

# MESABI RANGE COLLEGE

## Course Outline

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Course Title: Physical Science  
Semester Course Prefix and Number: PHYS 1541  
Old Quarter Course Prefix and Number: NA

Submitted By: Jason Slattery  
Approval Date:  
Revision Date: January 2017

Number of Credits: 4  
Semester(s) Offered:  
Class Size: 48/lecture  
24/lab  
Negotiated by AASC on:  
(date)

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

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### 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 will cover four areas of physical science: physics, chemistry, atmospheric science, and geology. The physics portion will cover measurements, motion, forces, energy, heat, and electricity and magnetism. The chemistry portion will cover chemical bonding, chemical reactions, and gases. The atmospheric science portion will cover Earth's atmosphere and its dynamics. The geology portion will cover surface processes, plate tectonics, minerals, and rocks.

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

Course Prerequisite(s): None  
Reading Prerequisite: None  
Composition Prerequisite: None  
Mathematics Prerequisite: MATH 0095, CPT Placement, or instructor's consent

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

Any

### 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.)

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|--|--|
| 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 checked="" 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 an understanding of scientific theories that pertain to physical science
- Evaluate societal issues from a natural science prospective
- Communicate their experimental findings by performing hands-on and/or online labs

**Student Assessment Methods:**

Homework assignments  
Labs  
Exams

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

PowerPoint and Internet: D2L, articles, interactives, animations, simulations

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

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

Bemidji State University (SCI 1110), Winona State University(CHEM 204), Ridgewater College (SCI 0105), and Lake Superior College (PHYS 1105).

**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