DOCTOR OF PHILOSOPHY IN INTERDISCIPLINARY ENGINEERING

The PhD in Interdisciplinary Engineering (ITDE) program allows students to develop unique expertise in emerging areas that may not be covered by traditional departmental degree programs and provides a path for those whose research interests cross engineering disciplines and/or college lines. Graduates with interdisciplinary engineering skill sets are highly sought after by employers, and the PhD in ITDE poises graduates to become leaders in academic organizations, government and industry. Examples of previously awarded interdisciplinary topics include environmental engineering and public policy as well as engineering and education.

The ITDE program is administratively housed in the Department of Multidisciplinary Engineering. Doctoral candidates in ITDE are expected to excel academically with high-quality journal publications before defending their dissertations. These candidates are further expected to establish strong relationships with industry, through internships and related activities.

This program is also approved for delivery via asynchronous or synchronous distance education technology.

Program Requirements

Program Requirements

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Student’s Advisory Committee

On-Campus and Distance Education Degree Programs

After receiving admission to graduate studies and enrolling, the student will consult with the head of his or her major or administrative department (or chair of the intercollegiate faculty) concerning appointment of the chair of the advisory committee. The student’s advisory committee will consist of no fewer than four members of the graduate faculty representative of the student’s several fields of study and research, where the chair or co-chair must be from the student’s department (or intercollegiate faculty, if applicable), and at least one or more of the members must have an appointment to a department other than the student’s major department. The outside member for a student in an interdisciplinary degree program must be from a department different from the chair of the student’s committee.

The chair, in consultation with the student, will select the remainder of the advisory committee. Only graduate faculty members located on Texas A&M University campuses may serve as chair of a student’s advisory committee. Other Texas A&M University graduate faculty members located off-campus may serve as a member or co-chair (but not chair), with a member as the chair.

If the chair of a student’s advisory committee voluntarily leaves the University and the student is near completion of the degree and wants the chair to continue to serve in this role, the student is responsible for securing a current member of the University Graduate Faculty, from the student’s academic program and located near the Texas A&M University campus site, to serve as the co-chair of the committee. The Department Head or Chair of Intercollegiate faculty may request in writing to the Associate Provost and Dean of the Graduate and Professional School that a faculty member who is on an approved leave of absence or has voluntarily separated from the university, be allowed to continue to serve in the role of chair of a student’s advisory committee without a co-chair for up to one year. The students should be near completion of the degree. Extensions beyond the one year period can be granted with additional approval of the Dean.

The committee members’ signatures on the degree plan indicate their willingness to accept the responsibility for guiding and directing the entire academic program of the student and for initiating all academic actions concerning the student. Although individual committee members may be replaced by petition for valid reasons, a committee cannot resign en masse. The chair of the committee, who usually has immediate supervision of the student’s research and dissertation or record of study, has the responsibility for calling all meetings of the committee. The duties of the committee include responsibility for the proposed degree plan, the research proposal, the preliminary examination, the dissertation or record of study and the final examination. In addition, the committee, as a group and as individual members, is responsible for counseling the student on academic matters, and, in the case of academic deficiency, initiating recommendations to the Graduate and Professional School.

Degree Plan

On-Campus and Distance Education Degree Programs

The student’s advisory committee will evaluate the student’s previous education and degree objectives. The committee, in consultation with the student, will develop a proposed degree plan and outline a research problem which, when completed, as indicated by the dissertation (or its equivalent for the degree of Doctor of Education or the degree of Doctor of Engineering), will constitute the basic requirements for the degree. The degree plan must be filed with the Graduate and Professional School prior to the deadline imposed by the student’s college and no later than 90 days prior to the preliminary examination.

This proposed degree plan should be submitted through the online Document Processing Submission System located on the website http://ogsdpss.tamu.edu (http://ogsdpss.tamu.edu/). A minimum of 64 hours is required on the degree plan for the Doctor of Philosophy for a student who has completed a master’s degree. A student who has completed a DDS/DMD, DVM or a MD at a U.S. institution is also required to complete a minimum of 64 hours. A student who has completed a baccalaureate degree but not a master’s degree will be required to complete a 96-hour degree plan. Completion of a DDS/DMD, DVM or MD degree at a foreign institution requires completion of a minimum of 96 hours.
Research Proposal

On-Campus and Distance Education Degree Programs

The general field of research to be used for the dissertation should be agreed on by the student and the advisory committee at their first meeting, as a basis for selecting the proper courses to support the proposed research.

As soon thereafter as the research project can be outlined in reasonable detail, the dissertation research proposal should be completed. The research proposal should be approved at a meeting of the student’s advisory committee, at which time the feasibility of the proposed research and the adequacy of available facilities should be reviewed. The approved proposal, signed by all members of the student’s advisory committee, the head of the student’s major department (or chair of the intercollegiate faculty, if applicable), must be submitted to the Graduate and Professional School at least 20 working days prior to the submission of the Request for the Final Examination.

Compliance issues must be addressed if a graduate student is performing research involving human subjects, animals, infectious biohazards and recombinant DNA. A student involved in these types of research should check with the Office of Research Compliance and Biosafety at (979) 458-1467 to address questions about all research compliance responsibilities. Additional information can also be obtained on the website http://rcb.tamu.edu.

Examinations

On-Campus and Distance Education Degree Programs

Preliminary Examination for Doctoral Students

The student’s major department (or chair of the interdisciplinary degree program faculty, if applicable) and his or her advisory committee may require qualifying, cumulative or other types of examinations at any time deemed desirable. These examinations are entirely at the discretion of the department and the student’s advisory committee.

The preliminary examination is required. The preliminary examination for a doctoral student shall be given no earlier than a date at which the student is within 6 credit hours of completion of the formal coursework on the degree plan (i.e., all coursework on the degree plan except 681, 684, 690, 691, 692, 693, 695, 697, 791, or other graduate courses specifically designated as S/U in the course catalog). The student should complete the Preliminary Examination no later than the end of the semester following the completion of the formal coursework on the degree plan.

Preliminary Examination Format

The objective of preliminary examination is to evaluate whether the student has demonstrated the following qualifications:

a. a mastery of the subject matter of all fields in the program;

b. an adequate knowledge of the literature in these fields and an ability to carry out bibliographical research;

c. an understanding of the research problem and the appropriate methodological approaches.

The format of the preliminary examination shall be determined by the student’s department (or interdisciplinary degree program, if applicable) and advisory committee, and communicated to the student in advance of the examination. The exam may consist of a written component, oral component, or combination of written and oral components.

The preliminary exam may be administered by the advisory committee or a departmental committee; herein referred to as the examination committee.

Regardless of exam format, a student will receive an overall preliminary exam result of pass or fail. The department (or interdisciplinary degree program, if applicable) will determine how the overall pass or fail result is determined based on the exam structure and internal department procedures. If the exam is administered by the advisory committee,
each advisory committee member will provide a pass or fail evaluation decision.

Only one advisory committee substitution is allowed to provide an evaluation decision for a student’s preliminary exam, and it cannot be the committee chair.

If a student is required to take, as a part of the preliminary examination, a written component administered by a department or interdisciplinary degree program, the department or interdisciplinary degree program faculty must:
  a. offer the examination at least once every six months. The departmental or interdisciplinary degree program examination should be announced at least 30 days prior to the scheduled examination date.
  b. assume the responsibility for marking the examination satisfactory or unsatisfactory, or otherwise graded, and in the case of unsatisfactory, stating specifically the reasons for such a mark.
  c. forward the marked examination to the chair of the student’s advisory committee within one week after the examination.

Preliminary Examination Scheduling
Prior to commencing any component of the preliminary examination, a departmental representative or the advisory committee chair will review the eligibility criteria with the student, using the Preliminary Examination Checklist to ensure the student is eligible for the preliminary examination. The following list of eligibility requirements applies.

• Student is registered at Texas A&M University for a minimum of one semester credit hour in the long semester or summer term during which any component of the preliminary examination is held. If the entire examination is held between semesters, then the student must be registered for the term immediately preceding the examination.
• An approved degree plan is on file with the Graduate and Professional School prior to commencing the first component of the examination.
• Student’s cumulative GPA is at least 3.000.
• Student’s degree plan GPA is at least 3.000.
• All English language proficiency requirements are satisfied.
• At the end of the semester in which at least the first component of the exam is given, there are no more than 6 hours of coursework remaining on the degree plan (except 681, 684, 690, 691, 692, 693, 695, 697, 791, or other graduate courses specifically designated as S/U in the course catalog). The head of the student’s department (or Chair of the Interdisciplinary Degree Program, if applicable) has the authority to approve a waiver of this criterion.

Report of Preliminary Examination
Credit for the preliminary examination is not transferable in cases where a student changes degree programs after passing a preliminary exam. If a written component precedes an oral component of the preliminary exam, the chair of the student’s examination committee is responsible for making all written examinations available to all members of the committee. A positive evaluation of the preliminary exam by all members of a student’s examination committee with at most one disssention is required to pass a student on his or her preliminary exam.

The student’s department will promptly report the results of the Preliminary Examination to the Graduate and Professional School via the Report of Doctoral Preliminary Examination form. The Preliminary Examination checklist form must also be submitted. These forms should be submitted to the Graduate and Professional School within 10 working days of completion of the preliminary examination.

The Report of the Preliminary Examination form must be submitted with original signatures of the approved examination committee members. If an approved examination committee member substitution (one only) has been made, that signature must also be included, in place of the committee member, on the form submitted to the Graduate and Professional School. The original signature of the department head is also required on the form.

After passing the required preliminary oral and written examinations for a doctoral degree, the student must complete the final examination within four years of the semester in which the preliminary exam is taken. Exams taken in between terms will expire at the end of the term that ended prior to the exam. For example, a preliminary exam taken and passed during the fall 2019 semester will expire at the end of the fall 2023 semester. A preliminary exam taken in the time between the summer and fall 2019 semesters will expire at the end of the summer 2023 semester.

Retake of Failed Preliminary Examination
Upon approval of the student’s examination committee, with no more than one member dissenting, and approval of the Graduate and Professional School, a student who has failed the preliminary examination may be given one re-examination. Adequate time must be given to permit the student to address the inadequacies emerging from the first preliminary examination. The examination committee must agree upon and communicate to the student, an adequate time-frame from the first examination (normally six months) to retest, as well as a detailed explanation of the inadequacies emerging from the examination. The student and the committee should jointly negotiate a mutually acceptable date for this retest. When providing feedback on inadequacies, the committee should clearly document expected improvements that the student must be able to exhibit in order to retake the exam. The examination committee will document and communicate the time-frame and feedback within 10 working days of the exam that was not passed.

Final Examination for Doctoral Students
The candidate for the doctoral degree must pass a final examination by deadline dates announced in the “Graduate and Professional School Calendar” each semester. The doctoral student is allowed only one opportunity to take the final examination.
No unabsolved grades of D, F, or U for any course can be listed on the degree plan. The student must be registered for any remaining hours of 681, 684, 690, 691, 692, 791 or other graduate courses specifically designated as S/U in the course catalog during the semester of the final exam. No student may be given a final examination until they have been admitted to candidacy and their current official cumulative and degree plan GPAs are 3.00 or better.
To be admitted to candidacy for a doctoral degree, a student must have:
  1. completed all formal coursework on the degree plan with the exception of any remaining 681, 684, 690 and 691, 692 (Professional Study), or 791 hours,
must be uploaded to the website, http://grad.tamu.edu. Additionally, a signed paper approval form with original signatures must be received by the Graduate and Professional School. Both the PDF file and the signed approval form are required by the deadline.

Deadline dates for submitting are announced each semester or summer term in the Graduate and Professional School Calendar (see Time Limit statement). These dates also can be accessed via the website http://grad.tamu.edu.

Each student who submits a document for review is assessed a one-time thesis/dissertation processing fee through Student Business Services. This processing fee is for the thesis/dissertation services provided. After commencement, dissertations are digitally stored and made available through the Texas A&M Libraries.

A dissertation that is deemed unacceptable by the Graduate and Professional School because of excessive corrections will be returned to the student’s department head or chair of the intercollegiate faculty. The manuscript must be resubmitted as a new document, and the entire review process must begin anew. All original submittal deadlines must be met during the resubmittal process in order to graduate.

### Additional Requirements

#### Additional Requirements

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#### Residence

**On-Campus Degree Programs**

A student who enters the on-campus doctoral degree program with a baccalaureate degree must spend one academic year plus one semester in resident study at Texas A&M University. A student who holds master’s degree when he/she enters the on-campus doctoral degree program must spend one academic year in resident study. One academic year may include two adjacent regular semesters or one regular semester and one adjacent 10-week summer semester. The third semester is not required to be adjacent to the one year. Enrollment for each semester must be a minimum of 9 credit hours each to satisfy the residence requirement.

To satisfy the residence requirement, the student must complete a minimum of 9 credit hours per semester or 10-week summer semester in resident study at Texas A&M University for the required period. A student who enters the on-campus doctoral degree program with a baccalaureate degree may fulfill residence requirements in excess of one academic year (18 credit hours) by registration during summer sessions or by completion of a less-than-full course load (in this context a full course load is considered 9 credit hours per semester).

Students who are employed full-time while completing their degree may fulfill total residence requirements by completion of less-than-full time course loads each semester. In order to be considered for this, the student is required to submit a Petition for Waivers and Exceptions along with verification of his/her employment at the Graduate and Professional School. An employee should submit verification of his/her employment.
at the time he/she submits the degree plan. See Registration. (http://catalog.tamu.edu/graduate/academic-expectations-general-degree-requirements/#registrationandacademicstatus).

**Distance Education Degree Programs**

Distance education doctoral degree students do not have a residence requirement.

See Residence Requirements (http://catalog.tamu.edu/graduate/academic-expectations-general-degree-requirements/#degreerequirements).

**Time Limit**

**On-Campus and Distance Education Degree Programs**

All requirements for doctoral degrees must be completed within a period of ten consecutive calendar years for the degree to be granted. A course will be considered valid until 10 years after the end of the semester in which it is taken. Graduate credit for coursework more than ten calendar years old at the time of the final oral examination may not be used to satisfy degree requirements.

After passing the required preliminary oral and written examinations for a doctoral degree, the student must complete the final examination within four years of the semester in which the preliminary exam is taken. Exams taken in between terms will expire at the end of the term that ended prior to the exam. For example, a preliminary exam taken and passed during the fall 2019 semester will expire at the end of the fall 2023 semester. A preliminary exam taken in the time between the summer and fall 2019 semesters will expire at the end of the summer 2023 semester.

A final corrected version of the dissertation or record of study in electronic format as a single PDF file must be cleared by the Graduate and Professional School within one year of the semester in which the final exam is taken. Exams taken in between terms will expire at the end of the term that ended prior to the exam. For example, a final exam taken and passed during the fall 2022 semester will expire at the end of the fall 2023 semester. A final exam taken in the time between the summer and fall 2023 semesters will expire at the end of the summer 2023 semester.

Failure to do so will result in the degree not being awarded.

**Continuous Registration**

**On-Campus and Distance Education Degree Programs**

A student in a program leading to a Doctor of Philosophy who has completed all coursework on his/her degree plan other than 691 (research) are required to be in continuous registration until all requirements for the degree have been completed. See Continuous Registration Requirements (http://catalog.tamu.edu/graduate/academic-expectations-general-degree-requirements/#registrationandacademicstatus).

**Admission to Candidacy**

**On-Campus and Distance Education Degree Programs**

To be admitted to candidacy for a doctoral degree, a student must have:

1. completed all formal coursework on the degree plan with the exception of any remaining 681, 684, 690 and 691, or 791,
2. a 3.0 Graduate GPA and a Degree Plan GPA of at least 3.0 with no grade lower than C in any course on the degree plan,
3. passed the preliminary examination (written and oral portions),
4. submitted an approved dissertation proposal,
5. met the residence requirements. The final examination will not be authorized for any doctoral student who has not been admitted to candidacy.

**Languages**

**On-Campus and Distance Education Degree Programs**

A student is required to possess a competent command of English. For English language proficiency requirements, see the Admissions section of this catalog. The doctoral (PhD) foreign language requirement at Texas A&M University is a departmental option, to be administered and monitored by the individual departments of academic instruction.

**99-Hour Cap on Doctoral Degrees**

**On-Campus and Distance Education Degree Programs**

In Texas, public colleges and universities are funded by the state according to the number of students enrolled. In accordance with legislation passed by the Texas Legislature, the number of hours for which state universities may receive subvention funding at the doctoral rate for any individual is limited to 99 hours. Texas A&M and other universities will not receive subvention for hours in excess of the limit.

Institutions of higher education are allowed to charge the equivalent of non-resident tuition to a resident doctoral student who has enrolled in 100 or more semester credit hours of doctoral coursework.

Doctoral students at Texas A&M have seven years to complete their degree before being charged out-of-state tuition. A doctoral student who, after seven years of study, has accumulated 100 or more doctoral hours will be charged tuition at a rate equivalent to out-of-state tuition. Please note that the tuition increases will apply to Texas residents as well as students from other states and countries who are currently charged tuition at the resident rate. This includes those doctoral students who hold GAT, GANT, and GAR appointments or recipients of competitive fellowships who receive more than $1,000 per semester. Doctoral students who have not accumulated 100 hours after seven years of study are eligible to pay in-state tuition if otherwise eligible.

Doctoral students who exceed the credit limit will receive notification from the Graduate and Professional School during the semester in which they are enrolled and exceeding the limit in their current degree program. The notification will explain that the State of Texas does not provide funding for any additional hours in which a student is enrolled in excess of 99 hours. Texas A&M University will recover the lost funds by requiring students in excess of 99 hours to pay tuition at the non-funded, non-resident rate. This non-funded, non-resident tuition rate status will be updated for the following semester and in all subsequent semesters until receipt of a doctoral degree. Please see the Tuition Calculator (https://tuition.tamu.edu/) at the non-resident rate for an example of potential charges.

The following majors are exempt from the 99-Hour Cap on Doctoral Degrees and have a limit of 130 doctoral hours:

- Biochemistry
- Biomedical Sciences
- Clinical Psychology
- Counseling Psychology
- Epidemiology and Environmental Health
- Genetics and Genomics
• Health Services Research
• Medical Sciences
• Microbiology
• Neurosciences (School of Medicine)
• Nutrition
• Oral and Craniofacial Biomedical Sciences
• Pharmaceutical Sciences
• Public Health Sciences
• School Psychology
• Toxicology

Application for Degree

On-Campus and Distance Education Degree Programs

For information on applying for your degree, please visit the Graduation (http://catalog.tamu.edu/graduate/academic-expectations-general-degree-requirements/#degerequirementstext) section.