Bemidji State University

CHEM 3811: Intermediate Inorganic Chemistry

A. COURSE DESCRIPTION

Credits: 3
Lecture Hours/Week: 0
Lab Hours/Week: 0
OJT Hours/Week: *
Prerequisites: None
Corequisites: None
MnTC Goals: None

Theoretical approach to the principles of inorganic chemistry. Integration of theory and descriptive chemistry. Corequisite: CHEM 2212.

B. COURSE EFFECTIVE DATES: 07/31/2023 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Atoms & Electronic Structure
2. Covalent Bonding and Molecular Orbital Theory
3. Acid/Base Chemistry
4. Solids and Solid State Chemistry
5. Transition Metal Complexes and Coordination Chemistry
6. Oxidation-Reduction Chemistry
7. Symmetry
8. Main Group and Descriptive Chemistry

D. LEARNING OUTCOMES (General)

1. interpret how the physical and chemical properties of matter are dictated by the internal structures of the component atoms.
2. compare and contrast the different theories used to describe bonding in compounds, and use these theories to justify properties of the compounds.
3. infer how the geometric structures of compounds can influence their chemical and physical behaviors.
4. categorize the different reactions involved in the changes of matter leading to new physical and chemical properties.
5. interpret the energy changes that occur in chemical reactions at the molecular and macroscopic scales.
6. construct diagrams to explain chemical and physical properties at the particulate and macroscopic levels.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus
G. SPECIAL INFORMATION

None noted