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Received(time)	1:36 PM
Date	5/18/2006

**Ohio Articulation Number (OAN)
Course Submission Form
2005-2006**



College/University Lorain County Community College

Course(s) Submitted(Title & Course #) General Physics II PHYC 152 E for
Ohio Articulation Number OSC015

Date April 25, 2006 Course 1 of a 1 Course OAN mapping.

Name and title of individual submitting on behalf of the college/university

Name Rosemary Schestag Title Project Manager

Address 1005 Abbe Road N, CC219
Elyria, OH 44035

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Phone 440-366-7412

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Credit Hours 5 qtr _____ sem X

Lecture Hours 4

Laboratory Hours 3 (if applicable)

Pre-Requisites(s) Course work (if applicable)

PHYC 151 (General Physics I).

Placement Score (if applicable)

(Name of test) _____

(Domain) _____ (Score) _____

Catalog/Course Description (Includes Course Title and Course #)

<p>General Physics II PHYC 152 - Waves; sound; optics; electricity and magnetism; modern physics. Laboratory required. (A special fee will be assessed.) <i>Prerequisite: PHYC 151(General Physics I).</i></p>
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Texts/Outside Readings/Ancillary Materials

REQUIRED TEXTBOOK(S)/MATERIAL(S):

College Physics, 5th edition, by Wilson
General Physics 152 Lab Manual, by Johnson

OTHER RESOURCES INCLUDING EQUIPMENT AND SOFTWARE:

Scientific calculators

LIBRARY AND LEARNING RESOURCES: *All students are expected to fully utilize periodical and reference literature available in the Library and/or via Library computer.*

Course Objectives and/or Plan of Work

SYNOPSIS OF SUGGESTED COURSE OUTCOMES:

The student shall:

- be able to explain sound phenomena in terms of wave motion.
- be able to explain optical phenomena in terms of rays and wave motion.
- be able to describe and solve DC circuits built of resistors, capacitors and energy sources.
- be able to explain the basic tenets of the Quantum Theory, the wave-particle duality of matter and special relativity.

Description of Assessment and/or Evaluation of Student Learning

SUGGESTED INSTRUCTIONAL METHOD(S) AND TECHNIQUE(S):

Quizzes	30% of Total Grade
Tests and Final Exam	50% of Total Grade
Lab Reports*	20% of Total Grade

*The lab report grade must be at least 70% of the possible points to pass the course.

90% - 100%	A
80% - 89.99%	B
70% - 79.99%	C
60% - 69.99%	D

Master Syllabi and Working Syllabi (if both are used)

Course Description Sheet
General Physics 152
Lorain County Community College

Course Number: PHYC 152 E D1601

Faculty: Mr. David VanArsdale Office: PS210
Email: dvanarsd@lorainccc.edu Phone 440-458-6016 home
Phone 440-366-7202 lab office

Course Hours: Lecture: 1:00 – 1:50 pm MTWR
Lab: 2:00 – 4:50 pm T

Text: College Physics, by Wilson & Buffa, 5th Edition, Prentice-Hall
General Physics 152 Lab Manual, by Anne Johnson, latest edition, RonJon

Course Topics:

Chapter	13	Vibrations and Waves
	14	Sound
	15	Electric Charges, forces and fields
	16	Electric Energy
	17	Electric Current
	18	Basic Electric Circuits
	19	Magnetism
	20	E-M Induction
	21	AC Circuits
	22	Geometrical Optics
	23	Mirrors and Lenses
	24	Physical Optics
	25	Vision and Optical Instruments
	26	Relativity
	27	Quantum Physics
	28	Quantum Mechanics and Atomic Physics
	29	The Nucleus
	30	Nuclear Reactions and Elementary Particles

Evaluation: The final grade is calculated from a total percentage of points obtained from quizzes and tests (45%), lab reports and any other graded activities (30%), and final exam (25%). In addition, at least 70% of the possible lab points must be achieved in order to pass the course.

Grading Scale: 90% - 100% A
80% - 89.9% B
70% - 79.9% C
60% - 69.9% D

Absence/Make-up Policy:

If you know in advance that you will be absent the day a test is to be given, make alternate arrangements prior to the test date. Missed tests will be handled on a case-by-case basis. Missed quizzes cannot be made up. After an excused absence, problem assignments may be submitted at the next scheduled class.

In general, labs cannot be made up. Anticipated lab absences can be avoided by attending the alternate lab (Wednesday) on a space available basis.

Late Assignments:

Problem assignments and lab reports will be reduced by 20% for each class day they are late.

Academic Dishonesty:

Cheating on a test will result in a zero for that test. Students will work in small groups during lab sessions to plan, gather data, and organize results. Collaboration on lab write-ups is not permitted. No original text which becomes part of a lab report is to be shared with anyone else in the class.

Instructor Office Hours:

The instructor will be available for individual consultation 30 minutes before and after each lecture/lab session, and at other times by appointment.

Tutoring:

The Individualized Learning Support Center (ILSC/Tutoring Center) located in the Learning Resources Center. Tutoring may take place in small study groups or workshops, walk-in tutoring or one-to-one (private) tutoring. Students are entitled to two free hours of tutoring each week. To make an appointment for tutoring services, call the ILSC 366-4057.

Reading Days:

Reading days are scheduled during the semester to provide students time to work on special assignments, prepare for final exams, meet with professors, etc. On Tuesday, May 11, and Wednesday, May 12, I will be available in the lab (PS 101) during normal lecture and lab hours.

Special Needs:

The Office for Special Needs Services exists to serve the needs of students with disabilities – physical, learning and/or emotional. If you are a person with a disability who needs accommodations or assistance, contact the O.S.N.S. located in Room 115 in the Learning Resource Center. The coordinator is Ruth Porter (X4058). To receive accommodations, one must be registered with the O.S.N.S. office, and notify the instructor during the first week of class.

Miscellaneous:

No food or beverage in lab at any time.

No use of cell phones, pagers, etc. in class or lab

Easiest method of communication is email: dvanarsd@lorainccc.edu

Messages may be left in PS 210, or by calling the Division of Science and Math, X4022.

If special circumstances warrant, changes to this course description will be made, and students will be notified of those changes as soon as possible.

Lecture Schedule

Class	Date	Chapter	Topic
1	20-Jan T	13	Vibrations and Waves - SHM
2	21-Jan W		Equations of Motion
3	22-Jan R		Wave Motion
4	26-Jan M		Wave Properties
5	27-Jan T		Standing Waves and Resonance
6	28-Jan W	14	Sound - Sound Waves, Speed of Sound
7	29-Jan R		Sound Intensity
8	2-Feb M		Sound Phenomena, Doppler Effect
9	3-Feb T		Physics of Music
10	4-Feb W		TEST 1
11	5-Feb R	15	Electric Charges, Forces and Fields - Charge
12	9-Feb M		Electric Force
13	10-Feb T		Electric Fields
14	11-Feb W		Conductors
15	12-Feb R		Gauss's Law
16	16-Feb M	16	Electric Energy - Potential Energy and EPD
17	17-Feb T		Equipotential Surfaces
18	18-Feb W		Capacitance
19	19-Feb R		Dielectrics
20	23-Feb M		Capacitance in Series and Parallel
21	24-Feb T	17	Electric Current - Batteries and DC
22	25-Feb W		Current
23	26-Feb R		Resistance and Ohm's Law
24	1-Mar M		Electric Power
25	2-Mar T	18	Electric Circuits - Series and Parallel Resis
26	3-Mar W		Complex networks - Kirchoff's Rules
27	4-Mar R		RC Circuits
28	8-Mar M		Meters, Household Circuits, Safety
29	9-Mar T		TEST 2 - Mid-Term
30	10-Mar W	19	Magnetism - Magnets, Poles, Fields
31	11-Mar R		Magnetic Field Strength
32	22-Mar M		Applications, Charged particles in Magnetic F
33	23-Mar T		Applications, Magnetic Forces on Wires
34	24-Mar W		Electromagnetism
35	25-Mar R		Magnetic Materials, Geomagnetism
36	29-Mar M	20	E-M Induction - Induced emf
37	30-Mar T		Faraday's and Lenz's Laws, Generators
38	31-Mar W		Transformers and Power Transmission
39	1-Apr R		Electromagnetic Waves
40	5-Apr M	21	AC Circuits - Resistive Circuits

41	6-Apr	T	Capacitive Reactance
42	7-Apr	W	Inductive Reactance
43	8-Apr	R	Impedance: RLC Circuits, Resonance
44	12-Apr	M	TEST 3
45	13-Apr	T 22	Reflection and Refraction - Reflection
46	14-Apr	W	Refraction
47	15-Apr	R	Total Internal Reflection, Dispersion
48	19-Apr	M 23	Mirrors and Lenses - Plane Mirrors
49	20-Apr	T	Spherical Mirrors
50	21-Apr	W	Lenses
51	22-Apr	R	Lens Aberrations, Lensmakers Equation
52	26-Apr	M 24	Physical Optics - Young's Experiment
53	27-Apr	T	Thin Film Interference
54	28-Apr	W	Diffraction
55	29-Apr	R	Polarization, Atmospheric Scattering
56	3-May	M 25	Vision and Optical Instruments
57	4-May	T	Optical Instruments
58	5-May	W 26	Relativity
59	6-May	R 27/28	Quantum Physics - Atomic Physics
60	10-May	M 29	The Nucleus
	11-May	T	TEST 4
	12-May	W	Reading Day
	5/17/200	M	Final EXAM 1:00 - 2:50 pm

Lab Schedule

Week	
1	Simple Harmonic Motion
2	Standing Waves
3	Speed of Sound in Air
4	Planck's Constant
5	Line Spectra
6	Coulomb's Law
7	Electric Field and Equipotential Lin
8	Resistance and Ohm's Law
9	Simple DC Circuits
10	RC Circuits
11	Magnetic Induction
12	Reflection/Refraction of Light
13	Lenses
14	Interference/Diffraction of Light
15	Polarized Light
16	Interferometry

Additional Documentation

OAN	LCCC	BGSU	KSU	U, Akron	U. Toledo
OSC 015	PHYC 152	PHYS 202	PHY 13002	2820:163 & 164	PHYS 2020 OR 2080

This information is from the Equivalency Guide in CAS.

It shows how our indicated courses are accepted by BGSU, KSU, U of Akron, and U of Toledo.

Blue font indicates that the school submitted that course as indicated OAN.

COURSE DESCRIPTION WITH STUDENT OUTCOMES

LORAIN COUNTY COMMUNITY COLLEGE

DIVISION: Science and Mathematics

COURSE TITLE: General Physics II
COURSE NUMBER: PHYC 152

HOURS-CREDIT: 5

CONTACT: 7

LECT: 4

LAB: 3

REC/CLINICAL:

TOTAL COURSE ILUs: 6.55

LECTURE: 1.0

LAB: .85

REC/CLINICAL: 0

LECTURE SEATS: 48

LAB SEATS: 24

CLINICAL SEATS: 0

IS THERE A SEPARATELY SCHEDULED LAB:

Yes

IS THERE A SEPARATELY SCHEDULED CLINICAL:

No

FEES: Yes
\$45

SPECIAL FACILITIES: None

FAS ACCOUNT NO.: 1-02-02-350-450

GEN. EDUCATION REQ. CHANGES: Yes

START YEAR/SEMESTER: Fall
1998

TRANSFER MODULE REQ. CHANGES: Yes

PREREQUISITES: PHYC 151 (General Physics I).

COREQUISITES/CONCURRENT: None

CATALOG DESCRIPTION:

Waves; sound; optics; electricity and magnetism; modern physics. Laboratory required. (A special fee will be assessed.) *Prerequisite: PHYC 151 (General Physics I).*

REQUIRED TEXTBOOK(S)/MATERIAL(S):

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- be able to describe and solve DC circuits built of resistors, capacitors and energy sources.
- be able to explain the basic tenets of the Quantum Theory, the wave-particle duality of matter and special relativity.

TOPICAL OUTLINE: (COMMON CORE TOPICS)

- Waves
- Sound
- Optics
- Electricity and magnetism
- Modern physics
- Quantum Theory and Planck's Constant,
- Wave-Particle Nature of Matter,
- Special Relativity

SUGGESTED INSTRUCTIONAL METHOD(S) AND TECHNIQUE(S):

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Tests and Final Exam	50% of Total Grade
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*The lab report grade must be at least 70% of the possible points to pass the course.

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70% - 79.9%	C
60% - 69.9%	D

GENERAL EDUCATION REQUIREMENT:

Meets General Education Outcomes: 1, 2, 3, 6, 7, 8 and 9. Refer to LCCC catalog for a complete description of the eleven General Education Outcomes.

TRANSFER MODULE REQUIREMENT CHANGES:

Add to Natural/Physical Sciences area of Transfer Module.

Comment:

Combines PHYS 151/152/153 in Semester Conversion.

Date Revised for Semester Conversion: November 1996

OBR Use

Action

Approved	
Additional Information Requested	
Rejected	
Date	