

Washtenaw Community College Comprehensive Report

PHY 100 Physics for Elementary Teachers Effective Term: Winter 2019

Course Cover

Division: Math, Science and Engineering Tech

Department: Physical Sciences

Discipline: Physics

Course Number: 100

Org Number: 12340

Full Course Title: Physics for Elementary Teachers

Transcript Title: Physics for Elementary Teacher

Is Consultation with other department(s) required: No

Publish in the Following: College Catalog , Time Schedule , Web Page

Reason for Submission: Three Year Review / Assessment Report

Change Information:

Consultation with all departments affected by this course is required.

Outcomes/Assessment

Rationale: After completion of Course Assessment, master syllabus will be updated

Proposed Start Semester: Fall 2018

Course Description: In this course, students study the basic laws governing the physical universe. This course helps prospective educators learn to explain everyday physical phenomena in elementary terms. Prospective educators will also learn to select materials and provide instruction for hands-on activities that help students construct a picture of our physical universe.

Course Credit Hours

Variable hours: No

Credits: 4

Lecture Hours: Instructor: 60 Student: 60

Lab: Instructor: 30 Student: 30

Clinical: Instructor: 0 Student: 0

Total Contact Hours: Instructor: 90 Student: 90

Repeatable for Credit: NO

Grading Methods: Letter Grades

Audit

Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

College-Level Math

No Level Required

Requisites

General Education

MACRAO

MACRAO Science & Math

MACRAO Sci & Math Elementary Education

MACRAO Lab Science Course

General Education Area 4 - Natural Science

Assoc in Applied Sci - Area 4
Assoc in Science - Area 4
Assoc in Arts - Area 4
for Elementary and Early Childhood
Michigan Transfer Agreement - MTA
MTA Lab Science

Request Course Transfer

Proposed For:

Eastern Michigan University
Michigan State University
University of Michigan
Wayne State University

Student Learning Outcomes

1. Identify major components of mechanics, heat, sound, electricity and magnetism.

Assessment 1

Assessment Tool: Department exam
Assessment Date: Fall 2018
Assessment Cycle: Every Three Years
Course section(s)/other population: All
Number students to be assessed: All
How the assessment will be scored: Answer key
Standard of success to be used for this assessment: 80% of students will score 70% or higher
Who will score and analyze the data: Departmental faculty

2. Develop and teach a lesson plan for elementary age children based on one of the principles of physics.

Assessment 1

Assessment Tool: Lesson plan
Assessment Date: Fall 2018
Assessment Cycle: Every Three Years
Course section(s)/other population: All
Number students to be assessed: All
How the assessment will be scored: Departmentally-developed rubric
Standard of success to be used for this assessment: 70% of students will score 70% or higher
Who will score and analyze the data: Departmental faculty

Course Objectives

1. Identify the components of mechanics: motion, energy, rotational motion, states of matter and fluid motion.
2. Identify the components of heat: temperature scales and heat transfer.
3. Identify the components of waves: types and sound propagation.
4. Identify the components of electricity: static charge and basic circuitry.
5. Identify transformers and sources of magnetism.
6. Identify principles of physics appropriate for elementary age children.
7. Develop teaching of physics strategies for elementary students.
8. Demonstrate age-appropriate teaching lesson plans.

New Resources for Course

Course Textbooks/Resources

Textbooks

Paul Hewitt. *Conceptual Physics*, 10th ed. San Fransico: Addison-Wesley, 2006, ISBN: 9780805391909.

Manuals

Periodicals

Software

Equipment/Facilities

Level III classroom

<u>Reviewer</u>	<u>Action</u>	<u>Date</u>
Faculty Preparer: <i>Robert Hagood</i>	<i>Faculty Preparer</i>	<i>Apr 25, 2018</i>
Department Chair/Area Director: <i>Kathleen Butcher</i>	<i>Recommend Approval</i>	<i>May 24, 2018</i>
Dean: <i>Kristin Good</i>	<i>Recommend Approval</i>	<i>May 26, 2018</i>
Curriculum Committee Chair: <i>Lisa Veasey</i>	<i>Recommend Approval</i>	<i>Oct 29, 2018</i>
Assessment Committee Chair: <i>Shawn Deron</i>	<i>Recommend Approval</i>	<i>Oct 30, 2018</i>
Vice President for Instruction: <i>Kimberly Hurns</i>	<i>Approve</i>	<i>Nov 02, 2018</i>