

Student Learning Outcomes for M.S. in Chemistry

1. Knowledge

Understanding and competency at the M.S. level in a specific area of chemistry is assessed by performance in: (1) course work (22-24 credit hours), (2) one 50 minute seminar for credit following practice in non-credit seminars, (3) completion of a research project that is far more extensive than the 8-6 credit hours required, (4) the final oral examination on the M.S. thesis, and usually (5) assigned duties as a graduate teaching assistant.

2. Skills

The ability to apply knowledge through critical thinking, inquiry, analysis, and communication is assessed by performance in (1) one 50 minute seminar for credit, (2) completion of a research project, (3) the final oral examination, and often (4) an oral or poster presentation at a scientific conference and/or being a co-author of a peer-reviewed scientific publication.

3. Attitudes

Awareness of professional responsibility (integrity, ethical behavior, ability to work with diverse groups of people) begins in the orientation program with the department head's welcome to our new graduate students and two sessions on being a scientist. Chemistry is an international science practiced by an international community. The chemistry graduate program automatically generates experience with diversity due to the desire and the necessity to have many international students to meet our research and teaching obligations. The activities listed in the sections on knowledge and skills take place in a quite

diverse environment.