

CATALOG INFORMATION

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Dept & Nbr: PHY 211 Title: GENERAL PHYSICS II

Full Title: General Physics II

Units	Course Hours	Per Week	Nbr of Weeks	Course Hours	Total
Max: 4.0	Lecture	3.0	17	Lecture	51.0
Min: 4.0	Lab	3.0		Lab	51.0
	Contact DHR	0.0		Contact DHR	0.0
	Contact Total	6.0		Contact Total	102.0
	Non-contact DHR	0.0		Non-contact DHR	0.0

Title 5 Category: 01 AA Degree Applic
Grading: GC Credit course for grade or CR/NC
Repeatability: 00 No repeatability allowed or defined
Also listed as:

CATALOG DESCRIPTION:

Continuation of Physics 210. Non-calculus based introduction to classical physics. Topics include electric charge, field and potential, DC and AC circuits, magnetism, electromagnetic waves, light, optics, and modern physics. Assumes knowledge of basic algebra and trigonometry. Recommended for students majoring in the life sciences and similar courses.

PREREQUISITES:

MTH 121 and PHY 210 or PHY 214.

COREQUISITES:

RECOMMENDED PREPARATION:

No advisories.

LIMITS ON ENROLLMENT:

SCHEDULE OF CLASSES INFORMATION:

Prerequisites: MTH 121 and PHY 210 or PHY 214.

The goal of this course is to provide a broad, rigorous introduction to physics at the beginning college level with primary emphasis on physical principles and development of problem-solving skills. (Grade or CR/NC)
Transfer Credit: CSU; UC. (CAN PHYS 4)

ARTICULATION and CERTIFICATE INFORMATION

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ASSOCIATE DEGREE:	Effective: FALL	1981	Inactive:
Area: A	NATURAL SCIENCES		
CSU GE:	Effective: FALL	1981	Inactive:
Transfer area: B1	PHYSICAL UNIVERSE		
B3	LAB ACTIVITY		

IGETC: Effective: FALL 1981 Inactive:
 Transfer area: 5A PHYSICAL SCIENCES

CSU TRANSFER: TRANSFERABLE Effective: FALL 1981 Inactive:

UC TRANSFER: TRANSFERABLE Effective: FALL 1981 Inactive:

CAN:
 PHYS 4 Grp Nbr: 01 Effective: SPRING 1989 Inactive:

CERTIFICATE APPLICABLE: N NOT CERTIFICATE/MAJOR APPLICABLE

APPROVAL AND DATES

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Version 02 Submitted by: STEVE CARDIMONA Date: 05/10/2005
 Department approved: Catherine Indermill Date: 06/28/2005
 Curriculum approved: 06/01/1981 Version approved: 05/10/2005
 Prerequisites approved: 05/13/2005 Last reviewed: 05/10/2005
 Term effective: SPRING 2006 Last taught: SPRING 2008 Inactive:

COURSE CONTENT

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OUTCOME AND OBJECTIVES:

1. Continue to develop problem solving skills.
2. Apply knowledge of algebra, trigonometry and geometry to actual problems in physics.
3. Integrate and apply the lessons learned in Physics 210 and Physics 214 into the study of electric and magnetic fields.
4. Describe the principles involved in the study of optics and quantum mechanics.
5. Correlate and apply appropriate principles of classical physics to problems in other science fields and in everyday life.
6. Apply theoretical principles in practical laboratory experiments.

TOPICS AND SCOPE:

1. Electric charge and electric field
2. Electric potential and currents
3. DC circuits
4. Magnetism, electromagnetic induction, Faraday's Law
5. Electromagnetic waves
6. Geometric optics
7. Light
8. Relativity, quantum theory, and other selected topics in modern physics

ASSIGNMENTS:

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READING ASSIGNMENTS:

Students are expected to read each chapter before it is discussed in class.

WRITING ASSIGNMENTS:

1. Students will complete and submit assigned problems from the

textbook and other exercises as determined by the instructor.

2. Students are expected to submit detailed formal reports of laboratory activities and experiments as defined by the instructor.

OUTSIDE ASSIGNMENTS:

Students are expected to spend two hours or more outside of class for each hour of lecture accomplishing:

1. Scheduled textbook reading.
2. Assigned laboratory reading.
3. Finalizing of reports and writing assignments.

ASSIGNMENTS THAT DEMONSTRATE CRITICAL THINKING:

1. Determine how the different science disciplines interrelate.

METHOD OF INSTRUCTION:

Lecture presentations will be enhanced where possible by:

1. Demonstrations of laboratory equipment and physics principles.
2. Videos where appropriate.

METHODS OF EVALUATION:

1. Four exams including the final will be given during the semester. (approximately 60%)
2. Laboratory reports (approximately 30%)
3. Homework/Quizzes (approximately 10%)

BASIS FOR GRADING:

The assignment of a grade is based on the level of achievement of the outcomes and objectives of the course outline and is reflected in quantifiable terms in the course syllabus.

REPRESENTATIVE TEXTBOOKS:

Physics, James S. Walker, 2nd Ed., Prentice Hall
College Physics, Wilson and Buffa, 5th Ed., Prentice Hall
Physics, Douglas C. Giancoli, 6th Ed., Prentice Hall

REASON FOR REVISION

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Course outline updated and modified to include specific course content important for second semester physics course. Course title modified to be more representative of course content (electricity & magnetism and optics). Course prerequisite changed to include completion of a first semester physics course.

RESOURCES REQUIRED

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MISCELLANEOUS

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Advisory generate desc:	N	NO
Area department:	PHY	PHYSICS
Audit flag:	N	NOT AUDITABLE
Basic skills:	X	NOT BASIC SKILLS
Classification:	A	Liberal Arts and Sciences
Cost level:	01	
Disciplines:		PHYSICS
Division:	02	MERIDITH RANDALL
Faculty service areas:		PHYSICS
Fee:	\$0.00	
In-service:	X	NOT IN-SERVICE
Level below transfer:	X	NOT APPLICABLE
Matric-requiring:	X	Exempt from assessment
Maximum class size:	0	
Maximum wait list:	0	
Method of instruction:	03	LECTURE/LABORATORY
Non-credit category:	X	NOT APPLICABLE, CREDIT COURSE
Open entry/exit:	N	Not open entry/exit
Pacs activity:	1902	PHYSICS
Pacs program project:	0000	
Preq/coreq generate desc:	N	NO
Preq/coreq provisional:	N	NO
Preq/coreq reg check:	Y	PREREQUISITE RULES EXIST
Repeat group id:		
Requires instructor sig:	N	INSTRUCTOR'S SIGNATURE NOT REQUIRED
SAM classification:	E	Non-occupational
Selected/special topic:	N	NOT A SELECTED TOPIC COURSE
Special class:	X	NOT A SPECIAL COURSE
TOP code:	1902.00	PHYSICS, GENERAL
Workload:	0.0000	