MS in Chemistry

Departmental Mission:
The chemistry department contributes to Western Washington University’s mission by fostering lifelong learning in the chemical and biochemical sciences through exceptional classroom, laboratory, and research experiences. Students participating in our program will master content and develop critical thinking and communication skills that will help them be scientifically literate citizens and prepare them for professional careers as scientists, educators, and health professionals. Chemistry students, faculty and staff contribute to the scientific enterprise and broader community through outreach and a program of student-focused scholarship and research that strives to be the strongest of its kind in the nation.

Program Mission:
The mission of the Chemistry MS program is to provide a high quality postgraduate education, including rigorous and engaging course work, valuable teaching opportunities, and cutting edge research to prepare students for professional careers as scientists, educators, and health professionals.

Program Goals
1. provide training in the skills and practice of modern chemical/biochemical research
2. prepare students for a range of careers in the chemical/biochemical sciences
3. facilitate in depth learning within select areas of chemistry and biochemistry through both upper level coursework and project focused inquiry
4. provide training in student-centered pedagogy and meaningful teaching opportunities

Objectives
Graduates of the WWU Chemistry MS program will be able to:

a. critically evaluate the primary literature (Goals 1, 2, 3)
b. independently design, execute, and interpret the results of scientific experiments (Goals 1, 2, 3)
c. implement best safety practices in both teaching and research (Goals 1, 2, 4)
d. effectively communicate scientific concepts and results in both oral and written form to a discipline specific audience (Goals 1, 2)
e. understand and explain the societal impacts/benefits of their particular research area (Goals 1, 2, 3)
f. successfully engage in networking with peers in the field through interaction with seminar speakers and as attendees of professional meetings (Goal 1, 2, 3)
g. instruct undergraduate students using modern pedagogical approaches (Goal 4)
h. demonstrate a sophisticated understanding of their specific research area (Goal 1, 2, 3)
2015-2016 Evidence collection / Assessment plan
This plan primarily addresses program objective d, and secondarily addresses objectives a, b, e, and h.

Activities
Chemistry MS students give ~45 minute oral proposal presentations focused on providing a detailed introduction of their thesis topic and describing preliminary research results. Proposal seminars are typically given by MS students in their 3rd or 4th quarter of enrollment in the Chemistry MS program.

Evidence
Seminar evaluation forms will be completed by faculty and instructional staff in attendance. Evaluations will consist of numerical rankings of attributes such as seminar organization, clarity, student knowledge of subject, effectiveness of visual aids, student’s ability to answer questions, and the overall presentation quality. Written comments will also be collected.

Who and When
All tenure track faculty, non-tenure track faculty and instructional staff in attendance at seminars will complete evaluation forms during Fall 2015 and Winter 2016 and submit evaluations to the chemistry graduate program coordinator.

Data Analysis
The chemistry graduate program coordinator will collect evaluations and relay individual results to students and their faculty advisor. Students will discuss evaluations in an advising meeting with their thesis committees. After completion of the full data collection period, evaluation results from all students will be compiled by the graduate program coordinator and discussed by the chemistry department graduate committee.

Reporting / Feedback
The graduate committee will generate a report summarizing all seminar evaluation data and circulate the report to department faculty. As appropriate, the committee will provide specific recommendations for areas of improvement regarding oral presentation skills.