



## Department of Chemical and Biomolecular Engineering

### MS GRADUATE DEGREE REQUIREMENTS AND PROCEDURES



**The MS program is a thesis based program that seeks to prepare students for a career in the field of chemical engineering. Opportunities for new graduates span industries focused on energy, (petro)chemical, materials, biotechnology, environment and safety; of course, the MS degree can also be a stepping-stone for pursuing a doctorate degree.**

Additional information may be obtained from the Rice University General Announcements, the Office of Graduate and Postdoctoral Studies ([graduate.rice.edu](http://graduate.rice.edu)) and the Graduate Studies Committee of the Chemical and Biomolecular Engineering department. It is the student's responsibility to be familiar with the rules, procedures and requirements and to make sure that policies and timelines are followed in order to allow for a timely graduation. A student failing to meet department or university requirements is subject to dismissal from the program.

**This document summarizes departmental requirements and includes information on some University requirements for graduate degrees.**

**Consult the General Announcements and Code of Conduct for official and complete information on University requirements at [ga.rice.edu](http://ga.rice.edu) and [students.rice.edu/students/conduct.asp](http://students.rice.edu/students/conduct.asp)**

## **DEPARTMENT OF CHEMICAL AND BIOMOLECULAR ENGINEERING**

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### **2023-2024 GRADUATE STUDIES COMMITTEE:**

**Fred MacKintosh, Professor, GSC Chair**

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Program Overview	4
Program Policies and Procedures	5
1. Adviser Selection	5
2. Graduate Student Mentors	5
3. Seminar Series	5
4. Teaching Requirements	5
5. Satisfactory Progress	6
6. Candidacy, Oral Examination & Thesis	6
7. Transfer to the MCHE Program	6
8. Degree Conferral	6
9. Rice University Policies Applicable to All Graduate Students	7
9.1 Leaves of Absence	7
9.2 Residency Requirement and Part-time Status	7
10. Guidelines for Dismissals, Petitions, Appeals, Grievances and Problem Resolution	8
11. Title IX Sexual Misconduct Policy	8
12. Honor System	8

# Graduate Degree Requirements and Procedures

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## Program Overview

- Students need to complete a minimum of 30 credit hours of course work plus research credits for the MS program
- Students need to complete a minimum of 18 hours (6 x 3-credit hours) of CHBE courses which include five (5) core courses noted below and one (1) CHBE elective
  - i) Students with a non-Chemical Engineering Undergraduate degree may be required to take core undergraduate chemical engineering courses. This will be determined on a case-by-case basis. UG courses taken will not count toward the required course credits
- Students are required to take the following core graduate chemical engineering courses during their first two semesters
  - CHBE 501 Fluids
  - CHBE 590 Kinetics
  - CHBE 602 Transport
  - CHBE 611 Thermodynamics
  - CHBE 692 Applied Mathematics
- A grade of B- or better is required in each core and elective course. For those who do not receive a grade of B- or better the credit hours for that course will not count toward fulfilling the 18-course credit hours.
- Students must write and defend a thesis on original research work conducted under the guidance of a faculty in the department.
- Students will typically complete a minimum of 12 credit hours of CHBE 700 (research) under the appropriate faculty mentor for the MS.
- Students must meet the residency requirement.

# Program Policies and Procedures

## 1. Adviser Selection

Students in the MS program are required to work on an original thesis under the guidance of a faculty mentor in the CHBE department. During the first semester in residence department faculty members will present their research topics to the first-year graduate students. Each student must meet with a minimum of three faculty members for detailed discussions on the research topics of most interest to him/her. Presentations will be given by faculty members who are available for selection as an adviser.

The department will strive to match the preference of each student to those of the faculty and to available research projects. Students will be notified by the end of the first semester of their adviser appointment. Students whose adviser's primary appointment is in a different department will be required to follow the requirements outlined in these guidelines. The student is expected to keep both the thesis adviser and the GSC apprised of their course-work related plans.

## 2. Graduate Student Mentors

In-coming MS students will be paired with a senior MS or PhD student who will serve as their mentor. The student mentors serve an essential role in ensuring the well-being of the in-coming students, helping them settle into the program, and serving to transmit the "senior's wisdom." It is up to the student to make the best use of their time with their student-mentors.

## 3. Seminar Series

All MS students must register for the graduate seminar course, CHBE 661 (Fall) and CHBE 662 (Spring), each semester they are in residence. Students are expected to attend at least six seminars. No more than two of these may be excused and no more than one of these may be substituted with a research-appropriate seminar from another department, program or center and students must notify the Graduate Studies Committee of such absences or substitutions. **More than two unexcused absences and/or one substitution will result in an unsatisfactory seminar grade for the semester.**

**Prior approval must be obtained from the Graduate Studies Committee before registering for a class that conflicts with the CHBE seminar course.**

## 4. Teaching Requirements

Students in the MS program receiving a stipend from the department are expected to complete up to two semesters as a teaching assistant.

## 5. Satisfactory Progress

MS students are expected to make continuous and satisfactory progress towards fulfilling the degree requirements. Students must maintain a grade of B- or better in each course and also make satisfactory progress in their research work. Consistently failing to make satisfactory progress may lead to the student being dismissed from the program. In accordance with university policy (see General Announcements at [ga.rice.edu](http://ga.rice.edu)) students whose CGPA falls below 2.67 or the semester GPA falls below 2.33 are placed on probationary status. University policy further states that any student placed on probationary status for a second semester will lead to an automatic dismissal by the Office of Graduate and Postdoctoral Studies, unless the student's department presents a plea for exception that is approved by the Dean of Graduate and Postdoctoral Studies.

## 6. Candidacy, Oral Examination, and Thesis

Requirements for achieving candidacy towards a thesis Master's degree are determined at the department level. This includes satisfactory completion of all course requirements and designation of the student's thesis committee. The thesis committee is comprised of at least three members and must meet the criteria as outlined in the General Announcements at [ga.rice.edu](http://ga.rice.edu) and with input from their faculty mentor. The student is responsible for completion of the Master's Candidacy Petition. Within the CHBE department, this workflow is handled through the Academic Program Administrator. The student is expected to coordinate with the Program Administrator to ensure the petition is submitted. The thesis committee will examine the thesis work prepared by the student. The public oral defense of a thesis is intended to be an examination of a completed body of work and should be scheduled only when the thesis is essentially completed. Students may take the final oral examination in defense of their thesis only after the dean of graduate and postdoctoral studies approves their candidacy.

## 7. Transfer to the MChE Program

On occasion students in the research program elect to transfer to the non-thesis MChE program. Such transfers will need to meet the requirements of the MChE program. The student is expected to work with graduate studies chair and the program director to ensure all program requirements are satisfied. In particular, the student will need to complete a minimum of 30 credit hours of course work. For students who have already done research, we will only count up to 3 credits of research in lieu of Independent Study (CHBE 695).

## 8. Degree Conferral

Students can graduate at the end of the Fall, Spring, or Summer semesters. In order to qualify for a given commencement, students must meet the submission deadline for commencement per the appropriate Academic Calendar. Please confirm your plans well in advance of the deadline with your faculty adviser.

## 9. Rice University Policies Applicable to all Graduate Students

### 9.1. Leaves of Absence

All graduate students are expected to maintain continuous enrollment, unless an official leave of absence has been granted. Failure to register for any period without a leave of absence granted by the Associate Provost constitutes de facto withdrawal. If a student later wishes to resume study, reapplication is required. Readmission is given only on the recommendation of the department and the approval of the Associate Provost.

A leave of absence is granted by the Office of Graduate and Postdoctoral Studies upon the recommendation of the department and that too only to a student in good standing with the university. Leave must be approved in advance of the academic semester in question; it will not be granted after the student has registered for courses or after the registration period has passed. Normally, a leave of absence is granted for no more than two consecutive semesters. No work toward a degree may be done at Rice or involve Rice faculty (or facilities) during a student's leave of absence.

### 9.2 Residency Requirement And Part-time Status

Semester course load for full-time students is nine (9) hours. Minimum residency for schools of engineering is one Fall or Spring semester in full time or part time graduate study. Students dropping below the nine hours and registering for at least three hours are considered part-time. Students who wish to obtain part-time status must notify and obtain written permission from the MChE Director and the Academic Coordinator before the semester begins. A part-time status request will then be sent to the Office of Graduate and Postdoctoral Studies for final approval.

International students must obtain approval from the Office of International Students and Scholars (OISS) before dropping below the minimum hours required for full-time students; the request for approval is made by presenting a completed Reduced Course Load Authorization Form found on the OISS webpage. International students must verify with the department that this process has been completed with OISS before the formal request can be made to the Office of Graduate and Postdoctoral Studies. To maintain legal immigration status, international students are allowed to go part-time only in their final semester of study.

As a part-time student the tuition paid will be based on the number of registered hours times the hourly tuition rate. Rates are found in the General Announcements/Tuition, Fees & Expenses at [ga.rice.edu](http://ga.rice.edu). Students are assessed a one-time per semester part-time enrollment fee of \$150 when enrolled for less than 9 credits.

## 10. Guidelines for Dismissals, Petitions, Appeals, Grievances and Problem Resolution

Rice University graduate students have guidelines to assure fairness in problem resolution. These policies strive to uphold standards and raise the quality of graduate programs. They provide graduate students with an environment that has high standards, clear assessments of the student's achievements and fair and transparent procedures for handling cases of inadequate academic progress.

Please find the complete list of guidelines in the General Announcements for graduate students at [ga.rice.edu](http://ga.rice.edu). These guidelines are to be followed by all Rice graduate students. The CHBE Graduate Studies Committee will be the standing committee for all issues regarding these guidelines.

## 11. Title IX Sexual Misconduct Policy

Rice encourages any student who has experienced an incident of sexual, relationship, or other interpersonal violence, harassment or gender discrimination to seek support. There are many options available both on and off campus for all graduate students, regardless of whether the perpetrator was a fellow student, a staff or faculty member, or someone not affiliated with the university.

Students should be aware when seeking support on campus that most employees are required by Title IX to disclose all incidents of non-consensual interpersonal behaviors to Title IX professionals on campus who can act to support that student and meet their needs. The therapists at the Rice Counseling Center and the doctors at Student Health Services are confidential, meaning that Rice will not be informed about the incident if a student discloses to one of these Rice staff members. Rice prioritizes student privacy and safety, and only share disclosed information on a need-to-know basis. If you are in need of assistance or simply would like to talk to someone, please call Rice Wellbeing and Counseling Center, which includes Title IX Support: (713)348-3311. Policies, including Sexual Misconduct Policy and Student Code of Conduct, and more information regarding Title IX can be found at [safe.rice.edu](http://safe.rice.edu).

## 12. Honor System

Students take all written examinations and complete any specifically designated assignments under the honor system. By committing themselves to the honor system, all students accept responsibility for assuring the integrity of the examinations and assignments conducted under it. The Graduate Honor Council (GHC) is responsible for investigating reported violations and for conducting a hearing when the facts warrant. The Office of Student Judicial Programs, which reviews the results of the investigations and hearings, considers the GHC's recommendations when issuing penalties. Procedures for accusations arising out of summer classes or Rice Online classes may differ.