Chemistry
ACS Certified

Do you enjoy studying what some refer to as the "hard sciences"? Would you enjoy participating in scientific research and development projects? Is graduate study in a scientific field something you've often considered? If so, then a bachelor's degree in Chemistry (ACS certified) might warrant your consideration.

The Chemistry (ACS certified) degree prepares students to meet the minimum standards set forth by the Committee on Professional Training of the American Chemical Society.

The program for majors at the undergraduate level is designed for students planning professional careers in chemistry, biochemistry, and related fields. Many students prepare for work in areas outside pure chemistry, such as: biological sciences, medicine, dentistry, pharmacy, teaching, engineering, material science, pollution control, or ecology.

The Department of Chemistry is accredited by the American Chemical Society. Approval and periodic reviews of the department's capability to offer complete programs to prepare students for professional work in chemistry attest to the continuing academic soundness of the department's entire undergraduate program and to its ability to serve the diverse needs and interests of a generation in times of rapid change.

Skills and Competencies

As in most other fields, strong interpersonal communication and organizational skills are a must for any professional. Other valuable skills and competencies specific to the Chemistry-oriented professions are: analytical and data processing skills, theory development, research experiment experience, and the ability to remain objective when analyzing data.

Course Work

This degree includes the following courses as part of the program requirements, and specific major requirements along with general education courses and graduation requirements.

Chemistry

CH111 General Chemistry I (5 cr.)
CH112 General Chemistry II (5 cr.)
CH215 Chemistry of the Elements (4 cr.)
CH241 Chemical Equilibrium (3 cr.)
CH242 Quantitative Analysis (2 cr.)
CH315 Organic Chemistry I (3 cr.)
CH317 Organic Chemistry Lab I (1 cr.)
CH325 Organic Chemistry II (3 cr.)
CH327 Organic Chemistry Lab II (1 cr.)
CH341 Physical Chemistry I (4 cr.)
CH342 Physical Chemistry II (4 cr.)
CH415 Inorganic Chemistry (4 cr.)
CH435 Gas and Liquid Chromatography (2 cr.)
CH436 Modern Spectroscopy (3 cr.)
CH437 Atomic Spectrometry (1 cr.)
CH450 Biochemistry I (4 cr.)

Other Required Courses

MA 161 Calculus I (4 cr.)
MA163 Calculus II (4 cr.)
PH220 Introductory Physics I (5 cr.) *or*
PH201 College Physics I (5 cr.)
PH221 Introductory Physics II (5 cr.) *or*
PH202 College Physics II (5 cr.)

Minor (20–22 cr.)

Detailed course descriptions can be found at www.nmu.edu/bulletin.

Career Development

You should begin the resume-building process as soon as you can. The Academic and Career Advisement Center can assist you with career planning, while Career Services will help you fine tune your resume and look for jobs related to your field. In the meantime, the more hands-on experience you have, the better the chances are that you will find a job or undergraduate research. Becoming involved in a professional related internship is a way to develop your professional skills and gain experience. Your academic course work is important as well, so be sure to maintain a high grade point average.

Additional Considerations

In the meantime, the more hands-on experience you have, the better the chances are that you will find a job. Participating in a faculty-led research project is the best way to gain practical experience on campus. We have two research courses, CH 490 and CH 491, which allow you to earn college credit towards your degree while gaining hands-on experience. Becoming involved in a career-related internship is another way to develop your professional skills and gain experience. The department hires student workers for its chemical stockroom—another way one can gain practical experience and also earn money for school. There is an active student chemistry club which is involved in K-12 outreach activities as well as other career preparation events. Finally, your academic course work is important as well, so be sure to maintain a high GPA.

Job Outlook

Graduating Chemistry students can expect to find an average growth market awaiting them. The total number of jobs will grow at about a 6% rate. The starting salary in most fields will be $38,000 to $45,000. The median salary for experienced chemists is $80,000 and it is even higher with an advanced degree.

Potential Careers

NMU's Chemistry Program prepares students for employment in the following careers:

- Agricultural Scientist
- Biochemist
- Crime Lab Analyst
- Environmental Scientist
- Food Chemist
- Forensic Scientist
- Hydrologist
- Laboratory Analyst
- Mineralogist
- Occupational Safety Specialist
- Patent Expert
- Pathologist
- Petroleum Scientist
- Pharmaceutical Sale Representative
- Pharmacist
- Physician
- Polymer/Plastics Scientist
- Professor/Teacher (with certification)
- Toxicologist
- Toxicology
- Wastewater Treatment Engineer
- Writer/Editor

Additional Resources and Information

For Career Planning and Opportunities:
Academic & Career Advisement Center
3302.1 C.B. Hedgcock
906-227-2971
www.nmu.edu/acac

Chemistry Department
3301 New Science Facility
906-227-2911
www.nmu.edu/chemistry

For Job Search, Resume and Career Information:
Career Services
3302.3 C.B. Hedgcock
906-227-2800
www.nmu.edu/careers

For Information about NMU Student Organizations Associated with this Major Contact:
Center for Student Enrichment
1206 University Center
906-227-2439
www.nmu.edu/cse

Chemistry Club;
(on Facebook as "NMU Chemistry Club")

Internet Resource Links:
www.careers.org
www.bls.gov

For Career Information with National Organizations:
www.aibs.org -American Institute of Biological Sciences
www.acs.org -American Chemical Society

NORTHERN MICHIGAN UNIVERSITY
MARQUETTE, MICHIGAN

The Academic & Career Advisement Center
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What to do with a major in...

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