

Department of Chemical Engineering

Graduate Program Checklist

University of Massachusetts Amherst
Amherst, Massachusetts

In this document, the Department of Chemical Engineering presents a checklist form of its Graduate Program Regulations:

- I. Requirement Checklist for the Ph.D. degree;
- II. Requirement Checklist for the M.S. degree;

While the information that follows is intended to be quite complete, additional details are provided in the *Graduate Program Regulations*, *Graduate School Bulletin* and *Graduate Student Handbook*. To access these, see the Graduate Program Secretary or go to <http://www.umass.edu/gradschool/>. Questions may arise which are not covered here, and in those cases, do not hesitate to ask for help from your advisor and the departmental graduate program director.

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DOCTOR OF PHILOSOPHY (Ph.D.) – DEGREE REQUIREMENT CHECKLIST

- Earn a grade of B or better the four core 600-level Chemical Engineering courses:
 - ChE 621* Thermodynamics I
 - ChE 625* Chemical Reactor Design
 - ChE 631* Fluid Mechanics
 - ChE 661* Advanced Analysis I
- One credit of departmental seminar (ChE 691) in each semester in residence.
- Pass two credits of research-group seminar (ChE 791x or ChE 891x) with your Advisor in each semester after the first.
- Fulfill a minimum of 18 dissertation credits.
- Take at least three letter-graded 3-Credit elective courses.
- Register as a full-time student (9 credits minimum, 16 credits maximum) in each semester.
- Maintain a grade-point average of 3.0 or higher.
- TA for at least but not limited to 4 semesters during your doctoral program, excluding your first year.

First semester

- Attend all Faculty Research Presentations in first year.
- Meet with Faculty Members one-on-one after the Faculty Research Presentations.
- Rank the Faculty/Research Projects based on the presentations and one-on-one meetings.
- A one-time seminar of (ENV HL) Laboratory Safety Course and continuous compliance with hazardous waste and safety certification.

Qualifying exam

- Pass the Ph.D. Qualifying Exam Procedure.
- Submit a one-page memo to the departmental Graduate Program Secretary describing your tentative dissertation objectives and proposing a Dissertation Committee.

Thesis

- Orally present a Thesis Outline (“Thesis Proposal”) before your Thesis Committee. The Outline should be double-spaced, and of acceptable grammatical and stylistic quality. It should be brief but of sufficient length to cover the subject matter adequately, typically ten to fifteen pages of text. The outline typically includes:
 - A brief statement of the problem and its relevance
 - Survey of the pertinent literature
 - Specific objectives or conclusions expected from the study
 - A plan of research to address the objectives with description of equipment, operating or analytical approaches, and safety considerations
 - A plausible timetable
- Submit two copies of a written Dissertation Prospectus (“Thesis Proposal”) to the Graduate Program Secretary.
- When you know you will schedule your final Dissertation Defense prior to the end of a semester, you must register and pay for program fee/continuous enrollment (GRADSCH 999).
- Hold a Dissertation Committee meeting at least nine weeks before the date of your final examination.
- Schedule a final Dissertation Defense (at least 1 month in advance of the defense date) with the Graduate Program Secretary.
- Submit an Abstract to the Graduate Program Secretary at least 2 weeks in advance of the defense date.
- Submit a final draft of your Dissertation to your Advisor and Dissertation Committee at least 1 week in advance of the defense date.
- Defend your final Dissertation orally before your Dissertation Committee.
- Submit your final written Dissertation (electronically at: Login to ScholarWorks@UMassAmherst).
- Submit two original signature pages on acid-free paper to the Graduate Student Service Center.
- Submit 1 bound hard copy of your Dissertation to your Faculty Advisor and 1 bound hard copy to the Graduate Program Secretary. Both should be on acid-free paper and include original signatory pages.
- Submit to the Graduate School the "Certification of Eligibility for a Doctoral Degree."
- Complete the Laboratory Checkout Form with the Laboratory Technician.
- Pay all required fees and expenses.
- Return all departmental and university property in your possession before leaving campus, including books, equipment, and keys. Original laboratory notebooks and comparable original research documents must be returned to the Advisor(s).
- Provide Graduate Program Secretary with a forwarding address and/or email address.

MASTER OF SCIENCE (M.S.) – DEGREE REQUIREMENT CHECKLIST

- Satisfactorily complete at least thirty graduate credits with the following stipulations:
 - At least 21 (including the thesis) of the 30 credits must be in Chemical Engineering.
 - At least 13 of these credits must be earned in the 600 series of Chemical Engineering courses or above.
 - At least six but no more than ten credits may be earned by means of the required thesis.
- One credit of departmental seminar (ChE 691) in each semester in residence.
- Pass Two credits of research-group seminar (ChE 791x or ChE 891x) with your advisor in each semester after the first.
- Registered as a full-time student (nine credits minimum, 16 credits maximum) and take at least one approved course each semester.
- Maintain a grade-point average of 3.0 or higher

First semester

- A one-time seminar of (ENV HL) Laboratory Safety Course and continuous compliance with hazardous waste and safety certification.
- Attend all Faculty Research Presentations.
- Meet with Faculty Members one-on-one after the Faculty Research Presentations.
- Rank the Faculty/Research Projects based on the presentations and one-on-one meetings.

Thesis

- Submit a one-page memo to the Departmental Graduate Program Secretary describing your tentative thesis objectives and proposing a Thesis Committee.
- Orally present a Thesis Outline (“Thesis Proposal”) before your Thesis Committee. The Outline should be double-spaced, and of acceptable grammatical and stylistic quality. It should be brief but of sufficient length to cover the subject matter adequately, typically ten to fifteen pages of text. The outline typically includes:
 - A brief statement of the problem and its relevance
 - Survey of the pertinent literature
 - Specific objectives or conclusions expected from the study
 - A plan of research to address the objectives with description of equipment, operating or analytical approaches, and safety considerations
 - A plausible timetable
- Submit two copies of a written Thesis Outline (“Thesis Proposal”) to the Graduate Program Secretary.
- Hold a Thesis Committee meeting at least six weeks before the date of your final examination.
- Schedule a final Thesis Defense with your Thesis Committee.
- Submit an Abstract to the Graduate Program Secretary at least 2 weeks in advance of the defense date.
- Submit a final draft of your Thesis to your Advisor and Thesis Committee at least 1 week in advance of the defense date.
- Defend your final Thesis orally before your Thesis Committee.
- Submit your final written Thesis (electronically at: [Login to ScholarWorks@UMassAmherst](#)).
- Submit two original signature pages on acid-free paper to the Graduate Student Service Center.
- Submit 1 bound hard copy of your Thesis to your Faculty Advisor and 1 bound hard copy to the Graduate Program Secretary. Both should be on acid-free paper and include original signatory pages.
- Submit to the Graduate School the "Certification of Eligibility for a Master’s Degree."
- Complete the Laboratory Checkout Form with the Laboratory Technician.
- Pay all required fees and expenses.
- Return all departmental and university property in your possession before leaving campus, including books, equipment, and keys. Original laboratory notebooks and comparable original research documents must be returned to the advisor(s).
- Provide Graduate Program Secretary with a forwarding address and/or email address.