Physics 1051: GENERAL PHYSICS II - Oscillations, Waves, Electromagnetism

Fall 2009: Sections 001 and 002
LECTURES: SLOT 05: Mon, Wed, Fri 12:00-12:50
LABS: SECTION 001: Mon 0900-1100, CRN 47502 **SECTION 002:** Thu 0900-1100, CRN 47504
INSTRUCTOR: Dr. I. Afanassiev, Rm. C4065, 737-2500 **Email:** afanai@mun.ca

COURSE TEXT: R. A. Serway & J. W. Jewett, Jr.; Principles of Physics, 4th edition, Thomson, Brooks/Cole
(Note: Answers to odd-numbered problems are given in text.)

Calendar Entry:

1051. General Physics II: Oscillations, Waves, Electromagnetism (F), (W), & (S). A calculus based introduction to oscillations, wave motion, physical optics and electromagnetism. Prerequisite: Physics 1050 or 1020 (with a minimum grade of 65%) and Mathematics 1001. Mathematics 1001 may be taken concurrently.
Lectures: Three hours per week. Laboratories: Three hours per week.
(Note: Credit can be obtained for only one of Physics 1021, 1051, and 1061.)

OUTLINE:

Topic	**Text Sections**	**Number of Lectures**
Introduction		0.5
Oscillatory Motion	(12.1-12.7)	3.5
Mechanical Waves	(13.1-13.8)	3
Superposition and Standing Waves	(14.1-14.7)	3
Electric Forces, Electric Fields, Electric Flux, Gauss's Law (excluding continuous charge)	(19.1-19.9)	4
Electric Potential	(20.1-20.4)	2
Electric Potential and Electric Field due to Continuous Charge Distribution	(20.5, 19.5)	1
Application of Gauss's Law for Continuous Charge Distributions	(19.10)	1
Charged Conductors: Electric Field and Electric Potential	(19.11, 20.6)	1
Electric Current	(21.1-21.2)	1
Magnetic Forces and Magnetic Fields	(22.1-22.11)	5
Faraday's Law and Inductance	(23.1-23.4)	3
Electromagnetic Waves	(24.1-24.4; 24.7-24.9)	2
Reflection and Refraction	(25.1-25.7)	1
Wave Optics	(27.1-27.8;)	3

TERM TESTS: Term tests are scheduled for Wed Oct. 7, 2007 and Fri Nov. 13, 2007. Students are required to present their student ID at term tests and exams.

LABORATORY: **Labs will be done in C2039.** For LAB schedule see 1st year labs webpage

LECTURE NOTES: The act of compiling a complete set of notes, including the drawing of diagrams, contributes significantly to your ability to organize and recall important information. An archive of lecture notes, organized by topic, is provided to help you to fill in gaps and review complex diagrams presented in class. The most effective way for you to use the lectures and archived notes is to write down an outline of the main ideas and important points during the lecture and then to fill in the details of the outline, as soon as possible afterwards, by using the archived notes to refresh your memory of what was done in class. By doing this, you effectively review each lecture and reinforce important concepts while your recollection of the presentation is fresh and you generate a set of notes that will be of optimal use to you as study tools. Simply reading through the archived notes, without actively generating your own, is likely to be **MUCH LESS EFFECTIVE** as a learning strategy.

EVALUATION SCHEME:
Assignments 10 % , Term Tests (2) 30 % , Laboratory Reports 10 %, Final Exam 50 %

Notes:
1. A minimum Lab mark of 50% is required to pass the course.
2. A supplementary exam will be available as outlined in the calendar. Conditions apply.
3. Students repeating the course may carry the lab mark over from their previous registration in this course. **You must make arrangements with the course instructor to do this.** It will not be done automatically.

ASSIGNMENTS: Assignments will be done using the CAPA (Computer Assisted Personalized Approach) web based system. You will be issued PIN numbers which will give you access to your assignments over the course of the semester.

- Access through any web browser is sufficient. You can also use computers in the Help Centre to access the CAPA system.
- To print an assignment and submit answers, you will need a CAPA ID number for that assignment and your student number. These will be provided over D2L. Opening and closing dates for each problem set will be posted on the web site.
- Because the emphasis in assignments is on mastery of the concepts and techniques, you will be given multiple tries to enter a correct answer to a given problem. If you are unable to get it in the first few tries, ask for help from the instructor or staff in the help centre.
- Remember: The assignments are an important learning tool and the system has been set up to encourage mastery of the material.
- The system is easy to use but if you encounter any technical problems accessing the system, ask for help immediately. Neglect of the CAPA assignments will likely cost you about 1 grade in your final mark!!!

Desire2Learn: D2L, a computer-based course management system, will be used for announcements, distribution of CAPA IDs, discussion board, posting of student results, and other important information. Please check often.

HELP CENTRE: Room C3071, hours to be posted.

MEDICAL CERTIFICATES: The information required for medical certificates is specified in general regulation 14.4.1 of the University Calendar. For the convenience of students, this is quoted below:
14.4.1 Students who request permission to drop courses, to withdraw from University studies, to have examinations deferred or to obtain other waivers of University, departmental or course regulations based on medical grounds are required by the University to produce a note from a physician in support of their request. Such notes must be sufficiently specific to allow a proper consideration of the student's case.

WEB SITE: http://www.mun.ca/physics and click on Undergraduate Studies/Course Descriptions and Links/Physics 1051 Home page