

CHEM 2C

Catalog Description:

This freshman honors class addresses the very heart of chemistry – what brings atoms together to form molecules and solids. What are the deciding factors with regard to the structure and stabilities of molecules and solids. Specific examples in the descriptive chemistry of main group and transition elements will be presented as well. The text of Atkins and Jones will be closely adhered to.

Target audience:

Honors students with a B or higher grade in 2A.

Textbook (required):

Chemical Principles – The Quest for Insight, Peter Atkins and Loretta Jones, 4e. W. H. Freeman, New York. We will cover chapters 1, 2, 3, 14, 15, & 16.

Instructor:

Ram Seshadri, Professor of Materials, and Chemistry and Biochemistry
MRL Rm 3008, x6129, seshadri@mrl.ucsb.edu

Course Website:

<http://www.mrl.ucsb.edu/~seshadri/teach.html>

Grading:

5 best from 6 assignments (25%) (this number may vary), midterms 1&2 (2×20%), final (35%).

Outline:

1. Chapter 1 Atoms, The Quantum World
2. Chapter 2 Chemical Bonds
3. Chapter 3 Molecular Shape and Structure
4. Chapter 14 The Elements: The First Four Main Groups
5. Chapter 15 The Elements: The Last Four Main Groups
6. Chapter 16 The d-Block: Metals in Transition