

CATALOG INFORMATION

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Dept & Nbr: PHY 202 Title: INTRODUCTRY PHYSICS

Full Title: Introductory Physics

| 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:

Newtonian and Einsteinian physics without the use of mathematics. Philosophy of the physical sciences will be introduced. Topics of study include motion, momentum, energy, relativity, light, electricity and magnetism, atomic and nuclear physics.

PREREQUISITES:

COREQUISITES:

RECOMMENDED PREPARATION:

No advisories.

LIMITS ON ENROLLMENT:

SCHEDULE OF CLASSES INFORMATION:

Our tour of the non-math physics world includes trips to atoms, ball games, planets, and other strange places. The universe, as described by the laws of physics, is easy to understand and beautiful to see. Come enjoy the lectures and experiments that make such a journey a wonderful experience. (Grade or CR/NC)
Transfer Credit: CSU; UC.

ARTICULATION and CERTIFICATE INFORMATION

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ASSOCIATE DEGREE: Effective: FALL 1981 Inactive:
Area: A NATURAL SCIENCES
CSU GE: Effective: FALL 1993 Inactive:
Transfer area: B1 PHYSICAL UNIVERSE
B3 LAB ACTIVITY

IGETC: Effective: FALL 1993 Inactive:
 Transfer area: 5A PHYSICAL SCIENCES

CSU TRANSFER: TRANSFERABLE Effective: FALL 1981 Inactive:

UC TRANSFER: TRANSFERABLE Effective: FALL 1981 Inactive:

CAN:

CERTIFICATE APPLICABLE: N NOT CERTIFICATE/MAJOR APPLICABLE

APPROVAL AND DATES

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Version 01 Submitted by: GERALD DEBANE Date: 06/01/1981
 Department approved: Date:
 Curriculum approved: 06/01/1981 Version approved: 06/01/1981
 Prerequisites approved: 06/01/1981 Last reviewed: 11/19/1992
 Term effective: FALL 1981 Last taught: FALL 1997 Inactive:

COURSE CONTENT

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OUTCOME AND OBJECTIVES:

1. Comprehend the science of physics in common use today.
2. Research these topics by reading, studying, and writing on the current findings as reported in excellent scientific journals or texts.
3. Learn elementary physics and receive instruction on where additional information is available, and how to write a simple research paper on various topics.
4. Understand Newtonian physics principles and will be able to augment other science courses with the knowledge gained from this class.

TOPICS AND SCOPE:

1. Mechanics
2. Properties of matter
3. Heat
4. Sound
5. Electricity and magnetism
6. Light
7. Atomic nature of matter
8. Experiments
 - a) Measurement of Length, Mass, and Volume
 - b) Introduction of Metric System
 - c) Addition of Vectors: non-trigonometry, non-algebraic methods
 - d) Ballistic Pendulum Study
 - e) Friction
 - f) Simple Machines and the Principles of Work
 - g) Uniform Circular Motion
 - h) Young's Modules
 - i) Simple Harmonic Motion
 - j) Standing Waves
 - k) Joule's Law
 - l) Conversation of Linear Momentum

m) conversation of Angular Momentum

ASSIGNMENTS:

assignments:

READING ASSIGNMENTS:

Students will be required to read the text adopted for the course in the appropriate chapters. Students will also be required to read the available student guide which will assist them in problem solutions.

WRITING ASSIGNMENTS:

Students will be required to write the lab report complete with a stated purpose, a tabulated collection of data, and an extensive conclusion.

OUTSIDE ASSIGNMENTS:

Students will have various assignments from the text, student guide and/or library references which will be used to enhance lectures and laboratory experiments.

ASSIGNMENTS THAT DEMONSTRATE CRITICAL THINKING:

Memorization of facts will not be emphasized but analysis relationships between related topics will be of prime importance. Students will be asked to extend their knowledge as predicted in the text to other science and non-science topics.

METHOD OF INSTRUCTION:

The instructor will demonstrate experiments with the student in order to give the student a reasonable idea of how experiments, whose answers are unknown, are conducted. Lectures, slides, and field trips are also part of the instruction method.

METHODS OF EVALUATION:

Laboratory experiments will be graded each week and returned to the student (approximately 20%). Several midterm examinations, take-home preparation papers, and short quizzes in addition to a comprehensive final examination will also be given to determine the grade of the course (approximately 80%).

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-A World View by Kirkpatrick, Wheeler

RATIONALE

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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: | N | NO 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 | |