

COURSE SYLLABUS

EDEL 1440 Physical Science in the Elementary School

COURSE INFORMATION

- EDEL 1440
- Physical Science in the Elementary School
- 1.0 credit hour
- Spring 2013

INSTRUCTOR INFORMATION

- Instructor: Tina Christinck
- Office Location: Off-campus
- Email: tchristinck@ewcmail.wy.edu
- Phone: 307-331-8045
- Office Hours: By appointment

COURSE CONTENT INFORMATION

- **Catalog Description:** Covers selection of basic physical science concepts, materials, and curricula appropriate for elementary school. This course parallels the content in PHYS 1090 and previous or concurrent enrollment in a physics or chemistry course is ideal but not required.
- **Course Rationale:** EDEL 1440 will be a link between a college physical science course and what the prospective teacher will teach elementary students about physical science. This course will give direction to the prospective teacher on how to organize and conduct meaningful science experiences for elementary students.

Course objectives:

- To help pre-service and current elementary teachers gain confidence in their ability to teach science effectively and use scientific processes themselves.
- To help pre-service and current elementary teachers recognize common student misconceptions about physical science and help students gain a more accurate understanding of scientific concepts.
- To assist pre-service teachers in experiencing the effectiveness of the inquiry model of teaching.
- To introduce a variety of activities from various resources/curricula that may be useful in teaching physical sciences at elementary grade levels.
- To promote project-based and inquiry learning in science education.

Resources to be used include:

- Textbook: **No textbook purchase required.** Instructor will provide course materials.
- Lancernet: <http://prod.campuscruiser.com/ewc>
- EWC Library Catalog and Databases: https://prod.campuscruiser.com/PageServlet?pg=offices_welcome&tg=OfficeWelcome&cx=22.327-51.2946

Username: ewclibrary

Password: Lib123\$

Course schedule:

*This is a tentative outline for topics and due dates for the course. This schedule is subject to change, and you will be notified if it does change.

Unit and Dates	Topics Covered	Assignments Due:
Unit 1 January 15 – January 23	Wyoming Science Standards Famous Physical Scientists	Assignment 1 due: Wednesday 1/23 at 10pm Discussion 1 due: Wednesday 1/23 at 10pm
Unit 2 January 23 – January 30	Measurement	Assignment 2 due: Wednesday 1/30 at 10pm Discussion 2 due: Wednesday 1/30 at 10pm
Unit 3 January 30 – February 13	Roller Coasters and Falling Objects Article Review	Assignment 3 due: Wednesday 2/6 at 10pm Discussion 3 due: Wednesday 2/13 at 10pm Article Review due: Friday 2/15 at 10pm
February 14 and 15	Winter Break	No Classes
Unit 4 February 14 – February 22	States of Matter and Chemical Changes	Assignment 4 due: Monday 2/25 at 10pm Discussion 4 due: Monday 2/25 at 10pm
Unit 5 February 22 – March 1	Simple Machines and Magnets	Assignment 5 due: Monday March 4 at 10pm Discussion 5 due: Monday March 4 at 10pm
Final: March 1 – March 13	Book Review and Science Toolbox	Final Assignment due: Wednesday March 15 at 10pm

COURSE EXPECTATIONS

- Evaluation criteria

Unit Assignment: Each Unit assignment will be administered on LancerNet. Often you will complete an experiment and following the experiment you will complete a review of the experiment. To access these assignments click on the “My Course Content” tool and then open the folder for the Unit you are working on. These assignments MUST be submitted electronically. The due dates for these assignments are available in the syllabus and the course schedule. Each of these assignments is worth 20 points. **Please remember that 1 point will be deducted for each spelling and grammar error in these assignments!**

Unit Discussions: Each Unit will have a discussion topic in the course Message Board that you will need to make contributions to. You will need to make 1 original contribution to each discussion. This original contribution should be a reply to the question posted by the instructor. You also need to make 2 other contributions which should be a reply to another student’s post each week. The focus of each Unit's discussion will be common student misconceptions about the topic covered for the Unit.

Take a look at the message board to see the beginning and end dates for each discussion. **Each discussion is worth 10 pts. Points will be deducted for spelling errors and poor grammar!**

Article Review: Students will find an article from a primary literature source that relates to recognizing and/or understanding the elementary student's misconceptions about physical science. The student will submit a copy of the article as well as a 1-2 page article review which includes a summary of the pertinent information from the article as well as the student's reaction to what they have learned in the article. **This assignment will be worth 50 points.**

Final Book Review and Science Toolbox Assignment This will be your final “exam” for the course and will be due on Wednesday March 15th at 10pm. This assignment will be worth a total of 70 points.

• **Grading Scale and Criteria**

- 5 Unit Assignments @ 20 points each for a total of 100 points
- 5 Unit Discussions @ 10 points each for a total of 50 points
- 1 Article review @ 30 points
- 1 Final Book Review/Science Toolbox 70 points
- Total Course Points = 250 points
- **A standard grading scale will be used so:**
 - A = 90-100% or 225-250 points**
 - B = 80-89.4% or 200-224 points**
 - C = 70-79.4% or 175-199 points**
 - D = 60-69.4% or 150-174 points**
 - F = Below 60% or Below 150 points**

Policies and Expectations

- Exhibit positive attitudes towards science and the topics that lie within the course.
- Proper grammar and spelling count on all assignments, including discussions. **When you become a teacher you will need to model proper grammar and spelling to students, so now is the time to start practicing! Points will be deducted from your grade for spelling and grammar mistakes.**
- Late work will **NOT** be accepted in this course.
- Any form of academic dishonesty will NOT be tolerated. This includes cheating on quizzes or assignments and plagiarism. Plagiarism is copying or using the ideas of another individual without giving that individual proper credit. This does include copying work from other students. If it is obvious that a student has violated any of the above, all students involved will receive 0 credit for the assignment or the quiz. The matter may also be submitted to the Dean of Students for further action.
- Carefully read and follow any safety procedures for the activities you will complete.

GENERAL EDUCATION REQUIREMENTS

Communication Skills: Graduates will be able to understand and communicate ideas and information in written and spoken English that reveals a mastery of terminology appropriate to their disciplines.

Analytical and Quantitative Reasoning: Graduates will be able to solve problems through critical thinking involving analytical and quantitative reasoning at a level appropriate to their disciplines.

Technology Skills: Graduates will be able to demonstrate competence using technology appropriate to their disciplines.

Social Awareness: Graduates will be able to demonstrate an awareness of the relationship between the individual and the world.

Information Literacy: Graduates will be able to locate, evaluate, and use information effectively.

ACCOMMODATION STATEMENT

ADA Accommodations:

Eastern Wyoming College is committed to providing reasonable accommodations for qualified individuals with disabilities. If a student has a disability and desires a reasonable accommodation for such disability, the student should contact Mrs. Debra Ochsner (532-8238) or Mr. Tom McDowell (532-8330) as soon as possible so that arrangements may be made.

DISCLAIMER STATEMENT

Information contained in this syllabus is, to the best knowledge of the instructor, correct and complete when distributed for use at the beginning of the course. However, this syllabus should not be considered a contract between Eastern Wyoming College and the student. The instructor reserves the right, acting within the policies and procedures of EWC, to make changes in course materials and course schedules.