SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

Sault College

COURSE OUTLINE

COURSE TITLE:	***Concepts of Physics***		
CODE NO.:	**PHY115**	SEMESTER:	**I, II**
PROGRAM:	**General Arts & Science**		
AUTHOR:	**Subhash Verma, Bazlur Rasheed**		
DATE:	**Jan, 2007**	PREVIOUS OUTLINE DATED:	**June, 2006**

APPROVED: _____ _____

DEAN **DATE**

TOTAL CREDITS: **5**

PREREQUISITE(S): **None, *although* *grade 12 general level mathematics is strongly recommended***

HOURS/WEEK: **5 hours per week**

Course Name Code No.

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, 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

Note: Coverage of topics 5, 6 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: 0-8053-9375-7

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. They are located on the shelves under the ***Call Number QC***.

V. EVALUATION PROCESS/GRADING SYSTEM:

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

Tests and Quizzes	60%
Labs and Assignments	40%
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 in postsecondary courses:

Grade	**Definition**	*Grade Point Equivalent*
A+	90 – 100%	4.00
A	80 – 89%	
B	70 - 79%	3.00
C	60 - 69%	2.00
D	50 – 59%	1.00
F (Fail)	49% and below	0.00

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.

VI. SPECIAL NOTES:

Special Needs:
If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Special Needs office. Visit Room E1101 or call Extension 2493 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.

Plagiarism:
Students should refer to the definition of “academic dishonesty” in *Student Rights and Responsibilities*. 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 advanced credit in the course should consult the professor. Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

VIII. DIRECT CREDIT TRANSFERS:

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean’s secretary. Students will be required to provide a transcript and course outline related to the course in question.