

Doctor of Engineering (D.E.) Degree Plan

1. D.E. Program

The Doctor of Engineering degree is designed to prepare engineers to study engineering problems of complex nature and to develop solutions that address the most pressing engineering issues of the future. This document describes the procedure and timeline to earn the D.E. degree at Lamar University.

2. Minimum Degree Requirements

The minimum requirements for the D.E. degree are as follows. It is also summarized in Table 1.

1. Complete 27 course credit hours of doctoral preparatory courses beyond the master's degree or 45 course credit hours of doctoral preparatory courses beyond the bachelor's degree. The preparation includes completion of one semester of Justification of Engineering Project (ENGR 6320 or equivalent).
2. Complete a residency of at least one year for the student admitted with a master's degree or complete a residency of at least two years for the student admitted with a B.S. degree.
3. Complete 4 credit hours of Professional Seminar (ENGR 6110 or equivalent).
4. Pass a qualifying examination.
5. Pass a candidacy examination or proposal defense.
6. Complete of 30 credit hours of doctoral dissertation/field study research courses (ENGR 6603 and ENGR 6604 or equivalent).
7. Submit and successfully defend the dissertation/field study report.

Table 1 Minimum Degree Requirements

Required Credit Hours					Required Examinations and Defenses		
Type	Course	Dissertation	Seminar	Total	Qualifying Exam	Candidacy Exam (Proposal)	Dissertation Defense
Students admitted with a BS degree in engineering	45*	30	4	79	Yes	Yes	Yes
Students admitted with a MS degree in engineering	27*	30	4	61	Yes	Yes	Yes

* Note that the course includes Justification of Engineering Project (ENGR 6320 or equivalent).

3. D.E. Dissertation Committee (Form DE-1)

Consult with the supervising professor to form a permanent D.E. dissertation or field study committee consisting of no less than four faculty members. At least one committee member must be outside of the department that the student is in. The committee chair is the supervising professor of the student. The student is responsible for submitting the form (Form DE-1) and nominating the committee to the Graduate Advisor at least 3 weeks prior to the scheduled Qualifying Examination date.

4. Qualifying Examination (Form DE-2)

The Qualifying Examination is used to determine if a student has the essential background and knowledge required for his/her dissertation research. Full-time D.E. students typically take the Qualifying Examination by the end of their first year at Lamar University. The exam shall be initiated by the student's academic advisor or supervising professor. The student shall work with the D.E. dissertation/field study committee to find a right date and time for the exam.

The subjects and scope of the exam shall be determined by the student's supervising professor and the D.E. dissertation/field study committee. The exam may use a written or oral format, or both. It is recommended that an exam be given on three or four subjects/courses closely related to the student's research field. The exam problems shall be generated by the committee members or other faculty members with the consent of the committee. The passing grade is determined by the committee.

The Qualifying Examination may result in:

1. Pass without problems. The student can proceed to the next phase of the program.
2. Approval to remain in the program but additional criteria need to be met. For example, taking and passing a course.
3. Failure but the student is allowed to retake the examination after a certain period specified by the committee. The period should be no more than one year.
4. Failure. The student is asked to quit the program.

Within two weeks after the exam the result shall be reported to the department, the college and then the Graduate Studies by filling in the proper form (Form DE-2).

5. Doctor of Engineering Course Work (Form DE-3)

This form should be completed in the long semester after the student completes the first year of study in the D.E. program. Courses that will count toward the program degree requirements should be listed in the form.

6. Candidacy Examination: Defense of the Dissertation/Field Study Proposal (Form DE-4)

The full-time D.E. students must take their Candidacy Examination (also known as the Proposal Defense) within 1 year following successful completion of the Qualifying Examination. It is recommended that students work on the research proposal while taking the course of ENGR 6320 Justification of Engineering Project. Upon conclusion of the first D.E. dissertation course (ENGR 6603), DE candidates should defend their proposals.

To be eligible for the Candidacy Exam, a student must have passed the Qualifying Examination and be in good academic standing. The purpose of Candidacy Examination is to have the student clearly define his/her research topic and methods of investigation that will be employed. The exam consists of a written proposal plus an oral examination. The student is advanced to doctoral candidacy after successful completion of this examination.

The written report is a concise technical document outlining the proposed research agreed upon by both the student and his/her supervising professor. It should detail the specific aims, background work, preliminary results if any, and a research plan. A suggested format of the proposal report is described below. The report should be submitted to the student's dissertation committee at least 10 working days prior to the oral examination. The oral examination begins with the student's presentation of the research topic and lasts approximately 30 minutes, followed by a period of approximately 60 minutes for questions.

The examination committee will recommend one of four options based on the written report and oral examination:

1. Unconditional pass
2. Conditional pass with a statement of the conditions
3. Failure with an opportunity to retake the examination
4. Failure. The student is asked to quit the program.

Within two weeks after the exam the result shall be reported to the department, the college and then the Graduate Studies by filling in the proper form (Form DE-4).

[A Suggested Format for the Proposal Report](#)

Cover Page

It is suggested that the proposal begin with the title of the research project, the name of the student, the name of the student's advisor, the date, and the names of the student's committee.

Abstract

An abstract of 200-300 words may be included at the beginning of the written text.

Introduction

The introduction should provide background information to illustrate the motivation of the proposed project and literature review. The introduction should end with a brief description of the proposed research question.

Preliminary Work

Describe the work that has been done.

Proposed Work

Describe in detail the proposed research methods, protocols, and/or experimental design.

Expected Results

Describe the expected results.

Discussions on Constraints and Limitations

Describe the constraints and limitations of the proposed research. Discuss any potential pitfalls and possible solutions to overcome them.

Biographical Sketch

The students may include a brief biographical sketch with their proposal.

7. Dissertation/Field Study Defense (Form DE-5 and Form DE-6)

Once the proposal is approved by the dissertation/field study committee, the student continues to work on the doctoral research while taking the dissertation courses until graduation. In the graduating semester, the student must successfully defend for the D.E. dissertation.

The student is required to deliver copies of the dissertation/field study report to the committee members at least 15 working days before the defense. The student should also schedule (DE-5) and announce the D.E. Dissertation/Field Study Defense publicly in the department and college at least 15 working days before the defense. Deadlines for form submissions shall follow the Lamar University College of Engineering's Thesis, Field Study and Dissertation Defense policy.

The defense begins with a presentation (approximately 30-45 minutes) of the dissertation/field study by the student, which is open to the public. After the presentation, the audience will be allowed to ask questions. The general audience will then be excused, and the student will stand for a closed questioning period of approximately 60-90 minutes. All members of the student's dissertation committee may participate in the closed questioning session.

After evaluating the student's written dissertation, presentation and performance in the oral examination, the committee will recommend one of four options:

1. Unconditional pass.
2. Conditional pass with minor revisions to the dissertation.
3. Conditional pass with major revisions to the dissertation, which may require a second oral examination at the discretion of the committee.
4. Failure, which requires major revisions to the dissertation and a second oral examination.

The students are responsible for understanding the requirements and completing all the necessary paperwork designated by the Graduate Studies to present and defend their dissertation and to apply for their degree. Within two weeks after the exam the result shall be reported to the department, the college and then the Graduate Studies by filling in the proper form (Form DE-6).

8. Timeline

Unless under special circumstances, the following timeline is recommended by the College of Engineering.

For students admitted with a master's degree in engineering

1st Year	<ol style="list-style-type: none"> 1. Take courses. All courses must be approved by the student's supervising professor and the department graduate advisor. 2. Consult with the supervising professor to form a D.E. dissertation/field study committee (Form DE-1). 3. Typically complete the Qualifying Exam (Form DE-2) by the end of first year for students not taking deficiency courses. The Qualifying Exam should be administered, and this form should be completed before the student completes 15 credit hours of course work toward the D.E. degree. 4. Explore research opportunities with the supervising professor.
2nd Year	<ol style="list-style-type: none"> 1. Complete Form DE-3: Doctor of Engineering Course Work. This form should be completed in the long semester after the student completes the first year of study in the D.E. program. List the courses that will be counted toward the program degree requirements in the form. 2. Continue to complete the course requirement. 3. Start taking the Professional Seminar course ENGR 6110 or equivalent. 4. Complete ENGR 6320 Justification of Engineering Project upon passing Qualifying Exam and approval of dissertation/field study committee; and work on D.E. research proposal with the supervising professor during the course. 5. Submit the D.E. dissertation/field study proposal report to the dissertation committee and schedule for D.E. Candidacy Exam at least 10 working days before the oral proposal defense date. 6. Pass the doctoral candidacy exam and enter D.E. candidacy (Form DE-4). Note that the full-time D.E. students must take their candidacy examination within 1 year following successful completion of the qualifying examination. 7. * Take the first D.E. dissertation course (ENGR 6603 or equivalent). Upon conclusion of this course, the D.E. candidate's proposal should be defended.
3rd Year and On	<ol style="list-style-type: none"> 1. Continue to take Professional Seminar course (ENGR 6110). A minimum of 4 times are required in total. 2. * Take the second D.E. dissertation course (ENGR 6604) continuously. This course signifies that you have completed the proposal defense and actively work on the proposed D.E. research. 3. Continue to take the D.E. dissertation course (ENGR 6604) until graduation and complete the proposed research. 4. Draft the DE dissertation, and schedule for D.E. defense at least 15 working days before the final defense date (Form DE-5). 5. Deliver copies of the dissertation to the committee members at least 15 working days before the defense. 6. Successfully defend the D.E. dissertation/field study. (Form DE-6) 7. File for graduation following the timelines specified for the semester of graduation.

* Note that the first D.E. dissertation course ENGR 6603 is taken once, and the second D.E. dissertation course ENGR 6604 is taken repeatedly until graduation. A minimum of 30 credits of dissertation courses is required.

For students admitted with a bachelor's degree in engineering

The procedures for students admitted with a BS degree from 4-year engineering college are similar, except that the first year and second year activities may stretch to 3 years because 18 more credit hours of courses are required for students admitted to the program with a BS degree.

9. Exception

Any exception from this guideline shall be resolved with the agreement of the graduate advisor, department chair, and dean of the College of Engineering.

10. D.E. Forms

All the D.E. forms are listed as below.

DE-1 Request for Appointment of D.E. Committee

DE-2 Qualifying Examination

DE-3 Doctor of Engineering Course Work

DE-4 Candidacy Exam (Proposal Exam)

DE-5 Request to Schedule D.E. Dissertation Defense

DE-6 Result of D.E. Dissertation Defense