

CHE 6680: Special Topics in Inorganic Chemistry
Structure Determination by X-ray Diffraction
Spring, 2016

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COURSE DESCRIPTION

The purpose of this course is to help you gain a theoretical and practical understanding of the various aspects of Single Crystal X-ray Structure Determination. The course will cover theories and techniques of X-ray Diffraction, Symmetry, Intensity data collection, Structure determination and Refinement, and Molecular graphics.

Class will meet twice a week. One meeting we will cover theories and principles of X-ray Diffraction and X-ray Structure Determination. During the second meeting you will learn the practical part of Crystallography by carrying out a full crystal structure determination project. This time around we will place more emphasis on the practical parts through more hands on projects.

Each student will work on at least one crystal structure project, from start to finish. Search the Cambridge Structural Database for similar structures. Write a short regular format manuscript for publication in *Acta Crystallographica E*.

GRADING

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| Your participation in class | 10 % |
| Homework | 10 % |
| Progress in project | 10% |
| One exam (midterm) | 40 % |
| Manuscript | 30 % |