

Master's Degrees Chemistry



GRADUATE STUDIES

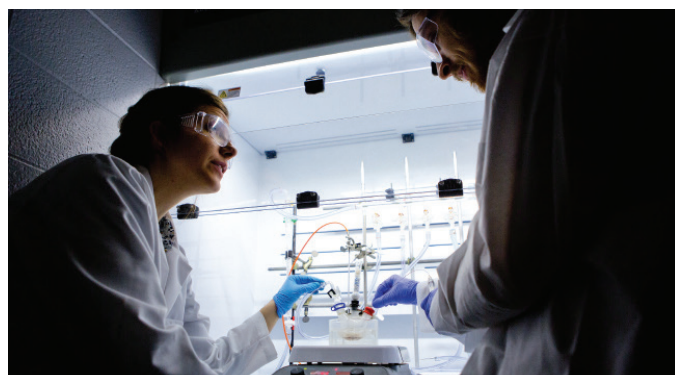
TAKE YOUR CHEMISTRY DEGREE TO THE NEXT LEVEL

At Rose-Hulman a master's degree in chemistry can take your education and employment opportunities to the next level, whether working for a private company, in industry, the government, or in academia.

A chemist can work in a variety of areas, including:

- Archeology
- Cosmetics
- Education
- Environment
- Food
- Forensics
- Paper
- Petroleum
- Pharmaceuticals
- Plastics
- Power

Rose-Hulman offers opportunities to use impressive research facilities and work alongside professors who are experts in the field.





Degrees

The Department of Chemistry and Biochemistry at Rose-Hulman offers two post-graduate degree programs:

- **Master of Science in Chemistry (MSCHEM)** degree. Requires a thesis that is publishable scientific work. A student's MSCHEM degree plan of study is arranged by agreement between the student, the student's advisory committee chairperson, and the student's advisory committee.
- **Master of Chemistry (MCHEM)** degree. No thesis that is publishable scientific work required. Instead, you will need 12 credit hours of additional coursework. A student's

MCHEM plan of study is arranged on an individual basis through a joint agreement between the student and academic advisor, who must be a member of the chemistry faculty.

Both degree programs build upon the basic foundations established by the student's undergraduate course of study.

Getting Two Degrees for the Price of One

Because Rose-Hulman's chemistry and chemical engineering curricula share several courses, you can earn a bachelor's degree in chemical engineering while getting your master's degree in chemistry. This will greatly enhance your prospects for postgraduate careers or doctoral degree programs.



At a Glance

Rose-Hulman's graduate programs have a strong focus on applied research involving excellent faculty, facilities, and flexibility in a student's plan of study to meet individual goals. The graduate studies programs at Rose-Hulman offer a supportive atmosphere focused on the growth and development of each student.

Master of Science in Chemistry requirements

- 48 credit hours, 36 credit hours of coursework as approved by student's advisory committee.
- At least 24 credit hours must be upper-level chemistry courses.
- At least 24 credit hours must be at 500 level.
- 12 credit hours of thesis work.
- Successful defense of thesis.
- Acceptance of a technical article for publication and/or for conference presentation with the major professor included as a named author.

Master of Chemistry degree requirements

- 48 credit hours of coursework as approved by student's academic advisor.
- At least 32 credit hours must be upper-level chemistry courses
- At least 36 credit hours must be graduate-level courses

Use World-Class Laboratory Facilities

Graduate students work with faculty members in a state-of-the-art environment to make scientific discoveries. Our facilities feature:

- High Performance Liquid Chromatography, an invaluable tool in separating and identifying solutions with multiple components.
- Varian Gemini 300 MHz Nuclear Magnetic Resonance, which can identify the component based upon the unique magnetic properties of the nuclei from the atoms that make up the molecule.
- Shimadzu GC-2010 Gas Chromatograph-Mass Spectrometer, an instrument that separates and analyzes a mixture of components.
- Anasazi 90MHz Nuclear Magnetic Resonance, identifies compounds based upon the unique magnetic properties of the nuclei from the atoms that make up the molecule.
- The Department of Chemistry and Biochemistry also has several equipped laboratories and a complete stockroom staffed by full-time technicians and student employees.

Our Faculty Are Scholars in their Fields

- **Michael Mueller, PhD**, Department Head and Professor of Chemistry, research in biodiesel fuels
- **Bruce Allison, PhD**, Professor of Chemistry, research in synthesis and characterization of novel NLO polymers
- **Mark Brandt, PhD**, Associate Professor of Chemistry, research in structure-function studies on human estrogen receptor
- **Rebecca DeVasher, PhD**, Associate Professor of Chemistry, research in environmentally friendly organic synthesis
- **David Erwin, PhD**, Associate Professor of Chemistry, specializes in inorganic chemistry and organometallic chemistry
- **Michelle (Shelly) Hoffman, PhD**, Assistant Professor of Chemistry, research in heavy metal bioremediation studies
- **Daniel Morris, PhD**, Professor of Chemistry, research in HPLC studies of oxidatively damaged DNA bases
- **Edward Mottel, PhD**, Professor of Chemistry, specializes in inorganic chemistry
- **Stephanie Poland, PhD**, Assistant Professor of Chemistry, research in green polymerization methods
- **Luanne Tilstra, PhD**, Professor of Chemistry, specializes in physical chemistry and polymer biodegradation
- **Ross Weatherman, PhD**, Associate Professor of Chemistry, research in breast cancer therapeutics

ROSE-HULMAN INSTITUTE OF TECHNOLOGY

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