

# MESABI RANGE COLLEGE

## Course Outline

Course Title: Fundamentals of Chemistry  
Semester Course Prefix and Number: CHEM 1511  
Old Quarter Course Prefix and Number: CHEM 101

Submitted By: Jason Slattery  
Approval Date:  
Revision Date: February 2016

Number of Credits: 4  
Semester(s) Offered:  
Class Size: 40/lecture  
20/lab

Number of Lecture Credits: 3  
Number of Lab Credits: 1 Number of Lab Hours: 2  
Number of Studio/Demonstration/Internship Credits:

Negotiated by AASC on:  
(date)

### Course Purpose Code:

- 0 – Developmental Courses
- 1 – Non-transferable
- 2 – Technical course related to career programs
- 3 – College course which has the primary goal of applying certain concepts (e.g. vocal ensemble)
- 4 – Other college course not considered a part of MNTC (e.g. computer science, health, physical education)
- 5 – Course which is intended to fulfill the Minnesota Transfer Curriculum (MNTC) requirements or intended for transfer.
- 9 – Continuing Education/Customized Training specialized credit course (not occurring in 0-5)

### Catalog Description:

This course is a presentation of the principles of inorganic chemistry, amplified with relevant applications. Atomic structure, periodic classification of the elements, chemical bonding, matter and energy changes, solutions, electronic structure, equilibrium, and acid-base theory are among the topics covered. This course is designed for students who are not science majors. This course is recommended for elementary education, various allied health field majors and as a preparation for CHEM 1522.

### Prerequisites and/or recommended entry skills/knowledge:

Course Prerequisite(s): None  
Reading Prerequisite: None  
Composition Prerequisite: None  
Mathematics Prerequisite: Placement by CPT score or grade of C or better in [MATH 0095](#)

### Career Programs and Transfer Majors Accessing this Course:

All Science Majors

### Minnesota Transfer Curriculum Goal(s) partially met by this course if applicable:

(Notes: No more than two goals may be met by any one course. AASC review and the Chief Academic Officer's approval are required.)

- |  |  |
|--|--|
| 0. <input type="checkbox"/> None   | 6. <input type="checkbox"/> The Humanities and Fine Arts     |
| 1. <input type="checkbox"/> Communications                                 | 7. <input type="checkbox"/> Human Diversity                  |
| 2. <input type="checkbox"/> Critical Thinking                              | 8. <input type="checkbox"/> Global Perspectives              |
| 3. <input checked="" type="checkbox"/> Natural Sciences                    | 9. <input type="checkbox"/> Ethical and Civic Responsibility |
| 4. <input type="checkbox"/> Mathematical/Logical Reasoning                 | 10. <input type="checkbox"/> People and the Environment      |
| 5. <input type="checkbox"/> History and the Social and Behavioral Sciences |  |

**Learning Outcomes:** (including any relevant competencies listed in the Minnesota Transfer Curriculum)

Upon completion of this course, the student will be able to:

- Demonstrate understanding of scientific theories
- Critically analyze and solve problems with multiple steps
- Formulate and test hypotheses by performing laboratory experiments
- Communicate their experimental findings, analyses, and interpretations in writing

**Student Assessment Methods:**

- End of chapter homework problems
- Quiz and exam problems
- Laboratory reports

**Use of Instructional Technology:** (includes software, interactive video and other instructional technologies):

NA

**Additional Special Information:** (special fees, directives on hazardous materials, etc.)

**Transfer Information:** (Please list colleges/majors that accept this course in transfer.)

**Affiliated Mesabi Range College Courses and Programs:**

**Approvals:**

Body	Representative Signatures	Date
Faculty Association		
Academic Affairs Standards Committee		
Chief Academic Officer		

**Distribution:** Original – Instructional Services  
**Copies:** Transfer Specialist, Originating Faculty Member, Records  
**Revised:** December 2012