



**CURRICULUM COMMITTEE
ACADEMIC YEAR 2013-2014**

NEW COURSE PROPOSAL FORM

ACADEMIC AREA:	SCHOOL OF PURE AND APPLIED SCIENCES
PROGRAM:	ALL DEGREES
PROPOSED BY:	MARIUS COMAN
PRESENTER:	MARIUS COMAN
SUBMISSION DATE:	9/23/2013
COURSE PREFIX, NUMBER AND TITLE:	PHY1007L, PHYSICS FOR THE HEALTH SCIENCES LABORATORY

SECTION I

<u>COURSE INFORMATION:</u>	<u>TYPE IN THE APPROPRIATE INFORMATION FOR EACH ITEM:</u>
DEPARTMENT	SCIENCES
COURSE PREREQUISITE(S):	MAT 1033 with a minimum grade of "C"
DO YOU ANTICIPATE THAT STUDENTS WILL BE TAKING ANY OF THE PREREQUISITES LISTED FOR THIS COURSE IN DIFFERENT PARTS OF THE SAME TERM?	NO
MINIMUM GRADE OF PREREQUISITE(S):	C
COURSE COREQUISITE(S):	PHY 1007
IS ANY COREQUISITE LISTED ON THIS COURSE LISTED AS A COREQUISITE ON ITS PAIRED COURSE? EXAMPLE: CHM 2032 IS A COREQUISITE FOR CHM 2032L AND CHM 2032L IS A COREQUISITE FOR CHM 2032.	YES
COURSE CREDITS OR CLOCK HOURS:	1

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CREDIT TYPE:	COLLEGE CREDIT (TRANSFERABLE)
CONTACT HOURS:	2
<p>COURSE DESCRIPTION: This laboratory course accompanies PHY1007 and is a one-semester course for students in the health sciences who need a background in physics which is broad in scope and stresses applications in the health field. The course is designed to enhance the learning of physical concepts through a hands-on approach, emphasizing inquiry and problem solving in laboratory investigations.</p>	
<p>Type your course description as you would like it to appear in the catalog and syllabus.</p>	
GENERAL TOPIC OUTLINE:	
<ul style="list-style-type: none"> • Graphing • Ratios • Motion • Free Fall • The Pendulum • Centripetal Force/ Friction • Hooke's Law (elasticity) • Rotational Equilibrium • Work and Power • Archimedes' Principle • Thermometer Fixed Points • Specific Heat • Ohm's Law • Electromagnets • Speed of Sound in Air • Reflection and Refraction • Nuclear Radiation/Attenuation 	

LEARNING OUTCOMES:

TYPE IN ALL OF THE LEARNING OUTCOMES, ASSESSMENTS AND GEN ED COMPETENCIES AS THEY SHOULD BE DISPLAYED IN THE SYLLABUS

LEARNING OUTCOMES	ASSESSMENTS	GENERAL EDUCATION COMPETENCIES
<ul style="list-style-type: none"> • Visualize the relationship between physical variables, analyze experimental data, and make predictions based on observations and experimental data. • Investigate how measurement data are simplified, identify trends in the experimental data and generalize. 	Lab reports, exams and/or projects	
<ul style="list-style-type: none"> • Describe and analyze motion, visualize the relationship between distance and time, distinguish between motion with uniform velocity and non-uniform 	Lab reports, exams and/or projects	COM

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<ul style="list-style-type: none"> Describe and analyze motion with constant acceleration. Visualize the relationship between velocity and use it to predict the motion of falling objects. 	Lab reports, exams and/or projects	TIM
<ul style="list-style-type: none"> Investigate the force necessary to keep an object moving in a constant circular path. Determine the magnitude of the centripetal force required to keep an object in a circular path. 	Lab reports, exams and/or projects	
<ul style="list-style-type: none"> Verify and investigate Hooke's Law, and determine the spring constant for various elastic systems. 	Lab reports, exams and/or projects	QR
<ul style="list-style-type: none"> Explain mechanical rotational equilibrium, applying Newton's laws to rotational motion and to rigid bodies. Analyze and investigate the concepts of work and energy and the rate at which work is done. Distinguish between "density" and "specific gravity"; apply Archimedes' principle in determining these properties for solid samples. Investigate and summarize the relationship between the temperature on the Fahrenheit scale and the temperature on the Celsius scale. Investigate and identify thermal properties and processes, and determine experimentally the values of certain heat constants for various metals and liquids. 	Lab reports, exams and/or projects	
<ul style="list-style-type: none"> Investigate the proportionality relationship between voltage and electric current, visualize the relationship by plotting graphs, and compute the electrical resistance from the slope of a graph. 	Lab reports, exams and/or projects	
<ul style="list-style-type: none"> Distinguish between the concepts of "node," "antinode," and "resonance" by investigating the properties of waves and their interaction with matter; calculate the speed of a wave. 	Lab reports, exams and/or projects	CT

SECTION II (MUST COMPLETE EACH ITEM BELOW)

ICS CODE FOR THIS COURSE:	ADVANCED AND PROFESSIONAL - 1.11.19 - PHYSICAL SCIENCES
IF YOU INTEND TO RESTRICT STUDENT REGISTRATION BASED ON THE STUDENTS' MAJOR(S), ENTER ALL APPLICABLE MAJOR RESTRICTION CODE(S)—ENTER "NA" OR MAJOR CODE(S):	CLICK HERE TO ENTER TEXT

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GRADE MODE:	STANDARD GRADING
IS THIS AN "INTERNATIONAL OR DIVERSITY FOCUS" COURSE?	NO
IS THIS A GENERAL EDUCATION COURSE?	NO
IS THIS A WRITING INTENSIVE COURSE?	NO
IS THIS AN HONORS COURSE?	NO
IS THIS A REPEATABLE* COURSE? (A repeatable course may be taken more than one time for additional credits. For example, MUT 2641, a 3-credit hour course, can be repeated 1 time and a student can earn a maximum of 6 credits.) *not the same as Multiple Attempts or Grade Forgiveness	NO
IF "YES", WHAT IS THE MAXIMUM NUMBER OF CREDITS A STUDENT CAN EARN FOR THIS COURSE? IF "NO", ENTER "NA".	TYPE NUMBER HERE
DO YOU EXPECT TO OFFER THIS COURSE THREE TIMES OR LESS (EXPERIMENTAL)?	NO
WILL THIS COURSE HAVE AN IMPACT ON OTHER COURSES, PROGRAMS, DEPARTMENTS, OR BUDGETS?	YES
IF "YES," PLEASE EXPLAIN OR SUBMIT COMMENTS (ENTER "NA" OR COMMENTS):	There is a budgetary impact in the sense that the course is a 1-cr course but faculty will carry a two-hour load. The VPAA's office is supporting this. This class is required for programs in the Health Sciences and the proposal is supported by Dr. Marie Collins.
IF "YES," HAVE YOU DISCUSSED THIS PROPOSAL WITH ANYONE (FROM OTHER DEPARTMENTS, PROGRAMS, OR OTHER INSTITUTIONS) REGARDING THE IMPACT? WERE ANY AGREEMENTS MADE (ENTER "NA" OR COMMENTS)?	YES, WITH OTHER PHYSICS PROFESSORS, WE ARE IN AGREEMENT.

SECTION III (MUST COMPLETE EACH ITEM BELOW)

PROVIDE JUSTIFICATION FOR EACH CHANGE ON THIS PROPOSED CURRICULUM ACTION (OTHER EXPLANATORY INFORMATION)—ENTER "NA" OR TEXT:

THIS COURSE IS REQUIRED FOR PROGRAMS IN THE HEALTH SCIENCES. IF APPROVED PHY 1007L CAN BE USED WITH PHY 1007 TO MEET THE AA SCIENCE REQUIREMENT.

NOTE: Changes for the Fall 2014 Term must be submitted by the January 2014 deadline and approved no later than the February 2014 Curriculum Committee meeting prior to the start of the next academic year. Changes during mid-school year are NOT permitted. Extreme circumstances will require approval from the appropriate dean as well as the Vice President, Academic Affairs to begin in either the spring or summer term.

TERM IN WHICH PROPOSED ACTION WILL TAKE PLACE:

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SELECT EFFECTIVE TERM

SPRING 2014

ORDER OF APPROVAL FOR EXCEPTIONS IS AS FOLLOWS:

SIGNATURE #1 NEEDED FOR EFFECTIVE TERM EXCEPTION:

X Theo Koupelis
DISTRICT DEAN OF INSTRUCTION

SIGNATURE #2 NEEDED FOR EFFECTIVE TERM EXCEPTION:

X David H. Wright
VICE PRESIDENT OF ACADEMIC AFFAIRS

FACULTY ENDORSEMENTS:

PLEASE SEPARATE FACULTY MEMBERS WITH A COMMA (,)

MARIUS COMAN, ROB CUTLER, GEORGE MANACHERIL

DEPARTMENT CHAIR / PROGRAM COORDINATOR ENDORSEMENT:

Christina Ottman

10/2/2013

DEAN ENDORSEMENT:

THEO KOUPELIS

10/4/2013

DEANS' COUNCIL REVIEW – VERIFIED BY:

Mary R. Myers 10/15/13

PLEASE SELECT TODAY'S DATE

FOR CURRICULUM COMMITTEE MEETING DATE:

NOVEMBER 22, 2013

Completed curriculum proposals must be uploaded to the dropbox by the deadline. Please refer to the *Curriculum Committee Critical Dates for Submission for Proposals* document available in the document manager in the MyEdisonState Portal:

- Document Manager
- VP Academic Affairs
- Curriculum Process Documents