

Portland State University
Department of Physics
Physics 202 – General Physics
Electromagnetism & Thermal Physics

Summer 2005

07/14-08/04/2005 8am-10.20am
Building/Room CH 150

Instructor: Bjoern Seipel

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Phone: 503-725-4226

Office hours: Tuesday & Thursday 11am-12pm at SB2 Room 314

Text book: *James S. Walker, PHYSICS, Second Edition, ISBN 0-13-101416-1*

Web: <http://www.physics.pdx.edu/~bseipel/Teaching.html>

Course overview

The course covers the basic concepts of electromagnetism and thermal physics.

Part 1: **Electromagnetism** (Chapter 19-24)

Part 2: **Thermal Physics** (Chapter 15-18)

Lecture Notes

[1- Electric Charge, Force and Field](#)

[Homework CH 19 / Solutions](#)

[2- Electric Potential](#)

[Homework CH 20 / Solutions](#)

[3- Electric circuits-1](#)

[3- Electric circuits-2](#)

[Homework CH 21 / Solutions](#)

[4-Magnetism1](#)

[Homework CH22 / Solutions](#)

[4-Magnetism2](#)

[Homework CH23 / Solutions](#)

[5- Alternating current](#)

[Homework CH24 / Solutions](#)

[6 - Fluid](#)
16, 28, 38 / [Solutions](#)

Homework CH15: Problems 5, 7,

[7 - Thermodynamics – Temperature and Heat](#) [Homework CH16 / Solutions](#)

[8 – Thermodynamics – Phases and Phase Changes](#) [Homework CH17 / Solutions](#)

[9 – Thermodynamics – The Laws of Thermodynamic – Part1](#) and [Part2](#) /
[additional transparencies](#) [Homework CH18](#)

Homework

The homework is meant to help the students apply the concepts from the lecture and to review the covered theory. Homework problems will be assigned but will not be graded. Homework Problems and solutions will be posted on the homepage <http://www.physics.pdx.edu/~bseipel/Teaching>.

The homework should help the students to prepare for the exams. Some of the homework problems might also appear in a slightly changed form in the exams.

Problems (Quizzes)

Besides the homework quizzes will be given occasionally. These quizzes can consist of both conceptual questions and problems and will be graded. The answers are due to the next day before class.

Exams

The course grade is based on quizzes and three exams. The best exam of each student is worth 40%, and the two other are worth 35% (2nd best) and 25% of the total grade. The exams can have both conceptual questions and problems. The exams are non-comprehensive, but exam 2 and 3 may include general concepts already covered in previous exam.

I pay special emphasis to in the lectures that will be asked off you in the quizzes and exams, but I do not take class attendance.

Exam1 07/20/2005 8.00-10.20am

Exam2 07/27/2005 8.00-10.20am

Exam3 08/04/2005 8.00-10.20am

One piece of paper is allowed with anything you want to write on it on both sides.
Format: Letter 8.5" x 11"

Calculator is required!!

Grade

The quizzes (problems) are worth 30%, the exams are worth 70% of the final grade.

Make-up exams will be only given in case of emergencies or illness (with proof) at the end of the term.

Grading Scale

$\geq 90\%$ A, 80%-89% B, 70%-79% C, 60%-69% D, $< 59\%$ F

Lowest in the range will be a MINUS highest will be a PLUS

(E.g. 90% = A- and 89% = B+)