

Physics 2900E Intermediate Laboratory

Course Outline 2009-2010

Lectures: M W F 9:30 am – 10:30 am
P&AB Room 34

Laboratories: to be scheduled, P&AB room 110.

Prerequisites: a minimum mark of 60% in Physics 1020 or 1024 or 1026 or the former 025, or a minimum average of 80% in Physics 1028A/B and 1029A/B; a minimum mark of 60% in each of (Calculus 1000A/B or 1100A/B) and (Calculus 1301A/B or 1501A/B), or in Applied Mathematics 1413.

Corequisite(s): Physics 2101A/B and 2102A/B or the former Physics 200.

Instructor:

Professor Peter J. Simpson

Office: Physics & Astronomy 135

Telephone: 661-3390

Office hours by appointment.

psimpson AT uwo DOT ca

To contact me by email please use your UWO email address.

Web page: <http://www.physics.uwo.ca/~psimpson/p2900e.html>

Textbook:

Sears and Zemansky's University Physics by Young and Freedman, edition 12.

Course Content:

Despite the title, the course includes both laboratory and lecture material. Lecture material will be drawn from the textbook, and will cover the subjects of electric circuits, introductory thermodynamics, and optics. The laboratory section of the course will include these subjects, with addition material related to the courses Physics 2101 and 2102 (i.e. electrodynamics and modern physics). The emphasis is on developing experimental technique, as opposed to demonstrating the correctness of theory. Note that the course is designated "E"—report writing forms a major component.

Calendar description

Students will gain a thorough introduction to experimental methods through experiments on electricity and magnetism, thermal physics, optics and modern physics.

Description of examinations

- One midterm test in December, composed of problem solving plus multiple choice conceptual questions. Formula sheet permitted.
- One 3-hour final exam, composed of problem solving plus multiple choice conceptual questions. Formula sheet permitted.

Description of assignments

- Approximately 8 homework assignments consisting of problems from the textbook.
- Approximately 5 full-length laboratory reports, and a similar number of "brief reports"

Mark distribution

- Homework assignments: 10%
- Midterm test: 25%
- Final exam: 25%
- Laboratories: 40%
- *All* laboratory experiments must be completed satisfactorily to receive a passing grade in the course.

Course Policies

Attendance at lectures is strongly recommended.

Class participation is encouraged. I prefer my classes to be a dialogue, not a monologue.

Late assignments: there will be a penalty for lateness.

Accommodations for Religious Holidays

When scheduling unavoidably conflicts with religious holidays which a) require an absence from the University or b) prohibit or require certain activities (i.e., activities that would make it impossible for the student to satisfy the academic requirements scheduled on the day(s) involved), no student will be penalized for absence because of religious reasons, and alternative means will be sought for satisfying the academic requirements involved. If a suitable arrangement cannot be worked out between the student and instructor involved, they should consult the appropriate department chair and, if necessary, the student's Dean.

It is the responsibility of such students to inform themselves concerning the work done in classes from which they are absent and to take appropriate action.

A student who, for either of the situations outlined in paragraph one above (a or b), is unable to write examinations and term tests on a Sabbath or Holy Day in a particular term shall give notice of this fact in writing to his or her Dean as early as possible, but not later than November 15 for mid-year examinations and March 1 for final examinations, i.e., approximately two weeks after the posting of the mid-year and final examination schedule respectively. In the case of mid-term tests, such notification is to be given in writing to the instructor within 48 hours of the announcement of the date of the mid-term test. If a Special Examination is offered as an alternative means to satisfy the academic requirements, the instructor(s) in the case of mid-term tests and the dean in the case of mid-year and Spring final examinations will arrange for special examination(s) to be written at another time. In the case of midyear and Spring final examinations, the accommodation must occur no later than one month after the end of the examination period involved. It is mandatory that students seeking accommodations under this policy give notification before the deadlines and that the Faculty accommodate these requests. For purposes of this policy the University has approved a list of dates which are recognized religious holidays which require members of those religions to be absent from the University; this list is updated annually and is available at Departmental, Deans' and Faculty advising offices.

Final Examination

In accordance with Senate Policy, a Special Examination will be held within thirty days of the regular final examination for students who are unable to write the regular examination for medical or other documented reasons. Requests for such a Special Examination must be made to the Associate Dean, Faculty of Science.

Procedures for Medical Excuses

If you are unable to meet a course requirement due to illness or other serious circumstances, you must provide valid medical or other supporting documentation to the Dean's office as soon as possible and contact your instructor immediately. It is the student's responsibility to make alternative arrangements with their instructor once the accommodation has been approved and the instructor has been informed. In the event of a missed final exam, a "Recommendation of Special Examination" form must be obtained from the Dean's Office immediately. For further information please see:

<http://www.uwo.ca/univsec/handbook/appeals/medical.pdf>

A student requiring academic accommodation due to illness should use the Student Medical Certificate when visiting an off-campus medical facility or request a Records Release Form (located in the Dean's

Office) for visits to Student Health Services. The form can be found here:

https://studentservices.uwo.ca/secure/medical_document.pdf

Cheating

Scholastic offenses are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offense, at the following Web site:

http://www.uwo.ca/univsec/handbook/appeals/scholastic_discipline_undergrad.pdf

Plagiarism

Students must write their essays and assignments in their own words. Whenever students take an idea, or a passage from another author, they must acknowledge their debt both by using quotation marks where appropriate and by proper referencing such as footnotes or citations. Plagiarism is a major academic offence (see Scholastic Offence Policy in the Western Academic Calendar).

[If plagiarism-checking software will be used:]

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).

[If ScanExam is used to grade multiple-choice exams:]

Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.