

ASSESSMENT REPORT 2014-2015

Chemistry Graduate

(Instructional Degree Program)

M.S.

(Degree Level)

Program Mission:

The goal of the chemistry Master of Science degree program is to adequately prepare the graduate to enter the work force at the level of a M.S. graduate. It also designed to prepare students for the rigors of a more advanced Ph.D. program of study. Course preparation and advisement are available for students who chose to enter a profession school to study for a career in an area such as medicine, veterinary science, dentistry, pharmacy, etc.

Student Learning Outcome 1:

NMHU Master of Science Chemistry graduates should have the command of a basic body of chemical knowledge that is competitive with any M.S.-level chemistry graduate from any quality U.S. University or institution.

NMHU Traits Specifically Linked to Student Learning Outcome 1

Mastery of Content Knowledge and Skills

Effective Communication Skills

First Means of Assessment for Outcome 1:

Thesis, oral exams, or similar chemistry discipline measurement devices will be given to determine how well the NMHU chemistry graduate student has assimilated the total body of chemical knowledge offered in the curriculum. The results of the examinations will provide the student a vehicle for a self-assessment and to help in formulating plans for further graduate study. The results of the examinations will assist the faculty in identifying areas of weakness in the curriculum. Courses may be modified, developed or dropped in response to the test results. Student outcomes are considered met if students obtain passing scores for thesis defense, oral exams, or similar discipline measurement devices.

Summary of Data:

Number of Students Meeting Criterion:	8	Number of Students Not Meeting Criterion:	0
Total Number of Students Assessed:	8	Percent of Students Meeting Criterion:	100%

Interpretation of Results for Outcome 1:

Success here indicates that students are matching expectations placed on them by the Master's program.

Student Learning Outcome 2:

NMHU Master of Science Chemistry graduates should be able to analyze and solve a chemical problem and suggest appropriate solutions to the problem that apply responsible and safe procedures. They should also have the ability and confidence to use appropriate chemistry-related instrumentation in the solution of chemical problems and be able to communicate by oral, written and electronic modes.

NMHU Traits Specifically Linked to Student Learning Outcome 2

Mastery of Content Knowledge and Skills

Effective Communication Skills

Effective Use of Technology

First Means of Assessment for Outcome 2:

Involvement of students in research projects allows the faculty to ascertain student achievement in the areas of work ethics, instrumentation usage, safety, problem solving, project completion abilities and the utilization of basic chemical knowledge. The chemistry Master of Science program requires the completion of a Master of Science thesis. Student outcomes are considered met if students satisfactorily complete a thesis research project and successfully defend the thesis. See data for outcome 1.

Summary of Data

Number of Students Meeting Criterion:	7	Number of Students Not Meeting Criterion:	1
Total Number of Students Assessed:	8	Percent of Students Meeting Criterion:	87.5%

Second Means of Assessment for Outcome 2:

Graduate students engaged in thesis research will be required to present their research results (in an "ongoing" fashion) at Departmental Research Seminars and at Professional meetings. Student outcomes are considered met if students satisfactorily present research results at Departmental Research Seminars and at Professional meetings.

Summary of Data:

Number of Students Meeting Criterion:		Number of Students Not Meeting Criterion:	
Total Number of Students Assessed:		Percent of Students Meeting Criterion:	%

Interpretation of Results for Outcome 2:

Once again, near complete success here indicates that the Master's program is successfully graduating students and producing students that are capable of meeting benchmarks of competency like the final defense.

Student Learning Outcome 3:

NMHU Master of Science Chemistry graduates should have the maturity and the work ethic to succeed in subsequent Ph.D.-level work, as a professional chemist, or in a related technical discipline.

NMHU Traits Specifically Linked to Student Learning Outcome 3

Mastery of Content Knowledge and Skills

Effective Communication Skills

Critical and Reflective Thinking Skills

First Means of Assessment for Outcome 3:

An exit evaluation which students will be asked to complete upon graduation from the program. We however do keep track of where graduates of the program go upon completion of the program. Student outcomes are considered met if graduates of the program go on to pursue advanced Ph.D. studies, or obtain employment in a chemistry-related or similar field.

Summary of Data

Number of Students Meeting Criterion:	4	Number of Students Not Meeting Criterion:	0
Total Number of Students Assessed:	4	Percent of Students Meeting Criterion:	100%

Interpretation of Results for Outcome 3:

The MS program is producing students capable of furthering their education in PhD programs or joining the workforce in this area.