



NORTHERN ILLINOIS UNIVERSITY

College of Liberal Arts and Sciences

Department of Chemistry and Biochemistry

Major: Chemistry

Degree: M.S.

Date Revised: 2016

Program Student Learning Outcomes and Assessment Methods

Student Learning Outcomes	Assessment Methods (Outcomes)
<p>1. Demonstrate proficiency in chemical sciences and conduct research that culminates in a thesis. In particular:</p> <ul style="list-style-type: none">a. All students will demonstrate knowledge proficiency at the 50th percentile composite norm level in general chemistry and two undergraduate chemical subject areas, with at least one subject area in the field of study.b. All students will clearly articulate and assemble evidence pertaining to questions or challenges in their primary field of study using appropriate inquiry-based methodologies and practices.c. All students will demonstrate an accurate understanding of their research, have a broad understanding of their primary field of study, and will evaluate or synthesize information related to questions or challenges. <p>2. Effectively engage undergraduate students as Teaching Assistants and consistently practice laboratory safety. In particular:</p> <ul style="list-style-type: none">a. All students will demonstrate comprehensive knowledge of the NIU Chemical Hygiene Plan, participate in lab safety training, and consistently practice and promote all safety policies in their assigned teaching and research laboratories.b. 90% of students will apply sound pedagogical practices as laboratory or recitation instructors and will be considered effective instructors by at least 70% of their assigned undergraduate students. <p>3. Communicate published research using clear and effective language. In particular:</p>	<ul style="list-style-type: none">• Standardized ACS Exam (1a)• Written Thesis or Project (1b)• Oral Comprehensive Exam (1c)• Oral Defense of Thesis or Project (1c)• Laboratory Instruction (2b)• CHEM 615 (3a)• CHEM 690 (4a)• Alumni survey and feedback (1-4)





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a. All students will be able to give a seminar in the primary field of study that organizes, accurately presents, and explains the significance of the published works of others.

4. **Demonstrate professional conduct and ethics:**

a. All students will know and apply the principles of ethical and professional conduct.

