UCONN

SCHOOL OF ENGINEERING

Department of Chemical & Biomolecular Engineering

Revised 02/2020

Chemical Engineering Program Graduate Handbook

Learning Objectives

Upon graduation from the Chemical Engineering Program at the University of Connecticut, a **Master's** candidate will demonstrate:

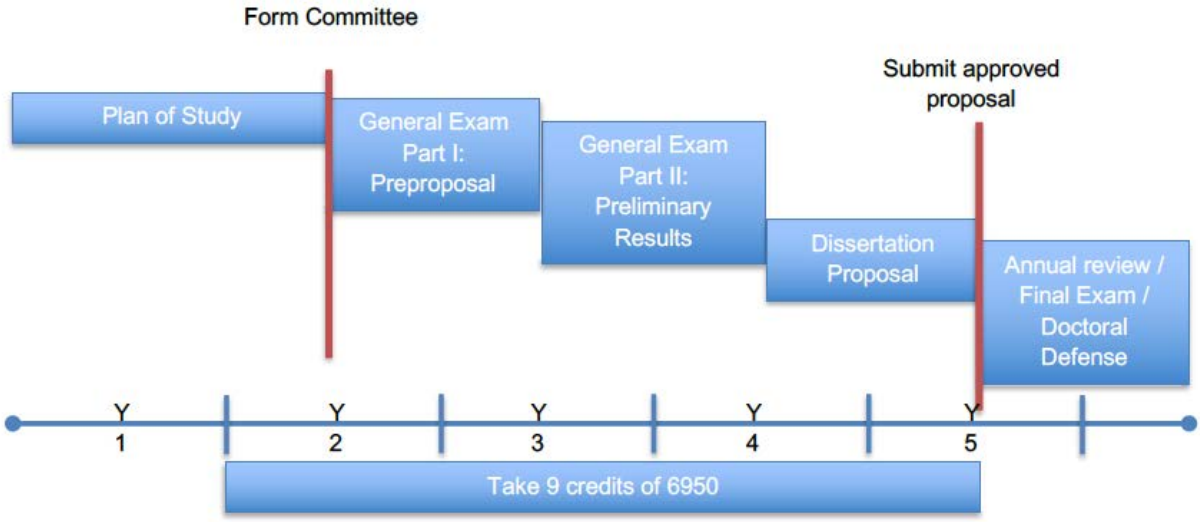
1. An ability to conduct laboratory and/or theoretical research
2. An ability to work independently
3. An ability to publicly disseminate their work in both written and oral form via publications in peer review archival journals, conference proceedings, and professional meetings
4. Expertise in the pillars of Chemical Engineering: thermodynamics, kinetics and transport phenomena

In addition to the skills that are expected at the Masters level, upon graduation from the Chemical Engineering Program at the University of Connecticut, a candidate seeking a **Doctor of Philosophy** will demonstrate:

1. An ability to perform independent research
2. An ability to think critically and propose creative, novel solutions to modern problems
3. In-depth knowledge of their field of study
4. An ability to mentor junior-level students in the laboratory and/or the classroom.

Requirements for Ph.D. Degree

Graduate requirements for the Ph.D. degree in Chemical Engineering include a plan of study, departmental seminar or equivalent, and several curricular requirements, which will be detailed below. The suggested timeline for the Ph.D. degree is illustrated below.



- **Plan of Study.** The plan of study must be presented to the members of the advisory committee and submitted to the Graduate School for approval by the Executive Committee of the Graduate Faculty Council: (Plan of Study for Doctor of Philosophy). The student may not take the General Examination before the plan of study has been fully approved. The only specific course requirements for a Chemical Engineering graduate student are CHEG 5301 - Thermodynamics I, CHEG 5315 - Transfer Operations I, and CHEG 5321 - Reaction Kinetics I. The remainder of the courses should be consistent with the student's objectives and related to the field in which the degree will be taken. Plans of study will consist largely of courses at the 5000's level or above. A limited number of credits at the 4000's level (ordinarily not more than six), if not open to sophomores, may be accepted.

  The Graduate School requires a minimum of at least 30 credits of content coursework beyond the baccalaureate or at least 15 credits of content coursework beyond the master's degree in the same or a closely–related field of study. In addition to the content course work, satisfactory completion of at least 15 credits of GRAD 6950 – Doctoral Dissertation Research or GRAD 6960 – Full-Time Doctoral Dissertation Research is required.

  Advanced coursework taken on a non-degree basis at the University of Connecticut, ordinarily not more than 12 credits may be included on a Ph.D. plan of study, provided the following conditions are met: (1) the grades earned in such coursework are *B* (not *B-)* or higher, (2) such course work is within the time limit for completion of the Ph.D. degree requirements, and (3) such credits have not been applied toward any other degree here or elsewhere (already completed or to be completed in the future). In any event, inclusion of non-degree coursework on the plan of study requires the written consent of the advisory committee and is subject to the approval of the Graduate School.

  Advanced coursework taken at other institutions may be included on a Ph.D. plan of study, provided the following conditions are met: (1) the grades earned for equivalent courses (as

assessed by the course instructor) to CHEG 5301 - Thermodynamics I, CHEG 5315 - Transfer Operations I, and CHEG 5321 - Reaction Kinetics I are *A* or higher, (2) the grades earned for other coursework that the advisory committee approves are *B* (not *B*-) or higher.

After approval of the plan, any request for change must be submitted to the Graduate School on an official form bearing the signatures of the members of the advisory committee and the student. Such requests are also subject to approval by the Graduate School.

- **Seminar.** The CHEG Program Seminar, CHEG 5393 and 5394, must be attended by all graduate students. The Chemical Engineering Program also requires that all Ph.D. students present a seminar or conference paper on their research.

- **Curricular Requirements for Ph.D. Students.** During the course of earning a Ph.D., Chemical Engineering Students at the University of Connecticut must satisfy eight technical requirements, which have been designed to help the students to achieve six learning objectives: Dissemination, Independent Research, Critical Thinking, Expertise in Chemical Engineering, Expertise in the Selected Field of Study, and Mentoring. The eight technical requirements for Chemical Engineering Ph.D. Students are:

  1. Complete the three core graduate courses with a minimum GPA of 3.0; each course is 3 credit hours:

     a. CHEG 5301 – Thermodynamics I
     b. CHEG 5315 – Transfer Operations I
     c. CHEG 5321 – Reaction Kinetics I

  2. Complete no less than 21 credits of elective coursework

  3. Pass the Qualifying Examination

  4. Initiate a research project, present a comprehensive literature review (General Exam Part 1) and successfully defend preliminary results (General Exam Part 2)

  5. Conduct research, successfully defend a Ph.D. dissertation Proposal, and provide annual updates to your advisory committee,

  6. Present and defend a comprehensive review of the results of the original research representing the completion of all planned work (Final Committee Meeting)

  7. Publish three original works (published or submitted manuscripts, published conference proceedings, conference papers presented, or conference posters presented)

  8. Successfully complete a Ph.D. dissertation and publicly defend that work

The following table illustrates how each of the requirements is related to the learning objectives.

Ph.D. Learning Objectives

Requirement	*Dissemination*	*Independent Research*	*Think Critically*	*CHEG Expertise*	*In-depth knowledge of field*	*Mentor*
1			x	x		
2			x		x	
3			x	x		
4			x	x	x	
5		x	x	x	x	
6	x	x	x	x	x	
7	x	x	x	x	x	
8	x	x	x	x	x	x

- **The Qualifying Examination.** The Qualifying Examination is given twice a year, January and after the following spring semester. All Ph.D. students are required to take the Qualifying Exam in the first January of their enrollment. Students may request a one-time deferral of the exam with a letter from their faculty advisor indicating this request along with a brief justification. This letter will be reviewed by the Graduate Committee and a final decision will be rendered to student and advisor within 5 business days of the formal request. If the students request is denied and they do not take the examination, it will be considered a failed examination. A no-show without obtaining a prior deferral will be considered a failed examination.

  The exam is designed to test a candidate's ability to utilize chemical engineering fundamentals to analyze, comprehend, and propose new solutions for an assigned peer-reviewed article. Candidates are given four weeks to review the article using appropriate literature, and to prepare a 20-minute technical presentation based on it. The presentation will demonstrate the candidate's knowledge of the theory, experimental techniques, results, discussion, and conclusions. It is recommended that technical talks contain these minimum areas:

  - A thorough understanding of the assigned paper's scientific content.
  - What is being solved or discussed and why is it being done?
  - How does the work fit into the scientific literature?
  - Analyze the work in terms of its scientific content (positive and negative).
  - Provide a thoughtful proposal of what you would have done differently or next to solve this problem.

  A faculty committee will question the candidate for approximately 25 minutes focusing on the paper's science as it pertains to chemical engineering. The student's technical presentation and responses to questions will be graded on five criteria:

  - Demonstrating expertise in kinetics, thermodynamics and transport phenomena in the system presented in the publication.
  - Ability to form a complete, well organized presentation.
  - Ability to field questions from the faculty.
  - English proficiency.

- Performance in the core courses.

This Qualifying Examination is Pass/Fail. ***Candidates are not allowed to solicit coaching from any faculty member, or advisor.*** If the candidate does not pass the exam, they are allowed a second opportunity during the next scheduled time. The second Qualifying Examination is to be coordinated with the advisor. The advisor will form a committee with at least 4 CBE faculty members.

If the candidate does not pass the Qualifying Examination in the second attempt, they will be assigned to the Master's program, plan A. Students may not attempt the Qualifying Examination a third time. A conditional pass may be granted by the Qualifying Examination committee. In case of conditional pass, the student will work with the advisor towards a plan A MS degree. Upon completing the MS degree requirements, the MS thesis committee will review the progress and accomplishments. If the committee decides that the candidate has made successful progress, the candidate will be entitled to continue on toward a PhD degree without another Qualifying Exam.

- **Advisory Committee.** The students Advisory Committee is chosen prior to the General Examination no later than the end of the third semester, but typically around the end of the second semester. This committee must have at least 5 members. One of these members is the student's primary advisor. At least one member of the committee must come from outside the Chemical Engineering Program. This person can come from another department or program, or from academia and/or industry. Please note that outside academia and/or industry participants must be approved by the Graduate School.

  The advisory committee should be listed on the Ph.D. Plan of Study and a CV for the external advisor should be attached to the Plan. The CV is approved at the same time as the Plan is.

  Advisory committee members are expected to be present at all milestone events. Skype and video conferencing are acceptable. Advisory committee members are the only ones who provide original signature of approval to documents required by the Graduate School.

- **The General Examination.** The chemical engineering program requires a two-part General Examination consisting of Part 1: Preproposal, and Part 2: Preliminary Data and Results. The General Examination must be completed no later than the submission of the Dissertation Prospectus (typically before the end of the seventh semester). Part 1 of the General Examination is to be completed within 12 months of the formation of the advisory committee. Part 2 of the General Examination is to be completed within 12 months of the completion of Part 1.
    - **Part 1.** The PhD student must provide their advisory committee with a 5-10 page single-spaced document herein referred to as the Preproposal, focusing primarily on a relevant literature review. In addition to the literature review, the Preproposal document should summarize any preliminary investigations as well as the planned work for the next 12 months. The student must also give a 30-minute presentation to their Advisory Committee based on the Preproprosal.

Also, prior to this examination, the student should have filled out their Plan of Study, which is discussed and approved by the committee during the examination.

- **Part 2.** The PhD student must provide their advisory committee with a 5-10 page single-spaced document focusing primarily on the student's preliminary data, results, and planned work for the remainder of the student's PhD. The student must also give a 30-minute presentation to their Advisory Committee based on their preliminary data, results, and analysis.

Each part of the General Examination is a pass/fail examination where the Ph.D. student is required to:

- Demonstrate a broad understanding of the literature
- Show broad knowledge of their field and context for their research project
- Compile preliminary work
- Describe the future direction of the project

Please refer to the Graduate Catalog for more information regarding preparation and paperwork to be filed for the General Examination:

- Report on the General Examination for the Doctoral Degree

All forms can be found at: https://grad.uconn.edu/forms/

Following the successful completion of the General Examination, the student may begin preparation of the Dissertation Proposal Prospectus.

- **The Dissertation Proposal.** The dissertation proposal is to be completed within 12 months after the successful completion of the General Examination. The proposal consists of an oral presentation and a written prospectus document. The written prospectus must be circulated to the student's advisory committee no less than 14 calendar days prior to the scheduled oral presentation and be made available to other faculty prior to the oral presentation. The prospectus document is largely based on the written documents prepared for the General Examination: the Preproposal and the preliminary data, results, analysis, and planned work for the completion of the student's PhD. The prospectus document is a 15-20 page single-spaced document containing no fewer than the following sections: I) Literature Review; II) Preliminary Work and III) Planned Work (with timeline).

  The oral examination will be administered by the student's Advisory Committee, followed by a Q&A session and direction by the committee. This examination typically lasts 2 hours. If the student earns a passing score, they are able to complete their proposed thesis work. If the student fails, they are assigned to the Master's program. Students are not allowed to attempt this examination a second time. The oral examination will be primarily on the doctoral dissertation proposal, but may include questions from coursework and related fields. The approved prospectus document is sent on to the Executive Committee of the Graduate Faculty Council for final approval by the time the 9th credit of 6950 is completed.

Finally, this exam must be completed by the end of the students' 9th semester. If this is not met, the students' major advisor may consider the attempt a fail and relegate the student to the Master's program.

Please refer to the Graduate Catalog for more information regarding preparation and paperwork to be filed for the Dissertation Prospectus:

- Doctoral Dissertation Proposal Coversheet and Instructions

All forms can be found at: https://grad.uconn.edu/forms/

- **Annual Review.** Following the Dissertation Proposal, each Ph.D. student is required to have an Annual Review by their doctoral advisory committee. This must happen within 12 months of the Dissertation Proposal or previous advisory meeting. In this exam, evidence for progress towards the Ph.D. degree can be satisfied by either i) copies of published or in-preparation manuscripts for peer reviewed archival journals; ii) a 10-15 page progress report, or iii) a committee meeting.

- **Final Committee Meeting Examination.** A final advisory committee meeting must be held no closer than 6 months to the students desired defense date (i.e., Final Examination of the Doctoral Degree). In this examination, the student is to provide evidence of satisfactory completion of the planned work, the department's publication requirement, and any requirements communicated by the advisory committee. The student must also provide the committee with a 30-minute oral presentation which is to be followed by Q&A/discussion with the advisory committee members. The final committee meeting is a Pass/Fail examination. Upon successfully passing this examination, the student may begin preparation of their Doctoral Dissertation.

- **Ph.D. Dissertation & Final Examination**. Upon approval of the plan of study, passing the general examination, and having had the dissertation proposal fully approved by the Executive Committee of the Graduate Faculty Council, the student becomes a candidate for the degree of Doctor of Philosophy. Students are notified of their advancement to Candidacy. ***Please refer to the Graduate Catalog or Graduate School website for details on preparation of the dissertation:***
  - Dissertation Tentative Approval Page
  - Dissertation Submission Checklist

  All forms can be found at: https://grad.uconn.edu/forms/

  The final examination deals mainly with the subject matter of the dissertation. The examination is oral and under the jurisdiction of the advisory committee. The examination shall be held not earlier than 4 weeks after the working copy of the completed dissertation and tentative Advisory Committee approval have been submitted to the Graduate School and by the conferral period deadline in August, December or May. Not fewer than five members of the faculty, typically the candidate's advisory committee, shall participate in the final examination unless written approval for a lesser number has been secured in advance from the Dean of the Graduate School. The decision as to whether a candidate has passed, conditionally passed, or failed the examination rests solely with the advisory committee, which shall take into account the opinions of other participating faculty members and other experts. Immediately following the examination, the major advisor shall communicate the

results to the student and send the official report on the examination to the Graduate Records Office. ***Please refer to the Graduate Catalog or Graduate School website for details on preparation and paperwork for the Final Exam:***

- Report on the Final Examination for the Doctoral Degree

All forms can be found at: https://grad.uconn.edu/forms/

Publication Requirement

Prior to a Ph.D. defense, candidates should have demonstrated their productivity through at least three of any combination of: published or submitted manuscripts, published conference proceedings, conference papers presented, or conference posters presented.

Checklist for Completion of Ph.D. Degree Requirements

The work presented for the Ph.D. degree should equate to at least 45 credits (30 coursework/15 research) beyond the baccalaureate or its equivalent.

☐ 1. Select your major advisor. Fill out a change of advisor form and return the completed form to the CHEG office for processing.

☐ 2. You must pass the Ph.D. Qualifying Exam either in January or May.

☐ 3. A Plan of Study should be filed as soon as possible. Three copies are required and all must have original signatures in ink. Submit the completed forms to the CHEG office for processing. Select your advisory committee.

☐ 4. Pass the General Exam Part 1. This examination has two components. First, the Ph.D. student must provide his/her advisory committee with a 5 – 10 page single-spaced document. Second, the Ph.D. student will also give a 30 minute presentation to their committee that will be followed by a Q&A session and direction by the committee. This exam must be completed by the end of the student's 5th semester.

☐ 5. Pass the General Exam Part 2. This examination has two components. First, the Ph.D. student must provide his/her advisory committee with a 5 – 10 page single-spaced document. Second, the Ph.D. student will also give a 30 minute presentation to their committee that will be followed by a Q&A session and direction by the committee. This exam must be completed within 12 months of the completion of the General Exam Part 1.

☐ 6. You may apply for a one-time award by the Research Foundation of a Doctoral Dissertation Fellowship after passing the General Exam https://grad.uconn.edu/financing/fellowships/dissertation/.

☐ 7. Graduate students are eligible for travel support to present their research at scientific meetings. Please refer to the following web site for more information regarding travel funds https://grad.uconn.edu/financing/fellowships/travel-fellowship/.

☐ 8. Pass the Dissertation Proposal. This examination has two components. First, the Ph.D. student must provide his/her advisory committee with a 15 – 20 page single-spaced document. Second, the Ph.D. student will also give a 30 minute presentation to their committee that will be followed by a Q&A session and direction by the committee. This exam must be completed within 12 months of the completion of the General Exam Part 2.

☐ 9. Complete any and all Annual Review examinations. Students must provide their advisory committee with evidence of their satisfactory progress on their planned work. The student's advisory committee will determine what evidence is deemed sufficient and provide constructive feedback on the student's progress. Annual reviews must be completed within 12 months of the Dissertation Proposal or any previous Annual Review.

☐ 10. Pass the Final Committee Meeting examination at least 6-months prior to the student's intended graduation date. Students must provide his/her advisory committee with evidence of satisfactory completion of the planned work, the department's publication

requirement, and any requirements communicated by the advisory committee in addition to a 30-minute presentation to their committee.

☐ 11. When you are nearing completion of your degree and are in the process of writing your dissertation, please make a point to go to the Graduate School. It is important to contact them as they will give you a packet of information on preparing your final dissertation and forms that must be filled out. Not all forms are available online.

☐ 12. All Ph.D. students must complete a departmental seminar or equivalent (e.g., a conference presentation) on their research. This is generally scheduled during the final year of studies.

☐ 13. You must present an oral defense of your final dissertation. Submit an abstract of your dissertation along with your advisory committee names, time, date and location of your oral defense to the CHEG program office. A notice will be sent to faculty and students one week before you defend. Please refer to the following link for more detailed information regarding preparation and submission instructions for your dissertation: https://registrar.uconn.edu/doctoral-degree-programs/dissertation-information/

☐ 14. Fulfill the publication requirements.

Requirements for M.S. Degree

The degree of Master of Science may be earned under either of two alternative plans. The first plan, Plan A, emphasizes research and requires a thesis, while the second plan, Plan B, emphasizes course work and an independent study project. Plan B students in chemical engineering typically do **not** receive financial aid and pursue their degree on a part-time basis.

- **Advisory Committee.** By the end of the first semester following his/her entrance a student should have chosen his/her major advisor. The advisory committee must have at least 3 members with one of these members being the student's primary advisor.

- **Plan of Study.** To become a candidate for a Master's degree, the student must have on file with the Graduate School a plan of study prepared with the aid and approval of an advisory committee and approved by the Executive Committee of the Graduate Faculty Council. The student may not take the final examination for the degree before the plan of study has been fully approved. The plan of study must be signed by the student and the members of the advisory committee, when the student has completed approximately 21 credits of coursework to be applied to the degree.

  The only specific course requirements for a Chemical Engineering graduate student are CHEG 5301 - Thermodynamics I, CHEG 5315 - Transfer Operations I, and CHEG 5321 - Reaction Kinetics I. The remainder of the courses should be consistent with the student's objectives and related to the field in which the degree will be taken. In addition to the minimum number of course credits required for the degree, the advisory committee may require the student to take other courses with or without graduate credit, depending on the student's objectives and previous preparation. Plans of study shall consist largely of courses at the 5000's level or above. A limited number of credits at the 3000's or 4000's level (not more than 6 credits) may be accepted. (https://grad.uconn.edu/forms/)

- **Plan A and Plan B Master's Degrees.** The first, Plan A, emphasizes research, while the second, Plan B) requires comprehensive understanding of a more general character. Plan A requires not fewer than 21 credits of advanced course work and not fewer than 9 additional credits of Master's Thesis Research (GRAD 5950 or GRAD 5960), as well as the writing of a thesis. Plan B requires no fewer than 30 credits of advanced coursework, a final examination (oral defense of a research project {CHEG 5399 Independent Study – 3 credits} performed with a CHEG faculty member), but no thesis.

  Up to six credits of advanced coursework taken on a non-degree basis at the University of Connecticut may be included on a Master's degree plan of study provided the following conditions are met: (1) the grades earned in such coursework are *B* (not *B*-) or higher; (2) such course work is within the six-year limit for completion of Master's degree requirements; and (3) such credits have not been applied toward any other degree, here or elsewhere (already completed or to be completed in the future). In any event, inclusion of non-degree coursework on the plan of study requires the consent of the advisory committee and is subject to the approval of the Executive Committee. Up to six credits of advanced coursework completed or to be completed at other institutions may be approved for transfer to the student's Master's degree program at the University of Connecticut. Such credits are to be listed "below the line" on the plan of study. The following conditions must be met before final approval of any transfer of credit is granted: (1) the advisory committee must indicate its approval of the transfer of credit by signing the plan of study; (2) the courses must be at a level appropriate for a graduate degree and offered by an

accredited institution; and (3) the grades earned in any courses to be transferred must be *B* (not *B*-) or higher. Official transcripts of any course work to be transferred must be on file in the Graduate School.

When the student's plan of study has gained the approval of the Executive Committee and official transcripts indicating satisfactory completion of the course work to be transferred are received, the transfer of credit is noted on the student's permanent academic record. Any credits transferred to a graduate degree program at the University of Connecticut must not have been used toward a degree elsewhere (already completed or to be completed in the future).

- **Continuous Registration.** Part-time students are expected to register for course work with reasonable regularity and to complete all requirements for the degree within a moderate span of time. Ordinarily, the Master's degree should be completed within two years or so. In any event, all work for the Master's degree must be completed within a maximum period of six years from the beginning of the earliest course, wherever taken, listed on the approved plan of study. Failure to complete the work within this period or failure to maintain continuous registration will require re-evaluation of the student's entire program and may result in termination. Students who wish to register for continuous registration should register for GRAD 5998 (Plan B students) or GRAD 5999 (Plan A students).

- **Seminar.** The CHEG Program Seminar, CHEG 5393 and 5394, must be attended by all full-time Master's students.

- **The Master's Thesis.** The advisory committee must approve the topic and scope of the thesis required under Plan A. Specifications for preparation of the thesis can be obtained at the Graduate School or from the Graduate School's website. It is the student's responsibility to be certain that the thesis conforms exactly to the specifications prescribed by the Graduate School.

  The thesis must be dated as of the calendar year in which all requirements for the degree are completed. The Graduate School requires the electronic submission of the thesis though Digital Commons, a university repository for public access. The final copy must meet all specifications outlined on the Graduate School Website. The Thesis Submission Checklist must be submitted to the Graduate School once it has been signed by a Homer Babbidge Library designated staff member together with an approval page bearing original signatures of all members of the advisory committee. Once a thesis is bound, it becomes the property of the Homer Babbidge Library. No restrictions that limit or delay the accessibility, use, or distribution of the results of a master's student's research are acceptable if such delays are inconsistent with an embargo period requested by the student or if they interfere with the timely completion of a student's academic program.

- **Final Examination.** The final examination deals mainly with the subject matter of the thesis (Plan A) or research project (Plan B). The examination is oral and under the jurisdiction of the advisory committee. The decision as to whether a candidate has passed, conditionally passed, or failed the examination rests solely with the advisory committee, which shall take into account the opinions of other participating faculty

members and other experts. Immediately following the examination, the major advisor shall communicate the results to the student and send the official report on the examination to the Graduate Records Office. (https://grad.uconn.edu/forms/)

Under the Thesis plan (Plan A), the examination may center on the candidate's research and its relation to the field of study as a whole, but may have a wider scope. Under the Non-Thesis plan (Plan B), the examination shall be comprehensive and designed to assess the candidate's mastery of the field and ability to integrate the knowledge acquired. (https://grad.uconn.edu/forms/)

Publication Requirement

M.S. plan A candidates should have demonstrated their productivity through at least one of any combination of i) published or submitted manuscripts, published conference proceedings, conference papers presented, or conference posters presented.

Checklist for Completion of M.S. Degree Requirements

Plan A - Complete 21 credits of advanced coursework (which needs to include the three core courses – CHEG 5301, CHEG 5315, CHEG 5321) and 9 credits of Master's Thesis Research (GRAD 5950 or GRAD 5960) and written thesis.
Plan B - Complete at least 30 credit hours of coursework (which needs to includes the three core courses – CHEG 5301, CHEG 5315, CHEG 5321) and a final exam (oral defense of a research project performed with a CHEG faculty member – CHEG 5399 – at least 3 credits); no thesis.

☐ 1. Decide on Plan A - thesis or Plan B – coursework and project. (Plan B students are not provided with financial support).

☐ 2. Select your major advisor. Fill out a change of advisor form and return the completed form to the CHEG office for processing. After your major advisor has been determined, you need to select two associate advisors (in consultation with your major advisor) to complete your advisory committee.

☐ 3. Plan of Study must be completed in consultation with your major advisor once you have completed approximately 21 credits. Must have original signatures in ink by all your advisors.

☐ 4. When you are nearing completion of your degree and are in the process of writing your thesis, go to the Grad School website for instructions on the preparation of your thesis (https://registrar.uconn.edu/doctoral-degree-programs/dissertation-information/).

☐ 5. You must present an oral defense of your thesis (Plan A) or research project (Plan B). Arrange your defense with your advisory committee.

☐ 6. Submit an abstract of your thesis or research project to the CHEG office along with the date, time and location so that a notice of your oral defense can be distributed. Forward a copy of your thesis or research project report for your committee members to look over. Please do so at least one week in advance of the scheduled defense.

☐ 7. An Examination Report Sheet must be completed at the end of your defense. It must be prepared in duplicate and signed by your advisory committee. The form will be prepared by the graduate program secretary.

☐ 8. Fulfill the publication requirements (Plan A only).

General Information

Time Limits:

- **Ph.D.** All work must be completed with a period of eight years of the beginning of the student's matriculation into the CHEG degree program, or, if the student entered with a master's degree in the same or a closely related field, the doctorate must be completed within seven years.

  A one-time extension of the student's terminal date of no longer than two years is considered only when there is substantial evidence that the student has made regular and consistent progress toward completion of degree requirements. A detailed recommendation to extend the terminal date must be signed by the Major Advisor and submitted in a timely manner to the Dean.

- **M.S.** The student is expected to register for course work with reasonable regularity and the complete all requirements for the degree within a moderate span of time to assure continuity and adequate familiarity with developments in the field of study. A chemical engineering MS degree must be completed within a period of six years. Failure to complete the work within this period or failure to maintain continuous registration as required may result in termination.

  An extension of a student's terminal date is considered only when there is substantial evidence that the student has attempted to make regular and consistent progress toward completion of degree requirements. A detailed recommendation to extend the terminal date must be signed by the Major Advisor and submitted in a timely manner to the Dean.

Conferral of Degrees:

Degree conferral requires that the student be in good academic standing and that all requirements for the degree have been completed satisfactorily by the deadline specified in the Graduate School Academic Calendar. Degrees are conferred three times each year – in August, December, and May. However, the only graduate Commencement ceremony is held annually in May. Students who qualify for degree conferral receive their diplomas by mail, normally within three months following conferral.

Formal application for a degree to be conferred must be filed online by the degree candidate using the Student Administration System. Information and instructions can be found on the Graduate School's website under the section titled Current Students. If filing is not timely, conferral is delayed to the next conferral period, even though all other degree requirements may have been completed on time.

The graduate Commencement ceremony is held once each year at the end of the spring semester. Individuals who have had degrees conferred at the end of the previous summer or fall semester, and candidates for degrees who complete degree requirements by the end of the spring semester may participate in the annual Commencement ceremony. Academic regalia appropriate for the University of Connecticut degree being conferred is strictly required for all who participate in the ceremony. Information concerning the Commencement ceremony, including academic regalia and guest tickets, is made available by the mid-spring semester, and can be found on the Graduate School's website.

Continuous Registration:

Master's, doctoral, Sixth Year in education, and graduate certificate students must begin their programs with course work and must maintain registration continuously each semester thereafter (except summer sessions) until all requirements for the degree have been completed. Registration may be maintained either by taking course work for credit or by registering for one of the four non-credit Continuing Registration courses. These include Special Readings at the master's (GRAD 5998) or doctoral (GRAD 6998) level, Master's Thesis Preparation (GRAD 5999), and Doctoral Dissertation Preparation (GRAD 6999). Other zero-credit courses may be substituted, if appropriate. Non-credit registration requires payment of University fees.

International students should consult with the Graduate School prior to registering for zero-credit courses. Per SEVIS guideline 8 C.F.R 214.2 (f) (6) (iii), students are permitted to register for zero credits for a maximum of one academic year. Continuous registration is granted on a semester-by-semester basis with the consent of the student's major advisor and the student's international advisor.

Failure to maintain continuous registration during any semester results in the student's inactivation. Reinstatement is possible within a year of last registration and payment of all fees. (See "Reinstatement Fee.") The consequences associated with matriculation via Continuing Registration rather than credit courses are addressed in the "Course Loads" section.

Neither enrollment for Continuing Registration nor payment for it is required for any semester, during the first ten class days of which the student completes all requirements for a degree, if it is the only degree the student is pursuing.

Any currently matriculated student taking course work at another institution, either for transfer to a University of Connecticut graduate degree program or for any other reason, must register for Continuing Registration as specified above in any affected semester.

Enrollment in Continuing Registration is not required during the summer. To receive most forms of summer financial aid for study or research, a student must register for either 5 credits of coursework in each of two summer sessions or one of the full-time research courses, GRAD 5960 (Full-time Master's Research) or GRAD 6960 (Full-time Doctoral Research). For summer registration, permission numbers for GRAD 5960 and 6960 are issued by the Graduate School Office.

Registration Deadlines:

All graduate students registering with the University must have their initial registration in place no later than the close of business of the first day of classes each semester. Additions to and deletions from a student's class schedule may occur freely throughout the first ten business days of the term. Students who do not complete an initial registration by the close of business of the first day of classes are subject to a late registration fee.

Course Loads:

The number of credits and choice of courses for which a student registers is a matter to be discussed by the student and the major advisor. A student may be classified as a full-time student in one of three ways: (1) enroll in 9 or more credits of coursework; (2) enroll in 6 or more credits of coursework while holding a graduate assistantship (50% or greater); or (3) enroll in

one of the four special purpose 3-credit courses. These courses include GRAD 5960 (Full-time Master's Research), GRAD 6960 (Full-time Doctoral Research), GRAD 5930 (Master's Level Directed Studies), and GRAD 6930 (Doctoral Level Directed Studies). The former two courses may be taken by students who have completed all requirements for the respective degree except the research component and who have no other obligations at the University (i.e., no other course work and no graduate assistantship). The latter two courses denote a full-time off-campus directed project, such as an internship, field work, or other special activity. Students in GRAD 5930 or GRAD 6930 may hold graduate assistantships if those assistantships are in direct support of their studies. Such an assistantship may not be a standard teaching assistantship.

To be classified as half-time, the student's course credit load must be between 5 and 8 credits/semester. A credit load of fewer than 5 credits per semester is a part-time load. These criteria apply to all registered students at the University. The currently defined Continuing Registration courses (GRAD 5998, 5999, 6998, and 6999) are zero-credit "placeholder" courses denoting part-time study and do not count toward the credit load requirement for half-time or full-time enrollment status. Degree-seeking students who do not need to be certified by the University as holding at least half-time enrollment status may use these courses to maintain registration on a part-time basis.

Students holding graduate assistantships must register for 6 or more credits/semester. Such students are considered to be full-time students.

In addition to courses offered by each department, a student's credit load may include GRAD 5950 (Thesis Research), GRAD 6950 (Dissertation Research), and other equivalent research courses defined by the Graduate School, including seminar and other "colloquium" courses that are not part of the plan of study. These variable credit courses carry S/U grading, with the student's major advisor as the instructor of record.

Financial Aid

Financial aid for all graduate students beyond an initial commitment of the first year will be determined on an individual basis.

Renewal of a first year graduate research assistantship will depend on the availability of funds, research performance, and progress toward the graduate degree. Renewal of a first year graduate teaching assistantship will depend on the availability of funds, departmental performance of the assistant in teaching duties, progress toward the graduate degree, and on the teaching needs of the department.

For Ph.D./M.S. candidates, financial aid will normally be restricted to a maximum of four/two years unless additional support is deemed necessary by the faculty advisor.

The maximum aid will be awarded only to students who are making good progress in their programs.

Important Financial Aid Facts to Remember:

If you are receiving financial aid, please see your advisor and review the graduate student union guidelines before making any vacation plans.

If you are an international student, you will be REQUIRED to take an English language proficiency exam before the start of your first semester. Should you fail the exam, you will be required to take an English language course which involves a fee.

A grade point average of 3.0 (B) or above must be maintained throughout your graduate studies to continue receiving financial support.

Tuition Waivers:

Tuition, ***but not associated fees***, is waived for graduate assistants. The student is still responsible for any fees for the semester.

If you have an assistantship that begins or terminates after the semester starts, the waiver will be prorated. This can result in either a partial tuition assessment (if the student is registered throughout the semester for tuition-bearing course work) or a partial refund (if tuition has been paid).

Graduate Assistantships:

The graduate assistantship or GA is sometimes called by its more specific names of teaching assistantship (or TA) and research assistantship (or RA). Whatever it is called, at UConn it is by far the most common form of financial support for graduate students. At UConn the effort devoted to GA duties (and the accompanying level of pay) ranges between 10 and 20 hours per week (also sometimes called a "half GA" and "full GA," respectively). Accompanying each GA is a full waiver of tuition (but not fees) and discounted dental/health insurance.

Payroll Deductions for Assistantships:

Graduate Assistants (either teaching or research) are eligible to use payroll deductions as a method of paying University fees not covered by their tuition waiver. There is no additional cost for participating in the payroll deductions plan.

A graduate tuition waiver, which is part of an assistantship, ***waives tuition only***. The student remains responsible for all other fees including the book store and deposit accounts (first semester only), the general university fee, infrastructure maintenance fee, student activity fee, graduate matriculation fee, transit fee, technology fee, student parking fee, and (if applicable) the International Sponsored Student fee. These are all fees which may be paid for via payroll deduction. Additionally, housing and meals (or a portion thereof) are eligible for payroll deductions for either 3/4 and full-time assistantships (i.e., 15 to 20 hrs per week).

When to Apply for Payroll Deductions:

You will be notified by e-mail when to apply. On or after these dates, it is strongly recommended that grad students apply prior to the 10th day of the semester to avoid late fees. Payroll deductions requested after the 10th day of the semester will be subject to the appropriate late fees.

Applications for a payroll deduction contract **are accepted online only** using the Student Administration system. The system will check to see if you have a current assistantship and if your payroll authorization has been processed by your department. If not, you will not be allowed to apply and you should contact your department to ensure they have processed all of your paperwork.

If a student has less than a full-time assistantship, a partial payment may be required depending on the total of your fee bill charges. Staff in the Deferments area of the Bursar's office will make that determination and will notify you by e-mail.

It takes a minimum of two pay periods to activate a payroll deduction.

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