Master Course Guideline Syllabus – PHY 2460

I. College/School: College of Science and Mathematics
   Department: Physics

II. Course Information
   Course Title: Concepts in Physics for Middle Childhood Education
   Course Abbreviation and Number: PHY2460
   Course Credit Hours: 3.5
   Course Cross Listing(s) Abbreviation and Number:
   Check ("x") all applicable:
   General Education Course__X__ Writing Intensive Course_____ Service Learning
   Course_____ Laboratory Course__X__ Ohio TAG (Transfer Assurance Guide) Course _____
   Ohio Transfer Module Course_____ Others (specify)_____

III. Course Registration
   Prerequisites: MTH 1260 or Math placement level 4
   Corequisites:
   Restrictions:
   Other: Students may use either PHY 2450 or PHY 2460, but not both courses to satisfy
   the requirements of the Wright State Core.

IV. Student Learning Outcomes
   Basic concepts and everyday applications of physics topics including motion, forces and energy.
   Topics are integrated with Mathematics.
   The Wright State Core Element 6 learning outcomes also apply:
   a. Understand the nature of scientific inquiry
   b. Critically apply knowledge of scientific theory and methods of inquiry to evaluate information from a variety
      of sources
   c. Distinguish between science and technology and recognize their roles in society
   d. Demonstrate an awareness of theoretical, practical, creative and cultural dimensions of scientific inquiry
   e. Discuss fundamental theories underlying modern science

V. Suggested Course Materials (required and recommended)
   2460 Laboratory Manual by Basista, Howell or Physics by Inquiry by Lillian McDermott

VI. Suggested Method of Instruction
   Integrated Lecture/Lab.

VII. Suggested Evaluation and Policy
   Tests__50__, Homework__20__, Quizzes___, In-Class Writing___, Out-of-Class
   Writing___, Journals/notebooks____, Individual/Group Projects__20__, Attendance
   Policy _____.

VIII. Suggested Grading Policy
A final course letter grade is earned based on a percent of the total evaluated work per course policy.

IX. Suggested Assignments and Course Outline

- Week 1,2  Basics of Scientific Investigations, Describing Motion
- Week 3  Representing Motion; Student investigation project 1 (suggested)
- Week 4  Gravitational Acceleration
- Week 5  Projectile Motion
- Week 6,7  Newton’s Laws; Student investigation project 2 (suggested)
- Week 8,9  Forces at an Angle
- Week 10  Circular Motion
- Week 11  Work
- Week 12,13  Potential Energy, Energy Transfers
- Week 14  Conservation of Energy

X. Other Information

None

This is a sample course syllabus guideline. Course materials, method of instruction, evaluation and policy, grading policy, assignments, and other course matters can differ by specific course sections and individual professors. Additional information can be obtained by contacting the appropriate college and department.

Approved:
Undergraduate Curriculum and Academic Policy Committee ______________________
Faculty Senate ____________________________                             