CATALOG DESCRIPTION Credit 4 semester hours. A continuation of calculus-based general physics. Course includes heat and thermodynamics, sound, electricity, magnetism, optics, and select topics from modern physics.

CO-REQUISITE: MATH 2024 and PHYS 2521.

PREREQUISITES BY TOPIC:
Physics lab II and integral calculus.


COURSE GOALS:
The purpose of this course is to give the student a calculus-based exposure to oscillations, sound, heat and thermodynamics, electricity, magnetism, optics, relativity and some modern physics in which he, or she, will be challenged and evaluated for understanding.

Course Outcomes:
Upon completing this course the student will have knowledge of many concepts in general physics with calculus, as well as experience in solving many word problems in math and physics associated with standard concepts.

Course Outcomes:
Upon completing this course the student will have knowledge many concepts in general physics with calculus, an enhanced applied knowledge of differential and integral calculus, trigonometry, algebra, vector operations to include vector addition, dot product, cross product, Cramer's rule for simultaneous equation solutions, experience in solving many word problems in math and physics associated with standard concepts, enhanced understanding of how things work in mechanical, heat, sound, electrical, magnetic, optical and relativistic systems, and the like.

Course Policies:
This course uses the lecture format. Reading and homework assignments will be made, and some problems will be graded. Occasional quizzes (expected everyday) will check the reading assignments. It is expected that you will need to spend at least two hours studying outside the class for each hour spent in class. That means you should plan to devote a minimum of nine hours per week for this class.

Homework And Grading

1) a. Your grade will be based on class participation in the form of explaining problems and taking quizzes (extra points to buffer your exam scores--you get paid for everything that you do), and four major exams (covering four to five current chapters each).
   b. Attendance should be maintained. Particularly, there is no way to make-up a quiz or lab missed, but if you miss a quiz, two points are taken.
   c. Remember: 'To hear is to forget, to see is to know, to do is to understand'.
   d. Your final grade will be based on your overall average falling in the following categories: A--from 90 to 100; B--from 75 to 89; C--from 60 to 74; D--from 40 to 59; F-under 40


100—90        A
89—75        B
74—60        C
59—40        D
40—0        F
Material in each reading assignment will be covered in the lecture on the date given. You should read the entire assignment and if possible work some of the problems before the class.

Assignments will be given each day. Problem assignments must be ready to hand in at the beginning of next class, or put on the board for you to explain for extra points up to 3 per problem. A random selection of these problems will be graded. Problem assignments and quizzes that are late or missed will not be made up.

Oral and Written Communications

Oral or Written communication assignments are given through exams, quizzes, board explanations, and lab assistance and reports.

Attendance Policy: (undergraduate catalog, 1998-2001, pp.80)

Classes will start at the prescribed time and will end at the prescribed time. Excessive absences or tardiness will result in lowered grades. Excessive absenteeism, whether EXCUSED or UNEXCUSED, may result in a student's course grade being reduced or in assignment of a grade of “F”. Absences are accumulated beginning with the first day of class. University Undergraduate catalog (1998-2001, pp.80) provide more detail information.

Student Academic Appeals Process (undergraduate catalog, 1998-2001, pp.88-91)

ADA statement

<table>
<thead>
<tr>
<th>Weeks</th>
<th>COURSE CONTENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2.5</td>
<td>COURSE CONTENT</td>
</tr>
<tr>
<td>FIRST 8 WEEKS</td>
<td></td>
</tr>
</tbody>
</table>
2.5-5  SECOND 8 WEEKS


Chapter 37-38: Special theory of relativity. (Optional) Planck's hypothesis, photoelectric effect, Compton effect, atomic spectra, Bohr theory of hydrogen. Review. 3rd (Final) major exam.