growth and research focus areas.

- **Admission Committee**: The MME Ph.D. Admission Committee consists of representatives from the Mechanical Engineering (ME), Manufacturing Engineering (MFGE), and Industrial Engineering (IE) programs. In coordination with the MME Ph.D. Program Coordinator, the committee is responsible for reviewing applications and making recommendations regarding student admissions to the program. The current process for admission to the MME Ph.D. and for awarding MME Ph.D. Doctoral Instructional Assistant (DIA) positions is outlined in Appendix 2.

- **Curriculum Committee**: Representatives of the ME, MFGE, and IE programs will participate in the PhD MME curriculum committee which, with coordination with the MME Ph.D. Program Coordinator, reviews and approves proposals for new courses and modifications to existing courses. This process ensures that the curriculum remains current with advancements in the field and aligns with the department, college, and university's academic standards. The MME Ph.D. Curriculum Committee will contribute to the Accreditation and Compliance activities that are led by the MME Ph.D. program coordinator.

- **Key Contact**:

  MME Ph.D. Program Coordinator: Dr. Barham Asiabanpour MME_PhD@txstate.edu

  MME Ph.D. Graduate College Website:
https://www.gradcollege.txst.edu/programs/mech-and-manufacturing-eng.html

  ISoE MME Ph.D. Program Website:

https://www.engineering.txst.edu/programs/mme-phd.html

3. Admissions

For most updated admission deadlines and criteria, visit the website:
https://www.gradcollege.txst.edu/programs/mech-and-manufacturing-eng.html

- **Application Deadlines**

DEADLINES*	U.S. CITIZEN	INTERNATIONAL
Fall - Priority	February 1	February 1
Fall - Standard	June 15	June 1

- **Application Process and Eligibility Criteria:**

1. **Complete Online Application** https://apply.gradcollege.txstate.edu/apply/
2. **Pay Application Fee**
3. **Provide Transcripts satisfying required GPA (**a copy of an official transcript from each institution where course credit was granted**)**
    - baccalaureate degree in mechanical engineering, manufacturing engineering, industrial engineering, or a closely related discipline from a regionally accredited university (non-U.S. degrees must be equivalent to a four-year U.S. bachelor's degree.)
    - master's degree in mechanical engineering, manufacturing engineering, industrial engineering, or a closely related discipline, from an accredited college or university (non-U.S. degrees must be equivalent to a U.S. master's degree.)
    - Required GPA: Applicants with bachelor's degree: A minimum cumulative GPA of 3.5 on a 4.0 scale in all completed undergraduate coursework. Applicants with master's degree: competitive GPA.
4. **Provide GRE Test Score** (the applicant must have an official Graduate Record Examination (GRE) general test result report submitted to the Graduate College)

Note: Students with bachelor's degree: Submission of official GRE General Test scores is required. Competitive scores are expected.
Students with master's degree: Official GRE (General Test only) with competitive scores.
Applicants can request a GRE waiver if they meet one of the following conditions:
• Hold a relevant engineering master's degree from an accredited institution with a competitive GPA.
• Have previously taken the GRE, and the scores have expired within the last one year.

5. **Provide Required Documents to Demonstrate Research Potential** (Resume/CV, Statement of Purpose, Three Recommendation Letters)
6. **International Students**: Additional requirements and considerations for international applicants. Applicants are required to submit an approved English proficiency exam score that meets the minimum program requirements below unless they have earned a bachelor's degree or higher from a regionally accredited U.S. institution or the equivalent from a country on our exempt countries list: https://www.gradcollege.txst.edu/international/language.html#waiver .

- official TOEFL iBT scores required with a 78 overall
- official PTE scores required with a 52 overall
- official IELTS (academic) scores required with a 6.5 overall and
    - minimum individual module scores of 6.0
- official Duolingo scores required with a 110 overall
- official TOEFL Essentials scores required with an 8.5 overall

More details are available at: https://www.gradcollege.txst.edu/international.html

4. Degree Requirements

The required courses are selected in a way that all students, regardless of their engineering background, acquire the fundamental skillsets that are expected from the graduates of the program. To give the students entering with an M.S. degree in engineering degree breadth of exposure to skills and knowledge that complement their specialty, they choose one elective course from an ample list of possible courses in areas such as computer science, material science and engineering, and commercialization.

- ## Credit Hour Requirements

DEGREE	COURSE WORK	DISSERTATION	TOTAL HOURS
Ph.D. (Entering with a master's)	**31**	**24**	**55**
10 (Required) + 6+6+6 (Prescribed Elective Groups 1,2, and 3) + 3 (Elective)			
Ph.D. (Entering with a bachelor's)	**55**	**24**	**79**
10 (Required) + 6+6+6 (Prescribed Elective Groups 1,2, and 3) + 3 (Elective) + 24 (MS Level Courses)			

- ## Coursework

I. Required Courses (10 credits)

The required courses are listed in Table 1, and briefly described below. Official course descriptions for these courses are in the graduate catalog.

MMIE 7310 Machine Learning and Artificial Intelligence for Engineers is one of the disruptive technologies that provides foundational knowledge and exposure to the field for students. It will also provide prerequisite knowledge for the other disruptive technologies to be taken as prescribed electives.

MMIE 7305 Advanced Design of Experiments is part of the required courses in the proposed program. Students who need more in-depth knowledge in this field can take additional advanced courses related to this topic as electives.

MMIE 7340 Advanced Computer Aided Engineering provides the fundamental knowledge and software skills of design, computer aided design, and simulation to students. Students with a research focus on design, computational modeling, and simulation take more advanced courses in these fields as electives.

MMIE 7100 Ph.D. Seminar will provide the opportunity for the students to conduct a literature review, survey, theoretical study, and a presentation in a field that can become their possible dissertation area.

Table 1. Required/Core Courses.

Prefix and Number	Required/Core Course Title	SCH
MMIE 7305	Advanced Design of Experiments	3
MMIE 7310	Machine Learning and Artificial Intelligence for Engineers	3
MMIE 7340	Advanced Computer Aided Engineering	3
MMIE 7100	Ph.D. Seminar	1

II. Prescribed Electives (18 credits)

Prescribed Elective Courses are provided in three groups (Table II):

· **Group 1: Disruptive Technologies Courses (6 credits).**

Students take two courses from a specified list of courses that deal with disruptive technologies (Table II.1). If a student, due to their research direction or interest, needs more than two courses in this category, they can take them under domain courses.

Table II.1. Prescribed Elective Courses- Group 1

Prefix and Number	Prescribed Elective Course Title	SCH
	Disruptive Technologies Courses ***Students must take two courses from the list of courses provided***	**6**
MMIE 7311	Cyber-Physical Systems Architecture	3
MMIE 7312	Digital Twins	3
MMIE 7313	Advanced Robotics	3
MMIE 7314	Human-Robot Interaction	3
MMIE 7315	Advanced Additive Manufacturing	3
MMIE 7316	Cybersecurity for the Mechanical and Manufacturing Systems	3
MMIE 7317	Applied Data Science I	3
MMIE 7318	Applied Data Science II	3

- **Group 2: Commercialization and Entrepreneurship Courses (6 credits).**

Students take two courses related to commercialization and entrepreneurship from a specified list of courses (Table II.2).

Table II.2. Prescribed Elective Courses- Group 2

Prefix and Number	Prescribed Elective Course Title	SCH
	Commercialization and Entrepreneurship Courses ***Students must take two courses from the list of courses provided***	**6**
MGT 7314	Organizational Behavior and Theory	3
MKT 7321	Marketing Management	3
MSEC 7301	Practical Skills in Commercialization and Entrepreneurship	3
MSEC 7302	Leadership Skills in Commercialization and Entrepreneurship	3
MSEC 7325	Principles of Technical Project Management	3

- **Group 3: Domain (Depth) Courses (6 credits).**

This group includes specialized courses in ME, MFGE, and IE. Based on their research direction, students take two courses from the list of courses corresponding to this group (Table II.3).

Table II.3. Prescribed Elective Courses- Group 3

Prefix and Number	Prescribed Elective Course Title	SCH
	Domain (Depth) Courses ***Students must take two courses from the list of courses provided***	**6**
MMIE 7311	Cyber-Physical Systems Architecture	3
MMIE 7312	Digital Twins	3
MMIE 7313	Advanced Robotics	3
MMIE 7314	Human-Robot Interaction	3
MMIE 7315	Advanced Additive Manufacturing	3
MMIE 7316	Cybersecurity for the Mechanical and Manufacturing Systems	3
MMIE 7317	Applied Data Science I	3
MMIE 7318	Applied Data Science II	3
MMIE 7320	Advanced Solid Mechanics	3
MMIE 7322	Advanced Fluid Mechanics	3
MMIE 7324	Advanced Heat Transfer	3
MMIE 7326	Advanced Mechanical System Control	3
MMIE 7330	Advanced Finite Element Analysis	3
MMIE 7332	Computations in Fluid Mechanics and Heat Transfer	3
MMIE 7341	Advanced Micro and Nano Manufacturing	3
MMIE 7342	Advanced Polymer Nanocomposites	3
MMIE 7362	Time-Series Analysis and Forecasting	3
MMIE 7367	Database Analytics for Web-Based Optimization	3
MMIE 7370	Stochastic Simulation	3
MMIE 7372	Network Flow Optimization	3
MMIE 7374	Applications of Data Science in Multi-Objective Optimization	3
MMIE 7379	Modeling & Design of Net Zero Manufacturing and Service Enterprises	3

III. Electives (3 credits)

To give the students breadth exposure to skills and knowledge that complement their specialty, they choose one course from a list of possible courses (Table III). Students entering with a bachelor's degree will have to take an additional 24 semester credit hours of courses listed in V, and/or doctoral level courses from the proposed program.

Table III. Elective Courses.

Prefix and Number	Elective Course Title	SCH
	Technical Breath Course ***Students must take one course from the list of courses provided***	**3**
BIO 7360Y	Applied Bioinformatics	3
BIO 7405	Statistics and Experimental Design I	4
BIO 7406	Statistics and Experimental Design II	4
CI 7351	Beginning Quantitative Research Design and Analysis	3
CI 7353	Intermediate Quantitative Research Design and Analysis	3
CI 7354	Intermediate Qualitative Design and Analysis	3
CS 7312	Advanced Data Mining	3
CS 7313	Advanced Machine Learning and Pattern Recognition	3
CS 7314	Bioinformatics	3
ED 7359	Advanced Quantitative Research Methods	3
ENG 7314	Specializations in Professional and Technical Communication Topics	3
Math 7325	Statistics	3
Math 7335	Statistics II	3
MSEC 7310	Nanoscale Systems and Devices	3
MSEC 7311	Materials Characterization	3
MSEC 7320	Nanocomposites	3
MSEC 7340	Biomaterials and Biosensors	3
MSEC 7355	Fluid Flow in Porous Media	3
MSEC 7360	Nanomaterials Processing	3
MSEC 7370	Advanced Polymer Science	3
MSEC 7395C	Materials for Sustainable Energy	3
MSEC 7395D	Polymer Characterization and Processing	3
MSEC 7395I	Structure and Properties of Alloys	3
MSEC 7395L	Advanced Solid-State Physics	3
MSEC 7395M	Semiconductor Devices and Processing	3

IV. Dissertation (24 credits)

Students will take 24 semester credit hours toward completing their dissertation (Table IV).

Table IV. Dissertation

Prefix and Number	Dissertation Course Title	SCH
	Dissertation ***Student must take 24 semester credit hours of dissertation***	**24**
MMIE 7199	Dissertation	1
MMIE 7299	Dissertation	2
MMIE 7399	Dissertation	3
MMIE 7599	Dissertation	5
MMIE 7699	Dissertation	6
MMIE 7999	Dissertation	9

V. Additional Elective Courses for Students Entering with a B.S. Degree (24 credits)

Students entering with a bachelor's degree will be required to complete an additional 24 semester credit hours of coursework. The 24 additional semester credit hours will correspond to master level courses (i.e., 5000 level courses) from the MME concentration and/or the IE concentration of the M.S. in Engineering program listed in Table V, and/or to doctoral level courses (i.e., 7000 level courses) from the proposed program.

Table V. Master Level Course

Prefix and Number	Master Level Course Title	SCH
ENGR 5310	Probability, Random Variables, & Stochastic Processes for Engineers	3
ME 5310	Continuum Mechanics.	3
ME 5312	Stress Analysis of Composite Materials	3
MFGE 5315	Energy and Thermofluids Engineering	3
MFGE 5316	Advanced Computer Aided Design and Manufacturing	3
MFGE 5318	Additive Manufacturing	3
MFGE 5320	Polymer Nanocomposites	3
MFGE 5326	Advanced Robotics in Manufacturing Automation	3
MFGE 5330	Multiscale Manufacturing	3
MFGE 5398B	Advanced Composite Materials	3
IE 5310	Advanced Statistical Design of Experiments for Engineers	3
IE 5320	Modeling and Analysis of Manufacturing Systems	3
IE 5330	Advanced Quality Control and Reliability Engineering	3
IE 5340	Applied Deterministic Operations Research for Engineers	3
IE 5343	Non-Linear Optimization Techniques for Engineers	3
IE 5345	Advanced Optimization	3

IE 5347	Modern Heuristic Optimization	3
IE 5360	Advanced Inventory Control	3
IE 5370	Scheduling	3
IE 5397	System Thinking and Analysis	3

- **Candidacy and Dissertation**

Figure 1 illustrates the process of initiating and completing dissertation research required for earning the PhD degree in Mechanical and Manufacturing Engineering (MME).

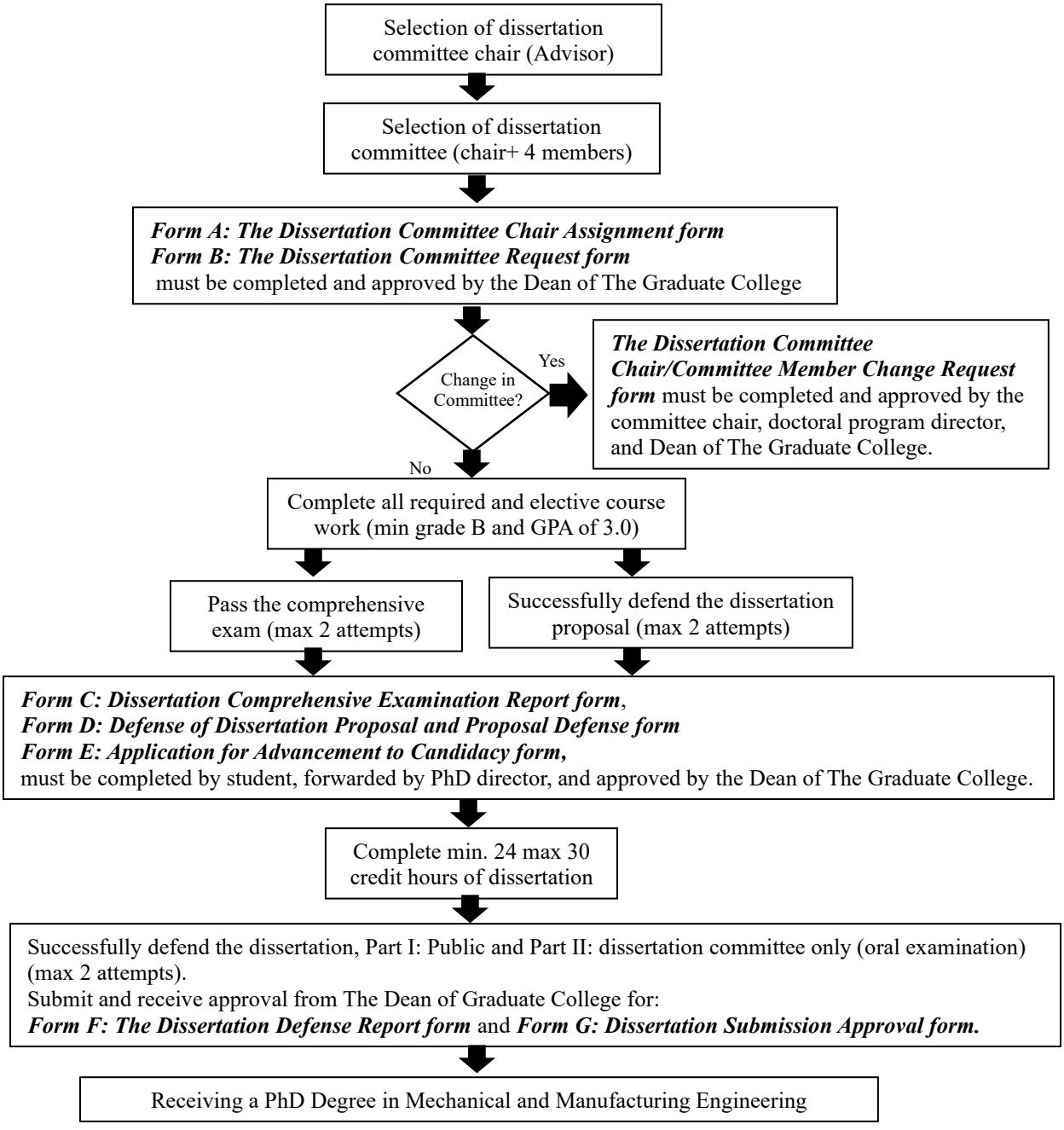

Figure 1. *The process of initiating and completing dissertation research in Ph.D. MME.*

All forms are available at: https://www.gradcollege.txst.edu/forms.html

- ***Advisor Selection***

Before starting their PhD program or during the first year, students are expected to identify and confirm a primary research advisor who aligns with their research interests and career goals. Advisor assignments are based on:

- Mutual interest in research topics
- Faculty availability and funding
- Interview or mutual agreement following initial coursework

- ***Dissertation Committee***

The initial dissertation committee chair assignment, and its continuation, is subject to the approval of both parties. A dissertation committee chair can be changed with the approval of a student's assigned dissertation committee chair, a student's new dissertation committee chair, and the doctoral program director. If a dissertation committee chair withdraws mentorship, the student must secure a new dissertation committee chair within one long semester to stay on track in the proposed program. Failure to do so will result in dismissal from the proposed program.

The Dissertation Committee will be responsible for administering the Comprehensive Exam and the Dissertation Proposal Defense and will oversee the research and writing of the student's dissertation. The committee will consist of 5 members, including the student's dissertation committee chair who must be a regular graduate faculty member in the proposed program, three other graduate faculty members from the ISOE (note that the majority of faculty members must come from the proposed program), and one graduate faculty from another department at Texas State or from another university, or a Ph.D. holder in industry or a government agency. The student's dissertation committee chair will chair the committee. The student, the dissertation committee chair, and the Dean of The Graduate College will approve the composition of the dissertation committee.

As per The Graduate College policy, the Dissertation Committee Chair Assignment form and the Dissertation Committee Request form must be completed and approved by the Dean of The Graduate College to establish the dissertation committee. Any changes to the dissertation committee must be submitted using the Dissertation Committee Chair/Committee Member Change Request form for approval of the dissertation committee chair, the doctoral program director, and the Dean of The Graduate College. Committee changes must be submitted no later than 60 days before the dissertation defense.

Candidacy Criteria: Students will advance to candidacy after they have completed all required and elective course work (except for dissertation credit hours), passed their comprehensive exam, and successfully defended their dissertation proposal. It is expected that students will complete their dissertation proposal by the end of year 2 if starting from an M.S. degree or by the end of year 3 if starting from a B.S. degree. Appropriate adjustments are made if students are part-time students. Once all requirements are met, the doctoral program director will forward the

Application for Advancement to Candidacy form to the Dean of The Graduate College for review and approval.

- ***Comprehensive Exam***

Each doctoral student must pass a comprehensive examination. This should be done by the time the student has completed 37 semester credit hours if starting from an M.S. degree or 61 semester credit hours if starting from a B.S. degree, and can only be done after identifying the dissertation committee and completing all required courses.

The comprehensive exam will be a written take-home exam. The dissertation committee will provide the student with a list of topics for the comprehensive exam. The topics in the list will be based on graduate courses that the student took at Texas State. The exam will have four questions and the student will have 24 hours to complete the exam. Members of the dissertation committee will grade the exam questions. The answer to each question will be graded as satisfactory or unsatisfactory. To pass the exam, the student must receive a satisfactory grade in all the exam questions. Any student who does not pass the comprehensive exam by the time 45 semester credit hours have been accrued if starting from an M.S. degree or 69 semester credit hours have been accrued if starting from a B.S. degree will be dismissed from the program. If any section(s) of the comprehensive exam is not passed, the student will have the option of retaking the section(s) they failed a second and final time in the following long semester. Students will be dismissed from the proposed program if they do not pass all sections of the comprehensive exam the second time.

- ***Dissertation Proposal and Proposal Defense***

Each Ph.D. student must prepare a written dissertation proposal and defend it orally. This should be done by the time the student has completed 37 semester credit hours if starting from an M.S. degree or 61 semester credit hours if starting from a B.S. degree, and after identifying the dissertation committee and completing all required courses. Any student who does not defend his/her dissertation proposal by the time 45 semester credit hours have been accrued if starting from an M.S. degree or 69 semester credit hours have been accrued if starting from a B.S. degree will be dismissed from the proposed program. If the proposal defense is not passed, the student will have the option of taking a second and final proposal defense in the following long semester. Students will be dismissed from the proposed program if they do not pass the proposal defense the second time.

The dissertation proposal must outline the substance and scope of the planned dissertation research and explain its merits. It must include at least an introduction, the methodology to be used, a survey of the relevant literature, and preliminary results that demonstrate the feasibility. The goal of the proposal is to establish that the student has a sufficient grasp of the fundamentals of the chosen dissertation topic to execute the research.

The proposal defense entails a public presentation of the student's dissertation proposal, followed immediately by a closed defense of the proposal attended only by the student and his/her dissertation committee. The dissertation proposal must be approved by the student's dissertation advisor and a majority of the remaining members on the dissertation committee. The student's dissertation committee members must indicate their approval on the doctoral

Dissertation Proposal Form and the Defense of Dissertation Proposal Form. These forms are available on The Graduate College's website.

A final copy of the dissertation proposal, accompanied by the signed approval forms, must be turned in to the doctoral program director, who will forward them to the Dean of The Graduate College for review and final approval.

- ***Candidacy and Dissertation***

When all requirements for admission to candidacy have been met, the doctoral program director forwards the Application for Advancement to Candidacy to the Dean of The Graduate College for review and approval. This application form is available on The Graduate College's website.

A minimum GPA of 3.0 on all coursework undertaken in the doctoral program is required for admission to candidacy. Grades below a "B" on any graduate coursework cannot be applied toward the doctoral degree. Incomplete grades must have been cleared before approval for advancement to candidacy can be granted. No more than six semester credit hours of dissertation research can be taken before advancing to candidacy. No credit will be applied toward a student's doctoral degree for coursework completed more than five years before the date on which the student is admitted to candidacy if starting from an M.S. degree or more than seven years if starting from a B.S. degree. Appropriate time adjustments are made for part-time students. This time limit applies to course credit earned at Texas State as well as course credit transferred to Texas State from other institutions.

All doctoral students must complete a dissertation that consists of original research and demonstrates mature scholarship and critical judgment in addition to familiarity with tools and methods in the chosen area. The dissertation project must adhere to the dissertation proposal and cover the topic approved by the student's dissertation committee.

After being admitted to candidacy, students must be continuously enrolled for dissertation hours each fall and spring semester until the defense of their dissertation. At least 24 semester credit hours of dissertation research must be taken after having advanced to candidacy. If a student is receiving supervision on a dissertation during the summer or if the student is graduating in the summer, the student must be enrolled in dissertation hours for the summer. All candidates for graduation must be enrolled in dissertation hours during the semester in which the degree is to be conferred, even if they have already satisfied the minimum dissertation hours.

- ***Dissertation Defense***

Once the dissertation has been completed, a final exam (referred to as the dissertation defense) on the dissertation must be conducted. The dissertation defense cannot be scheduled until all other academic and program requirements have been fulfilled. A complete draft of the dissertation must be given to the members of the dissertation committee at least one month before the defense. However, students are highly encouraged to provide drafts earlier so that the committee members can provide feedback, which the student, in consultation with the dissertation advisor, will address in later drafts to ensure that the dissertation is defendable, and each committee member is satisfied before the dissertation defense takes place.

The dissertation defense consists of two parts. The first part is a public presentation of their dissertation research. The second part of the defense immediately follows the public presentation. It is restricted to participation of the student's dissertation committee and entails an oral examination of the dissertation research. Approval of the dissertation requires positive votes from the student's dissertation advisor and from the majority of the remaining members of the dissertation committee. Notice of the defense presentation will be publicly posted at least two weeks in advance.

If the dissertation defense is not approved, the student will have the option of taking a second and final dissertation defense in the following long semester. Students who do not pass the dissertation defense the second time will be dismissed from the proposed program.

The results of the dissertation defense must be recorded in the Dissertation Defense Report Form and submitted to The Graduate College before the Dean of The Graduate College can give final approval of the dissertation. This form can be downloaded from The Graduate College's website. The student must submit his/her dissertation to The Graduate College for final approval. The guidelines for submission and approval of the dissertation can be obtained from The Graduate College.

Students must pass the dissertation defense by the time 30 semester credit hours of dissertation have been accrued. The doctoral program faculty will review each student annually to ascertain his/her progress towards the degree and will consult the student's dissertation advisor and dissertation committee on this matter as needed.

5. Academic Integrity and Honor Code

Academic Integrity

Academic integrity is the cornerstone of scholarly work at Texas State University. Violations such as plagiarism, data fabrication, data falsification, unauthorized collaboration, or misrepresentation of credentials are strictly prohibited and subject to disciplinary action, including dismissal from the program.

- **Plagiarism** includes copying text, ideas, or data without proper citation.
- **Data fabrication** is the intentional invention of data or results.
- **Data falsification** involves manipulating research processes or altering data to misrepresent results.

- **Honor Code (UPPS No. 07.10.01)**

As members of a community dedicated to learning, inquiry, and creation, the students, faculty, and administration of our university live by the principles in this Honor Code. These principles require all members of this community to be conscientious, respectful, and honest.

We are Conscientious
We complete our work on time and make every effort to do it right. We come to class and meetings prepared and are willing to demonstrate it. We hold ourselves to doing what is required, embrace rigor, and shun mediocrity, special requests, and excuses.

We are Respectful
We act civilly toward one another and we cooperate with each other. We will strive to create an environment in which people respect and listen to one another, speaking when appropriate, and permitting other people to participate and express their views.

We are Honest
We do our own work and are honest with one another in all matters. We understand how various acts of dishonesty, like plagiarizing, falsifying data, and giving or receiving assistance to which one is not entitled, conflict as much with academic achievement as with the values of honesty and integrity.

The Pledge for Students
Students at our university recognize that, to ensure honest conduct, more is needed than an expectation of academic honesty, and we therefore adopt the practice of affixing the following pledge of honesty to the work we submit for evaluation:
"*I pledge to uphold the principles of honesty and responsibility at our university*."

The Pledge for Faculty and Administration
Faculty at our university recognize that the students have rights when accused of academic dishonesty and will inform the accused of their rights of appeal laid out in the student handbook and inform them of the process that will take place:

"I recognize students' rights and pledge to uphold the principles of honesty and responsibility at our university."

- ***Addressing Acts of Dishonesty***

1. Students accused of dishonest conduct may have their cases heard by the faculty member. Specific academic penalties a student may receive for academic dishonesty violations are mentioned in the honor code (UPPS No. 07.10.01) and may include one or more of the following: (a) a requirement to perform additional academic work not required of other students in the course, (b) a reduction in grade in the course to any level; (c) a reduction in grade on an examination, or on other academic work affected by the violation of the Honor Code; and (d) a penalty related to a non-course violation as codified in departmental or catalog policy. The student may also appeal the faculty member's decision to the Honor Code Council. Students and faculty will have the option of having an advocate present to ensure their rights. Possible actions that may be taken range from exoneration to expulsion. Information about the Honor Code Council and its policies and procedures may be found at http://www.txstate.edu/honorcodecouncil/ .

Students are responsible for familiarizing themselves with the Texas State University's **Honor Code** and policies on academic misconduct available at:

https://policies.txst.edu/university-policies/07-10-01.html

Honor Code Procedures: Faculty Member Responsibilities
Below is a checklist of basic steps to assist faculty members who suspect that a student has violated the Honor Code Policy. The faculty member may consult with their department chair or school director to determine an appropriate academic penalty.

In compliance with the Honor Code University Policy (UPPS No. 07.10.01), the faculty member will follow these steps:

1. Schedule a meeting with the student suspected of committing an honor code violation.
2. During the meeting, clearly communicate your observations and the prescribed penalty to the student if confident that academic misconduct occurred.
3. After the meeting, using the TXST (secure) File Transfer system, send the student the Determination Verification Form to obtain the student's acceptance or non-acceptance of responsibility. Indicate in the message to the student that their response must be submitted using the TXST (secure) File Transfer system.
4. When the student's completed Determination Verification Form is received, or after three business days of no response, complete all required fields on the online Honor Code Review Form. Texas State NetID and login credentials will be required.
5. Attach the Determination Verification Form and any supporting documentation related to the Honor Code violation to the Honor Code Review Form.
6. Based on the submission details, a University Honor Code Hearing Officer will contact the student and/or professor for further steps as necessary.

6. Research Advisor, Research Expectation, and Mentorship

- ***Research Advisor***

Students are expected to meet with the MME faculty to discuss research interests and select a research advisor (dissertation committee chair) by the end of their first semester. When selecting a research advisor, students should consider many factors, including the student's knowledge/interest in the research area, availability of research assistantship funding, opportunity to publish research findings, marketability upon graduation, research advisor's mentoring style, and group dynamics. Before joining a research group, it is essential that each student meet with their prospective research advisor to gain an understanding of the expectations the advisor has for their students' productivity. This includes the number of publications/patents/presentations the student is expected to produce as well as the number of hours per week the student is expected to be in the laboratory and the advisor's policies on vacation time.

- ***Research Expectations***

Ph.D. students are expected to engage in original, high-quality research that advances knowledge in the fields of mechanical, manufacturing, or industrial engineering. Students must:

- Develop a clear research question or problem statement.
- Demonstrate thorough understanding of the existing literature.
- Apply appropriate research methodologies, whether experimental, computational, or theoretical.
- Document all procedures and results accurately.
- Disseminate findings through peer-reviewed publications, conference presentations, and a doctoral dissertation.

Research must be conducted ethically and with academic rigor, contributing positively to the scholarly community and societal advancement.

- ***Staircase of Researcher Development***

The journey from a graduate student to an independent scholar is a progressive and transformative process. To support this evolution, the Staircase of Researcher Development provides a structured framework that outlines the key milestones and expectations at each stage of academic growth. This model breaks down the graduate research experience into four distinct levels—Novice Learner, Developing Researcher, Emerging Independent Researcher, and Independent Researcher—each representing increasing levels of independence, responsibility, and scholarly contribution. By understanding and following this progression, students and mentors can better align their goals, expectations, and support strategies to ensure successful and timely development throughout the graduate journey.

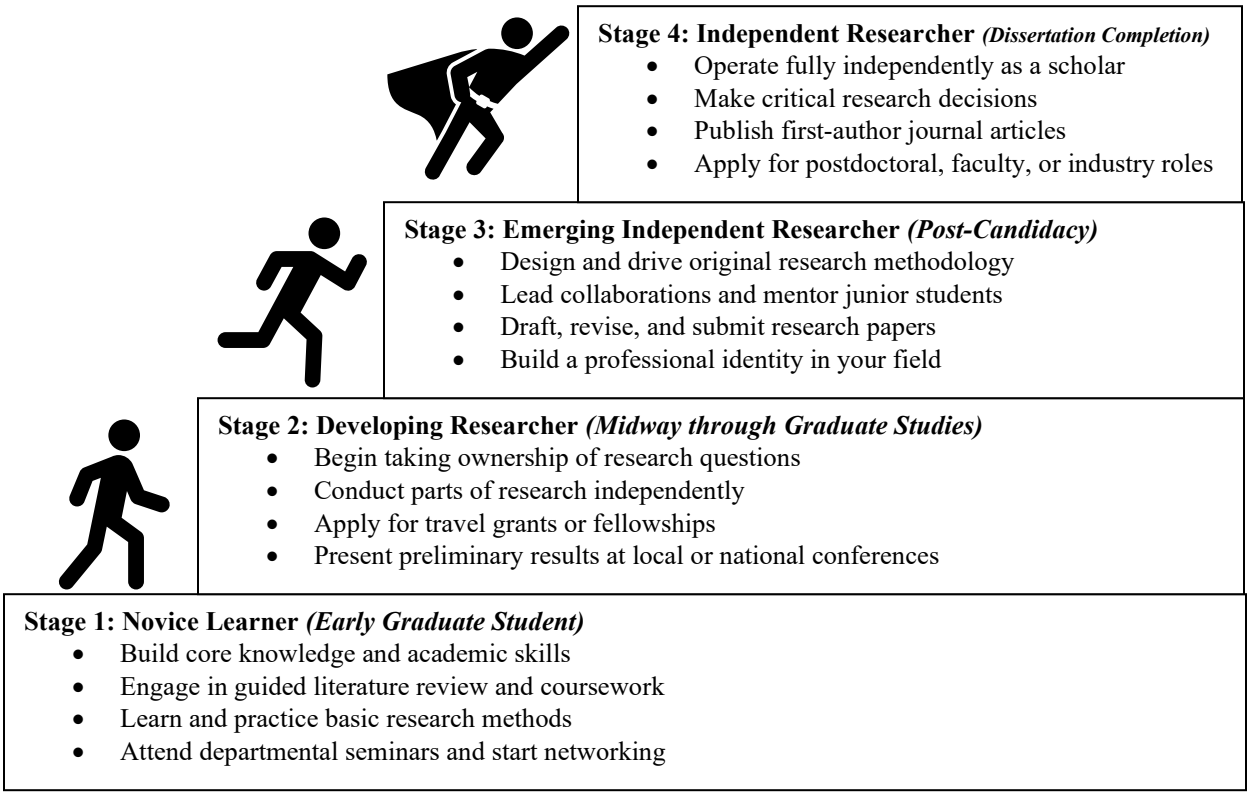

Figure 2. *Staircase of researcher development*

- ***Regular Meetings***

Students must maintain regular communication with their advisor and committee:

- Meet at least **once per semester** with the full committee to review progress
- Meet **monthly or bi-weekly** with the primary advisor for updates and guidance
- Keep detailed and organized records of meeting agendas and outcomes

- ***Progress Monitoring***

The following tools are used to monitor academic and research progress:

- **Annual Progress Reports** submitted to the Graduate Advisor
- **Committee evaluation forms** after key milestones (qualifying exam, proposal defense, etc.)
- **Individual Development Plans (IDPs)** recommended for tracking goals and identifying training needs

Failure to demonstrate adequate progress may result in academic probation or dismissal from the program, as outlined in the Graduate College policies.

7. Graduation and Beyond

The last phase of the academic life of an MME Ph.D. student is crucial for their careers. All students must be familiar with the following:

- **Application for Graduation**: Steps to apply for degree conferral.
- **Exit Interviews**: Conducting interviews to gather feedback and assess program effectiveness.
- **Alumni Relations**: Opportunities for staying connected with the department post-graduation.
- **Career Services**: Resources for job placement and career advancement.

Appendices

Appendix 1. Program Coordinator Responsibilities (*draft, not approved*)

1. **Program Handbook Management**
    - Develop, maintain, and regularly update the MME Ph.D. Program Handbook to reflect current policies, procedures, and academic requirements.
    - Ensure alignment with institutional, college, and departmental standards.
2. **Communication with the Graduate College**
    - Serve as the primary liaison with the Graduate College regarding admissions, enrollment, academic policies, student petitions, and compliance with graduate education standards.
    - Ensure timely dissemination and implementation of Graduate College requirements and updates within the program.
3. **Coordination with Committees**
    - Collaborate with the **Admissions Committee** to ensure timely and transparent review of applications and support improvements to admissions processes.
    - Work closely with the **Curriculum Committee** to evaluate and propose course changes, program enhancements, and ensure curriculum alignment with educational objectives and emerging trends.
    - **Work with the Program Coordination Committee** consisting of a representative (preferably the program lead) from each of the ME, MFGE, and IE programs.
4. **Interdepartmental Collaboration**
    - Coordinate with the ME, MFGE, and IE programs to align MME Ph.D. faculty hiring priorities with program needs and strategic goals.
    - Facilitate MME Ph.D. course scheduling by communicating with ME, MFGE, and IE program coordinators.
5. **Student Orientation and Progress Monitoring**
    - Organize and lead orientation sessions for incoming MME Ph.D. students to provide a comprehensive overview of program expectations, resources, and opportunities.
    - Monitor the academic progress of current students, ensuring timely completion of milestones, facilitating advisor assignments, and supporting academic success.
6. **Equipment and Facility Planning**
    - Oversee procurement of research equipment and supervise lab construction and renovation efforts in alignment with the original program proposal and evolving research needs.
    - Ensure effective utilization of funds taking into consideration the MME Ph.D. needs expressed by the ME, MFGE, and IE programs, and ensure compliance with procurement policies.
7. **Advisory Board Formation and Engagement**
    - Establish and maintain a Program Advisory Board consisting of academic, industry, and research leaders.
    - Leverage the board's insights to guide curriculum development, enhance industry relevance, and support strategic program growth.

8. **Accreditation and Compliance Reporting**
    - Lead efforts to meet and report on accreditation and regulatory requirements, including those from SACSCOC (Southern Association of Colleges and Schools Commission on Colleges) and THECB (Texas Higher Education Coordinating Board).

Collect, analyze, and submit program metrics and outcomes for continuous improvement and institutional accountability.

Appendix 2. MME Ph.D. Student Admission Procedure

1. **Application Collection and Initial Review**
    - The MME Ph.D. Admission Committee will compile and summarize all applications in an Excel spreadsheet for review.
    - The committee will conduct an initial screening and exclude applicants who do not meet admission criteria.

2. **Faculty Review and Candidate Selection**
    - The summarized list of qualified applicants will be shared with all faculty members of Mechanical, Manufacturing, and Industrial Engineering Programs for review.
    - Complete applications of qualified students will be uploaded on Canvas under the folder titled “PhD MME Admission”.
    - Faculty members who are willing to offer a DRA (Doctoral Research Assistantship) will identify the student in the list to receive the priority in selecting the student to supervise.
    - Each faculty member will be asked to identify their top two candidates for DIA offer, reflecting their willingness to serve as dissertation advisors.

3. **Admission and Financial Support Decision**
    - The Ph.D. Admission Committee will make final admission decisions based on multiple factors, including the applicant’s qualification, the availability of at least one faculty member to serve as their dissertation advisor, DIA funding availability, research funding, mutual research interests between faculty and students, and equitable opportunities for faculty to serve as advisors for DIA offers. Additionally, the committee will consider supporting junior faculty in their research endeavors.

4. **Offer Letters and Financial Support**
    - Ph.D. admission letters, along with details of financial support such as DIA, DRA, or any applicable scholarships, will be sent to admitted students with a specified deadline to accept the offer. Top applicants who meet the admission criteria but did not receive DIA or DRA funding will be notified of their admission status and placement on the reserve list for potential financial support.

Appendix 3 Forms and Templates: Access to necessary documents for various procedures.

The most updated forms are available on the graduate college website:

https://www.gradcollege.txst.edu/forms.html

Last update: *8-15-2025 By Dr. Asiabanpour with comments and corrections from Dr. Muci and Novoa.*