

MAYLAND COMMUNITY COLLEGE



PHY 152 10
01-04-07

PO Box 547
or
200 Mayland Drive
Spruce Pine, NC 28777
828-765-7351 or 1-800-462-9526
mayland.cc.nc.us

**MAYLAND COMMUNITY COLLEGE
Welcomes You To:**

**PHY 152 10
College Physics II
Credit: 4 Contact: 5**

Course Description

This course uses algebra- and trigonometry-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include electrostatic forces, electric fields, electrical potentials, direct-current circuits, magnetostatic forces, magnetic fields, electromagnetic induction, alternating-current circuits and light. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.*

Prerequisites: PHY 151

Corequisites : None

Instructor Information

Instructor: David Pittman
Office Location: 103b
Telephone Number: 765-7351 ext. 284
E-mail Address: dpittman@mayland.edu
Office Hours: Tuesdays & Thursdays 10:30 – 11:00
Wednesdays 4:00 – 5:00
Fridays 9:00 – 11:00

Course Information

Course meetings: Tuesdays & Thursdays 8:00 – 10:20
Required Text(s): Physics: Algebra/Trig, Hecht, 3rd edition.
LRC Resources: none
Required supplies: TI 36X calculator

Course Objectives/Competencies:

Physics is the study of the material Universe--- all there is. And that's a bold and wonderful agenda. In this class, the second of a two part series, we will begin the study of electricity, magnetism and light. This means that after this class you will be able to, identify, analyze and describe: electrostatic forces, electric fields, electric potential, dc circuits, ac circuits and light.

Attendance Policy/Tardiness/Make-Up Work:

Prompt and continual attendance is required. All assignments are due 'on time'. Students will receive a zero for any assignment not turned in on time. As for a missed exam, a makeup opportunity will not be allowed, except for authorized excuses (such as notes from a doctor or hospital, proof will be required).

Grading Criteria/Tests/Projects:

Tests	60%
Homework	20%
Labs/Projects/Papers	15%
Attendance & Participation	5%

Grading Scale:

A	=>90
B	=>80, < 90
C	=>70, < 80
D	=>60, < 70
F	<60,

Inclement Weather Procedures:

If we experience dangerous weather conditions do not risk your safety to attend class. Any classes that are missed due to weather will be made up, at a time that is satisfactory to all.

Academic Standards/Student Expectations/Ethics:

Do your own work. Be cordial to and respectful of your classmates. If you cheat on a test, copy someone's homework, or exhibit unethical behavior; you will be subject to one or more of the following: (1) No credit for the assignment/exam and/or (2) removal from the course. If you wish to contest any assertion of failure to meeting academic standards, you may exercise the due process options listed in the Student Handbook.

Withdrawal Dates:

End of unconditional withdrawal:
End of conditional withdrawal:

Monday February 13, 2007
Wednesday, March 27, 2007

ACADEMIC WITHDRAWAL STATEMENT

If a student has not been in contact with the instructor and has not attended class for a consecutive two-week period, an administrative withdrawal will be submitted by the instructor.

ADA Statement

Any student requesting special accommodations for this course due to a disability should apply for services through the SOAR Office or the Counseling Center, which will document the disability. A counselor will then help determine which accommodations, if any, the student needs for success in this course.

Course Outline/Weekly Topics

Week 1	Electromagnetic charge, electric force, electric fields.
Week 2	Gauss's Law, electrical potential, capacitance.
Week 3	Direct current, resistance, Ohm's law.
Week 4	Voltage drops & rises, series & parallel circuits.
Week 5	Network analysis, Kirchoff's rules.
Week 6	Magnets and Magnetic fields, EXAM I.
Week 7	Electrodynamics, Ampere's law.
Week 8	Induction, Faraday's law, motional emf.
Week 9	Generators, RLCircuits.
Week 10	ac resistance, inductance and capacitance.
Week 11	RLC ac networks, EXAM II.
Week 12	Transformers, semiconductors.
Week 13	EM waves, energy and irradiance.
Week 14	EM spectrum, propagation of light.
Week 15	Geometric optics, lenses & mirrors.
Week 16	Physical optics, polarization, interference, diffraction, FINAL EXAM.

PERSONAL NOTE

While I have attempted to be as thorough as possible with this syllabus, course procedure may vary from this outline to meet the needs of this particular group.