



**I. COURSE DESCRIPTION:**

This course introduces the student to a number of fundamental concepts of physics. It is designed to satisfy the needs of students who are interested in an *overview* of the *concepts* rather than a *rigorous mathematical analysis* of the topics as might be encountered in a traditional engineering level course in physics.

Topics to be covered include: units of measurement and the metric system, motion, forces, work, energy and power, simple machines, properties of solids, liquids and gases, temperature and heat, basic electricity and magnetism, sound, and the nature of light.

**II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:**

Upon successful completion of this course, the student will demonstrate the ability to:

1. In his/her own words write basic definitions for the concepts introduced. The definition will demonstrate a fundamental understanding of the concept.
2. Answer questions requiring an understanding of the concepts presented.
3. Respond to questions requiring some extrapolation of the course content.
4. Solve basic mathematical problems requiring an essential understanding of the course theory.
5. Develop an appreciation for physics as a science and its broad impact on the world as we now know it. This impact includes both the technological applications that are a result of the science and a fundamental understanding of our universe made possible by the science.

**III. TOPICS TO BE COVERED:**

1. Measurement and the metric system
2. Motion
3. Forces, Work, Energy, Power and Simple Machines
4. Properties of Matter: Solids, Liquids and Gases
5. Temperature and Heat
6. Basic Electricity and Magnetism
7. Sound and Light

Note: Coverage of topics 7 would depend on the availability of time.

**V. REQUIRED RESOURCES/TEXTS/MATERIALS:**

***Conceptual Physics, by- Paul G. Hewitt, Tenth edition;*** Pearson Addison Wesley Publishers; 2006; ISBN: 13-9780321548092

***Scientific Calculator,*** similar to Sharp – EL520W

**Additional resource materials are available in the college library:**

**Book Section**

You will find the college's collection of physics books on the second floor of the College library.

**V. EVALUATION PROCESS/GRADING SYSTEM:**

Final grade will be awarded based on the composite score of labs, assignments, quizzes, and tests as follows:

Tests	45%
Quizzes	10%
<u>Labs, Assignments and Attendance</u>	<u>45%</u>
Total	100%

(The percentages shown above may have to be adjusted to accurately evaluate student skills. Students will be notified of any changes made.)

The professor reserves the right to adjust the mark up or down 5% based on attendance, participation, leadership, creativity and whether there is an improving trend.

Some minor modifications to the above percentages may be necessary. The professor reserves the right to adjust the mark up or down 5% based on attendance, participation, leadership, creativity and whether there is an improving trend.

A minimum of **80% attendance** required in the labs and lectures.

- Students must complete and pass both the test and lab portion of the course in order to pass the entire course.
- All Assignments must be completed satisfactorily to complete the course.
- Late hand in penalties will be 10% per day. Assignments will not be accepted past one week late unless there are extenuating and legitimate circumstances.
- Makeup Tests are at the discretion of the instructor and will be assigned a maximum grade of 50%.
- The professor reserves the right to adjust the number of tests, practical tests and quizzes based on unforeseen circumstances. The students will be given sufficient notice to any changes and the reasons thereof.
- A student who is absent for 3 or more times without any valid reason or effort to resolve the problem will result in action taken.  
NOTE: If action is to be taken, it will range from marks being deducted to a maximum of removal from the course.

The following semester grades will be assigned to students:

<b>Grade</b>	<b><u>Definition</u></b>	<i>Grade Point Equivalent</i>
A+	90 – 100%	4.00
A	80 – 89%	3.00
B	70 - 79%	2.00
C	60 - 69%	1.00
D	50 – 59%	0.00
F (Fail)	49% and below	
CR (Credit)	Credit for diploma requirements has been awarded.	
S	Satisfactory achievement in field /clinical placement or non-graded subject area.	
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.	

X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.
NR	Grade not reported to Registrar's office.
W	Student has withdrawn from the course without academic penalty.

### **UPGRADING OF INCOMPLETES**

When a student's course work is incomplete or final grade is below 50%, there is the possibility of upgrading to a pass when a student meets all of the following criteria:

1. The student's attendance has been good.
2. The student's accumulated grade in the course to date is not less than 45%.
3. The student has not had a failing grade in all of the tests taken to date.
4. The student has made reasonable efforts to participate in class and complete assignments.

The nature of the upgrading requirements will be determined by the instructor and may involve one or more of the following: completion of existing labs and assignments, completion of additional assignments, re-testing on individual parts of the course or a comprehensive test on the entire course.

### **LAB ASSIGNMENTS**

Required lab report requirements will be detailed before labs are assigned. Late penalties will be applied to assignments not handed in by the due date.

### **ATTENDANCE:**

Absenteeism will affect a student's ability to succeed in this course. Absences due to medical or other unavoidable circumstances should be discussed with the instructor. **In cases of repeated absence from class, a penalty of up to 10% of the final grade may be assessed.**

## VI. SPECIAL NOTES:

### Disability Services:

If you are a student with a disability (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Disability Services office. Visit Room E1101 or call Extension 2703 so that support services can be arranged for you.

### Retention of Course Outlines:

It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

### Communication:

The College considers **WebCT/LMS** as the primary channel of communication for each course. Regularly checking this software platform is critical as it will keep you directly connected with faculty and current course information. Success in this course may be directly related to your willingness to take advantage of the **Learning Management System** communication tool.

The professor reserves the right to use other tools and/or techniques that may be more applicable. These other tools and/or techniques for effective communication will be discussed, identified and presented throughout the delivery of the course content.

### Plagiarism:

Students should refer to the definition of “academic dishonesty” in *Student Code of Conduct*. Students who engage in academic dishonesty will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

### Course Outline Amendments:

The professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Substitute course information is available in the Registrar's office.

**VII. PRIOR LEARNING ASSESSMENT:**

Students who wish to apply for advance credit transfer (advanced standing) should obtain an Application for Advance Credit from the program coordinator (or the course coordinator regarding a general education transfer request) or academic assistant. Students will be required to provide an unofficial transcript and course outline related to the course in question.

Credit for prior learning will also be given upon successful completion of a challenge exam or portfolio.