Learning Goals for Graduate Programs in Chemistry

**PhD graduates will be able to:**

1. Demonstrate an advanced undergraduate-level understanding of inorganic, organic, and physical chemistry and an in-depth knowledge of one or more subareas of chemistry.

2. Search and read the literature of their subarea of chemistry in a thorough and critical fashion.

3. Formulate an original research hypothesis based on the relevant literature and propose a research plan to address the hypothesis.

4. Communicate fundamental knowledge of their field of research, as well as details of their own research, in both written and oral form, to expert and non-expert audiences.

5. Teach chemistry effectively, for those interested in teaching careers.

6. Attain research expertise and complete a significant body of original research that advances a specific field of chemistry.

7. Recognize and practice ethical behavior in the sciences.

8. Be competitive for appropriate positions in industry and academia (e.g., research scientist and postdoctoral fellow).

**MS graduates will be able to:**

1. Demonstrate an advanced undergraduate-level understanding of inorganic, organic, and physical chemistry and a graduate-level understanding of one or more subareas of chemistry.

2. Search and read the literature of their subarea of chemistry.

3. Communicate scientific results in both written and oral form.

4. Perform research using technical and problem solving skills to contribute to their field.

5. Recognize and practice ethical behavior in the sciences.

6. Be competitive for appropriate positions in industry and high school education.
MA graduates will be able to:

1. Demonstrate an advanced undergraduate-level understanding of inorganic, organic, and physical chemistry and a graduate-level understanding of one or more subareas of chemistry.

2. Search and read the literature of their subarea of chemistry.

3. Recognize and practice ethical behavior in the sciences.

4. Be competitive for appropriate positions in industry and high school education.