

The School of Chemistry and Materials Science
Chemistry
Master of Science Program

Graduate Student Handbook
2025 - 2026 Academic Year

Revised 9/2025

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Normal text

Chemistry Master of Science Program

Chemistry (CHEM-MS) Program Contacts

CHEM-MS Director/Professor	Senior Staff Specialist	Graduate Admissions Counselor
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The School of Chemistry and Materials Science (SCMS) offers a Master of Science (MS) graduate degree in Chemistry. The Chemistry MS degree (CHEM-MS) was first introduced in 1965, and as such is one of RIT's oldest graduate degree programs. This MS degree program offers options designed to fill the needs of the full-time graduate student as well as enabling practicing chemists in the greater Rochester industrial community to pursue an advanced degree on a part-time basis.

SCMS offers two 30-credit hour program options leading to the CHEM-MS degree; the thesis option and the project option. There is the opportunity to switch between options during the course of the degree if circumstances warrant.

Thesis	Project
Designed for students seeking a traditional research-intensive master's degree	Designed to offer students a flexible program that can be tailored to their career interests
<ul style="list-style-type: none">• Focused study within a specific field of chemistry, culminating with the submission and defense of a written thesis• Thesis is 10 credit hours of research, 4 credit hours of seminars, and 1 credit hour of writing• Prepare a traditional thesis document that's publicly accessible and present an oral thesis defense• Students will take a total of five graduate level focus area courses• Thesis work may be conducted at an industrial site, provided that it culminates in a written public thesis• Recommended for students planning to further their education in a doctoral program and those wishing for an in-depth extended research experience	<ul style="list-style-type: none">• Breadth and flexibility in the academic program• Project accounts for up to 4 credit hours, 4 credit hours of seminars, and 1 credit hour of writing• Public presentation and written account of the project results• Students will take a total of eight graduate level focus area courses<ul style="list-style-type: none">◦ Additional research credits can be used for elective credits• Students may use industrial projects or cooperative education experience to complete their MS degree requirements• Ideal for part-time students

Application and Admission

Starting your RIT Graduate application is quick and easy. The online application will typically take 15-20 minutes to complete. All you need to get started is to submit the online application and pay the application fee. You may upload other required documents at that time or at a later date in your admissions portal.

[Application Process and Instructions](#) | [Graduate Admissions](#)

Admission

The Chemistry MS program accepts applications on a rolling basis, meaning, there is no specific deadline for applications; applications will be accepted and reviewed throughout the year.

Once the application is received, your graduate admissions counselor will contact you via email to acknowledge receipt of your application and let you know if any necessary items are missing from your application.

You may log in to your admissions portal at any time to monitor and track the receipt of your application credentials, upload new supporting documents, and change your email address or password. Your admissions portal also hosts a checklist to aid in determining what is needed to complete your application.

[Admissions Portal](#) | [Graduate Admissions](#)

Admission Requirements:

Location	Term	Deadline	Letters of Recommendation	Entrance Exam	Portfolio	English Language Scores	STEM Designated
On Campus	Fall Spring	Rolling	2	GRE	No	TOEFL – 79 IELTS – 6.5 PTE – 58	FT – Yes PT – No

International Students:

To apply for a student visa, U.S. government regulations require international students to demonstrate that they have sufficient financial resources to meet the costs of tuition, fees, supplies, and living expenses for at least nine months of full-time study.

[Accepted International Students](#) | [Graduate Admissions](#)

Readmission

Students who leave a graduate program, or have a lapse in enrollment greater than or equal to three terms, including summer but not including intersession, and wish to return to that program must reapply through the Office of Graduate Enrollment Services. All student applications are subject to admissions standards at the time of reapplication. The program of study shall be subject to review and may be rewritten. Previous waiver and/or transfer credit may be lost, and program deficiencies may need to be made up. Readmission applications are handled according to the following procedure:

- Students who left the program with a GPA of 3.0 or better (were in good academic standing) and are returning to the program **within two years** of the time their last course was completed will be readmitted to the program upon submitting a readmission application.
- Students who left the program with a GPA of 3.0 or better and return to the program **later than two years** after their last course was completed must meet the current admission standards for readmission. The program of study shall be subject to review and may need to be revised. Previous waiver and/or transfer credit may be lost, and program deficiencies may need to be remedied.

- Students who left the program with a **GPA below 3.0** must meet current admissions standards for readmission. The decision to reaccept the student to the program will be based on all information, including previous graduate level work. Previous waiver and/or transfer credit may be lost and program deficiencies may not be remedied. In addition, the School of Chemistry and Materials Science committee or program director will decide which previous courses, if any, will be applicable toward the degree.
- In all cases, **students must complete the program within seven years** of the date the earliest course counted toward their degree program. A student who has not completed their degree requirements within the seven-year period must petition the Chemistry Graduate Program Director for re-admission via a written letter that outlines why the petitioner was not able to complete the degree in the required time. Documented evidence supporting the petitioner's claim may be requested at that time. The final decision to pursue a petition for readmission to Graduate Studies at RIT is solely at the discretion of the Chemistry Graduate Program Director. If a petition is to be forwarded to RIT Office of Graduate Studies for review, the dean of graduate studies will decide whether to re-admit the candidate. In no case, is the decision automatic, and the petitioner may have their petition denied for any reason.

[RIT Policy D02.0 - Admission](#)

Academic Standing

Each degree-seeking graduate student will generate two different grade point averages that appear on the transcript; cumulative and term averages. The university cumulative average reflects all course work completed at RIT at the graduate level. The term average reflects a single term of academic activity. Each graduate student has a program average used for degree certification that is manually calculated by the academic unit and reflects course work completed at RIT applicable to graduation in the Chemistry MS program.

- Any degree-seeking graduate student whose cumulative and/or program grade point average falls below a 3.00 after 9 credit hours (attempted or earned) subsequently will be placed on probation and counseled by the graduate program director (or his/her designee) concerning continuation in the graduate program.
- Students on probation must raise their program cumulative and program grade point average to 3.00 within 9 credit hours (attempted or earned) or they will be suspended from the graduate program.
- A graduate student suspended for academic reasons, must apply for readmission.
- A suspended student cannot enroll in any credit or non-credit course at the university while on suspension.
- A suspended student may appeal a suspension decision. Individual colleges and/or programs may set limitations on the number of appeals a student can submit.
- A suspension may be waived upon written appeal to the student's home program. Final suspension waiver approval requires dean (or designee) approval. For programs housed outside the college structure, the approval of the director of the academic unit in which the enrollment is requested is required.
- A suspended student may be required to satisfy specific academic conditions imposed in order to be considered for readmission to his/her program.
- A suspended student may be admitted to another program if it is approved by the dean (or designee) of the college in which enrollment is requested. For programs housed outside the college structure, the approval of the director of the academic program in which the enrollment is requested is required.

[RIT Policy D05.1 - Academic Actions and Recognitions](#)

RIT Non Discrimination Statement:

RIT does not discriminate. RIT promotes and values diversity within its workforce and provides equal opportunity to all qualified individuals regardless of race, color, creed, age, marital status, sex, gender, religion, sexual orientation, gender identity, gender expression, national origin, veteran status, or disability.

The Title IX Coordinator has overall responsibility for the university's institutional compliance with Title IX. Any person with a concern about the university's handling of a particular matter related to sex or gender-based discrimination or harassment should contact:

Stacy DeRooy

Director of Title IX and Clery Compliance
Title IX Coordinator
171 Lomb Memorial Drive
Rochester, NY 14623
(585) 475-7158
Stacy.DeRooy@rit.edu
www.rit.edu/titleix

Any person may report sex discrimination, including sexual harassment, in person, by mail, by telephone, or by electronic mail, using the contact information listed for the Title IX Coordinator, or by any other means that results in the Title IX Coordinator receiving the person's verbal or written report. Reports may be made regardless whether the person reporting is the alleged victim of any conduct that could constitute sex or gender-based discrimination or harassment. Reports may be made at any time (including during non-business hours) by calling the telephone number noted above, by electronic mail, by mail to the office address listed for the Title IX Coordinator, or by filing a report on line with RIT's Title IX Office.

The U.S. Department of Education, Office for Civil Rights (OCR) is a federal agency responsible for ensuring compliance with Title IX. OCR may be contacted at 400 Maryland Avenue, SW, Washington, DC 20202-1100, (800) 421-3481.

Financial Assistance

Applicants can indicate their desire for financial awards in the online application portal. Students are considered for RIT graduate scholarships just by applying for admission; no separate application is necessary. Any matriculated student who wishes to be considered for a financial award should also notify the Director of the Chemistry Graduate Program.

All financial awards come with the student's responsibility of staying in good academic standing (GPA of 3.0 or greater) and making steady progress toward their degree. If these criteria are not met, the award will not be renewed, and may be revoked. This process of review and evaluation is to ensure that financial award recipients fulfill their primary goal in the program, obtaining their degree.

[Graduate Education Funding Sources | RIT](#)

Scholarships

Graduate scholarships entitle an awardee to receive tuition remission. Graduate scholarships may be renewed provided the recipient is in good academic standing.

Graduate Tuition Scholarships:

- Typically, 10-40% tuition scholarship range. The amount of scholarship offered varies by student and department.
- Offered to top candidates in recognition of academic excellence and outstanding admission credentials.
- Those offered a graduate scholarship will receive a scholarship letter in their admissions portal at the time they are notified of their acceptance.

RIT Master Plan:

- A 45% Graduate tuition scholarship
- Offered to students who graduate with at least a bachelor's degree from RIT after December 2019.
- Students in a Combined Accelerated Bachelor's/Master's program are not considered for this scholarship.

RIT Master Up NY:

- A 30% Graduate tuition scholarship
- Offered to New York State residents with a bachelor's degree or anyone who graduates with at least a bachelor's degree from a college or university in New York State.
- Students in a Combined Accelerated Bachelor's/Master's program are not considered for this scholarship.

Assistantships

Full-time graduate students may be offered assistantships and can receive wages or stipends in exchange for work performed. Assistantships are competitive and selective, do not cover tuition costs, and may not be awarded until after you are enrolled as a graduate student.

Graduate Teaching Assistant:

Graduate Teaching Assistants (GTA) are hired to assist in the offering of specific courses during a given semester. The time spent per week teaching, grading, and advising will commensurate with the number of courses for which they are responsible. Assignments are made at the discretion of the faculty member of record for each course.

In addition to these courses, several undergraduate programs within the College of Science and College of Engineering frequently hire graduate students for assistantships. Interested students should reach out to such programs directly.

Graduate Research Assistant:

A Graduate Research Assistantship (GRA) is a funded research position associated with a specific research laboratory or research advisor. Such awards are made at the discretion of the individual research advisors and their available funding. GRAs generally receive a stipend or hourly wages depending upon the available funding from the advisor. The term of a GRA appointment is one semester and may be renewable depending on the research advisor's needs.

Program Requirements and Course Administration

The Chemistry graduate program is a 30-credit hour program leading to the Master of Science degree in Chemistry. Students can choose from a Thesis or Project option to fulfill the degree requirements. All Chemistry graduate students, regardless of their chosen option, must demonstrate proficiency and mastery in one area. Proficiency is determined by performance on graduate level coursework, and mastery is demonstrated by the successful completion of a thesis or capstone project.

All newly matriculated graduate students must arrive a week in advance of their first academic semester allowing time to find a residence, get acclimated to the campus, and participate in the graduate student orientation week. Orientation is run in formal group activities prior to the fall semester. Students who enter the program during the other academic semesters will receive a personal orientation by a member of the Chemistry Graduate Committee.

During orientation, new graduate students will:

- be introduced to the faculty
- be introduced to their classmates
- review the CHEM-MS program guidelines
- be advised on course registration
- be introduced to the Chemistry Stockroom procedures
- take an OSHA certified laboratory safety course
- take placement examinations in the five chemistry subject areas

Advisor:

The Director of the CHEM-MS Program will act as the Academic Advisor for students. Each student should take an active role in seeking out a potential Research Advisor and Graduate Committee for their thesis or project.

FORM 2

Placement Examinations:

All new CHEM-MS graduate students must arrive at least one week prior to the first day of classes of the admitted term. During that week, they will take the Placement Exams (PEs) in the sub-disciplines of chemistry; analytical, organic, biochemistry, inorganic, and physical chemistry. The PEs are standardized examinations, published by the American Chemical Society, Division of Chemical Education Examinations Institute.

SCMS uses PEs to measure the content knowledge of incoming graduate students. All chemistry graduate students must demonstrate proficiency in at least three of the five sub-disciplines by passing three of the five exams. The pass/fail decision is based on the national statistics for a given exam. A passing score on a PE is at the discretion of the proctor for each sub-discipline of chemistry.

In the event a student *does not* successfully pass three of the five exams, they must formally take and pass, with a grade of B or higher, the sub-discipline course(s) until they have demonstrated proficiency by either a passing the PE or course. Progress on the placement exams is reported in FORM 1.

Course Academics

SCMS offers two 30-credit hour program options leading to the CHEM-MS degree; the Thesis Option and the Project Option. The specific graduate courses that students take will be determined by the student's area of focus, their Graduate Advisor, and the outcome of their PEs.

Core Courses:

Focus Area Courses	CHEM-771, 772, 773, & 774	
	Chemistry Seminar 4 credits	Chemistry Writing 1 credit

Course Outlines:

Thesis	Credits	Project	Credits
Focus Area Courses	15	Focus Area Courses	24
Thesis Research	10	Project	1
Seminars	4	Seminar	4
Chemistry Writing	1	Chemistry Writing	1
Total:	30	Total:	30

Focus Area Courses:

Graduate students will take either five or eight courses (depending on if they are on the Thesis or Project Option) pertinent to a chosen focus area in their graduate career at RIT. These courses are designed to give students depth of knowledge in specific chemistry areas relevant to a student's chosen research area. Many factors determine the courses a student will take, these include; course availability, PE performance, and research focus. A student's Graduate Advisor will serve to recommend which courses should be taken for the MS Chemistry Degree. Courses may be taken outside SCMS; however, they must get approval from the Director of the Chemistry Graduate Program.

Seminar Requirement:

A key component of the CHEM-MS degree requirements are the Chemistry Seminar courses. Chemistry Seminar is a series of four courses designed to introduce some breadth to a student's chemistry knowledge. Internal and external speakers present seminars on research topics of current interest. All students are enrolled in Chemistry Seminar and receive credit in two ways:

Presentation	Review/Critiques
Students present two public seminars during the course of their MS degree; → Year 1 - Semester 1 <ul style="list-style-type: none">Literature seminar on selected research topic → Year 2 - Semester 2 <ul style="list-style-type: none">Final research presentation	→ Students submit weekly written reviews/critiques of both internal and external presenting speakers

Graduate student seminars must be formally added to the seminar calendar by submitting a general seminar topic to the faculty member coordinating the Chemistry Seminar, and by arranging an agreed upon seminar date. In the week prior to their seminar presentation, students should submit a written abstract of their seminar to the SCMS Staff person to be included with the weekly seminar announcements. The grade for the seminar presentation will be determined from the grades submitted by the faculty members attending the seminar (FORM 5 & FORM 10).

Writing:

An important part of being a professional chemist is being able to effectively communicate information about your research results, laboratory, and personal qualities through written and verbal delivery. The Chemistry Writing course assists in developing these skills. Students will learn how to write a curriculum vitae, resumé, laboratory overviews, short and long research abstracts, and scientific research articles

using the various formats and styles used by chemists every day. Integral parts of writing a research article are the initial formulation of the research hypothesis and design of experiments to test the hypothesis.

Grading

Any course in which a grade of C-, D, or F is obtained will not apply toward the courses required to graduate. However, courses in which a grade of C+, C, C-, D, or F is received *may be repeated* with permission from the student's advisor and the Chemistry Program Director. Keep in mind that repeating a course will incur additional financial burdens. Grade point averages will include the original course's and the repeated course's grade. F grades most often occur if an incomplete grade in a course (grade of "I") has not been remedied within one academic semester of the official end of the course.

Thesis

The Thesis Option is a focused research study within a specific field of chemistry, culminating with the submission and defense of a written thesis. Students will register for ten credit hours of Research and Thesis under the supervision of a member of the CHEM-MS Graduate Faculty. This research should be original research that can lead to a publication in a scientific journal and presentation at a scientific meeting, and may be conducted at an industrial site, provided that it culminates in a written public thesis. The Thesis Option is recommended for students planning to further their education in a doctoral program.

Schedule

Once a Research Advisor has been established for a student, the advisor and student will work together to outline the pathway of courses to be pursued through the program. An example of a CHEM-MS Thesis schedule:

	Year One		Year Two		
Semester	Fall	Spring	Fall	Spring	Credits
Focus Area Courses	Course 1	Course 3	Course 5		15
	Course 2	Course 4			
Research	Research	Research	Research	Research	10
Seminars	CHEM-771	CHEM-772	CHEM-773	CHEM-774	4
Writing	Chemistry Writing				1
A minimum of 30 semester credit hours beyond a BS degree is required to obtain a CHEM-MS degree			Research varies up to 10 credits, as determined by the student & research advisor		Total: 30

Students have the responsibility of maintaining their schedule and program of study. Reach out to the School of Chemistry and Materials Science Department Head and/or the Director of the Chemistry Graduate Program to ask questions and obtain answers regarding scheduling.

Thesis Components

Research Advisor:

During or immediately after the second semester, graduate students in the thesis option should choose a faculty member who will serve as their Research Advisor. Any member of the Program or Program Allied Chemistry Faculty can serve as an advisor. In some cases, other RIT faculty may serve in this capacity. In both cases, the selection must be approved by the potential advisor and the Chemistry Program Director.

FORM 2

Graduate Committee:

Students completing a project must arrange for 3 additional graduate committee members. Any full time RIT faculty may serve as a graduate committee member. Committee members from outside RIT are possible with approval, such as when a student is working closely with a company or research group at another institution. In all cases, the Chemistry Program Director will serve as one of the committee members.

Seminar:

As part of the core course requirements, thesis students must present at least two public departmental seminars. These are typically followed by closed-door sessions to count towards the oral examinations.

Seminar 1: CHEM-771

The first seminar is a one-hour presentation based on literature (helpful background for the student's thesis research), with an additional research proposal component that outlines the proposed research endeavor. Guidance on the selection of a seminar topic may be provided by the student's advisor.

Seminar 2: CHEM-774

The second seminar is given in conjunction with the third oral exam, which together constitutes the thesis defense. This seminar is based on the thesis research and is followed by a question and answer period conducted by the seminar audience and the Oral Committee (the latter being, specifically, a closed session). A worked-up thesis draft must be provided to the Oral Committee at least two weeks before this event. The evaluation of the second seminar (CHEM-774) by the faculty audience is reported on FORM 10.

Oral Examination:

Graduate students who have chosen the thesis option must pass a series of two oral comprehensive exams and an oral thesis defense. The purpose of the Oral Examination is to evaluate and advise students on their research progress and their general knowledge of chemistry. The role of evaluator and advisor is performed by the Oral Committee. Members of the committee can make specific recommendations for remediation to assist the student in areas of weakness.

The Oral Committee is formed during the graduate student's first semester of attendance and prior to the student's first oral exam. The Oral Committee is approved by the Director of the Chemistry Graduate Program at the request of the student and the Thesis Advisor (FORM 2). The student's oral committee must be formed in time to enable the student to complete the first oral exam by the end of the first semester of attendance.

Every oral exam is to be culminated by a discussion (in the student's absence) of the student's performance and progress. The Thesis Committee's pass/fail decision is prepared by the Research Advisor prior to the meeting. The Thesis Committee's decision and recommendations will be shared with the examinee.

Written Thesis:

A written thesis including a student's research progress is the final product for the Thesis Option Chemistry degree. The thesis must be approved by the student's Thesis Committee, the Director of the Chemistry Graduate Program, and accepted by the RIT library as an approved publication.

[Thesis Services](#) | [RIT Libraries](#) - ProQuest

Certification:

Students in the Thesis Option Chemistry program will be certified for their degrees when the following materials are presented to the Director of the Chemistry Graduate Program:

- Proof of matriculation
- Completion of focus area courses with an overall GPA of 3.0 or higher
- Updated FORM 4 and Academic Advising Report
- Completed FORM 11 with a copy of the ProQuest Accepted Publication email
- Completed and signed Thesis Grading Form
- FORM 14 - initiated by advisor
- FORM 12

Project

The Project Option is for students desiring more course study in their academic program. Students fulfill the degree requirements through course work and completion of a capstone project. The capstone project accounts for up to four semester credit hours and must culminate in a capstone presentation and report of the project results. Students may use industrial projects to complete their MS degree requirements within the context of this option. The Project Option is ideal for part-time students or those wishing to complete a multi-disciplinary MS degree.

Schedule

Once a Research Advisor has been established for a student, the advisor and student will work together to outline the pathway of courses to be pursued through the program. An example of a CHEM-MS Project schedule:

	Year One		Year Two		
Semester	Fall	Spring	Fall	Spring	Credits
Focus Area Courses	Course 1	Course 3	Course 5	Course 7	24
	Course 2	Course 4	Course 6	Course 8	
Project				CHEM-780 – Project	1
Seminars	CHEM-771	CHEM-772	CHEM-773	CHEM-774	4
Writing	Chemistry Writing				1
A minimum of 30 semester credit hours beyond a BS degree is required to obtain a CHEM-MS degree					Total: 30

Students have the responsibility of maintaining their schedule and program of study. Reach out to the School of Chemistry and Materials Science Department Head and/or the Director of the Chemistry Program to ask questions and obtain answers regarding scheduling.

Project Components

Research Advisor:

During or immediately after the second semester, graduate students in the thesis option should choose a faculty member who will serve as their Research Advisor. Any member of the Program or Program Allied Chemistry Faculty can serve as an advisor. In some cases, other RIT faculty may serve in this capacity. In both cases, the selection must be approved by the potential advisor and the Chemistry Program Director.

FORM 2

Graduate Committee:

Students completing a thesis must arrange for 3 additional graduate committee members. Any full time RIT faculty may serve as a graduate committee member. Committee members from outside RIT are possible with approval, such as when a student is working closely with a company or research group at another institution. In all cases, the Chemistry Program Director will serve as one of the committee members.

Seminar:

As part of the core course requirements, project students must present at least one public departmental seminar, and a public, oral or written presentation of their final capstone project.

Seminar 1: CHEM-771

The first seminar is a one-hour presentation based on literature (helpful background for the student's thesis research), with an additional research proposal component that outlines the proposed research endeavor. Guidance on the selection of a seminar topic may be provided by the student's advisor.

Capstone Project

The master's degree implies a period of intense study in a specific area. In the project option, mastery of the subject area is demonstrated by a Capstone Experience project. This culminating work must be presented in either written or oral form to an audience of scientists. The presentation of the final project may take the form of a departmental seminar, an external to the department presentation, a journal publication, patent, or a poster presentation at a conference. The nature of this work will be agreed to by the student, the Graduate Advisor, and the Director of the Chemistry Graduate Program. The evaluation of the final project is reported on FORM 10.

Certification:

Students in the Project Option Chemistry program will be certified for their degrees when the following materials are presented to the Director of the Chemistry Graduate Program:

- Proof of matriculation
- Completion of focus area courses with an overall GPA of 3.0 or higher
- Updated FORM 4 and Academic Advising Report
- Completion of the Capstone Experience (FORM 10)
- FORM 14 - initiated by advisor
- FORM 12

Faculty