

CHEMICAL ENGINEERING (M.S.)

<https://ceps.unh.edu/chemical-engineering-bioengineering/program/ms/chemical-engineering>

Description

An M.S. in chemical engineering can help you unlock your career potential or enter the world of entrepreneurship. In fact, this advanced degree can translate into more than \$15,000 annually in salary compared to those with an undergraduate degree alone. Our program will introduce you to the exciting world of chemical engineering research, teaching you how to plan and execute research activities and interpret results. You will complete a research thesis in an area such as catalysis, green engineering, fluid dynamics, sensors, computational biophysics, biomaterials, tissue engineering, and synthetic biology. You will be prepared to enter the workforce with a deeper understanding of the fundamentals of chemical engineering.

Admission Requirements

An applicant is expected to have completed a baccalaureate degree in chemical engineering. Students with good undergraduate records in a science or engineering field may be admitted provided they learn specific math and engineering skills that are aimed at successful completion of the Master of Science program requirements. Applicants must submit current scores (within five years) from the general test of the Graduate Record Examination. International students are required to submit TOEFL test scores. IELTS scores are accepted on a case-by-case basis, and students must have a minimum score of 6.5.

Requirements

M.S. Degree Requirements

A minimum of **30 credits**, which must include:

| Code | Title | Credits |
|--|--|---------|
| Required Courses | | |
| CHBE 900 | Seminar ¹ | 0 or 1 |
| CHBE 923 | Advanced Chemical Engineering Thermodynamics | 3 |
| CHBE 932 | Advanced Chemical Engineering Kinetics | 3 |
| CHBE 940 | Advanced Transport Phenomena | 3 |
| In addition to the above 11#credit required courses, the M.S. student is expected to take the following courses: | | |
| Electives² | | |
| Select 19 elective course credits ² | | 19 |
| CHBE 899 | Master's Thesis | 6-9 |

The M.S. elective course credits must include CHBE 899 Master's Thesis of up to 9 credits.

¹ Students should register for CHBE 900 for 1 credit each in their first two semesters and 0 credits each additional semester until their degree is granted.

² Can be made up of electives offered by the department or by the college. Courses taken within the UNH School of Law, College of Life Sciences and Agriculture, and the Paul College of Business and Economics can apply with approval. Electives must be assessed with a letter grade and cannot be pass/fail. Students take electives after

consulting with their advisers. The courses the students have taken to fulfill their B.S. degree requirement cannot be counted toward their M.S. degree requirement.

Accelerated Master's

This graduate program is approved to be taken on an accelerated basis in articulation with certain undergraduate degree programs.

General Accelerated Master's policy, note that some programs have additional requirements (e.g. higher grade expectations) compared to the policy.

Please see the Graduate School website and contact the department directly for more information.

Student Learning Outcomes

Program Learning Outcomes Upon completion of the master's of science degree, the student will be able to:

- use appropriate chemical engineering techniques, tools and methods to solve broadly defined engineering problems.
- critically analyze the literature and determine the state-of-the-art in a given research topic.
- use computational and/or experimental skills to solve an original research problem in the field of chemical engineering and critically analyze the results.
- demonstrate oral and written communication skills.