Phy.203-601 2011 Summer III (6079) Syllabus (General Physics II)

Instructor: Dr. Curt Foltz ; foltzc@marshall.edu ; Science 159 ; (304) 696-2519
office hours: TR 8:30-9:30, MTWRF 12:30-15:00 ; other times by appointment or chance.

Class meets MTWRF 10am – 11:50am , from Jul.12 – Aug.12 in Science 277
You are expected to enroll in Phy.204 Laboratory during the same semester as Phy.203 .

Phy.203 is : a 3-credit undergrad course, intended for Natural (not Physical) Science majors.
Chem and Geology and Math majors should consider Phy.213+320 instead of Phy.203 .

Prerequisites: PHY 201 or PHY 211
Most students finish their PHY 201 class with a deficient understanding of *some* topics – do NOT try to hide these by blindly copying someone else's work or a textbook example! Rather, bring them to my attention in class (or out) so we can fix the situation right away. Lectures will include many in-class exercises – the class is customized for participants.

Required: textbook: College Physics 8th ed. by *Serway & Vuille*, from Brooks/Cole (2009)
calculator : non-programmable, with buttons (not menu) for EE or EXP , x^2 , $\sqrt{x}$, cos , $\sin^{-1}$
web browser … for our Phy.203 web site content and to links beyond it (MUonline?)
attendance: (with pen or pencil, calculator, textbook) at each class meeting, ready to learn
time & effort: in class and out, ≈ 6 effective hour/day to read, do assignments, ponder

Recommended: notebook with blank pages … extremely useful ! (out-of-class and in-class)
courage … to ask for help before you're hopelessly lost (in class) … or between classes
study partner … it's way more fun than by yourself, & can be more thorough (peer view)
MU email access … I'll use your marshall address as an official communication channel.

Maybe try: a workbook not-for-dummies (*Shaum's Outline*, or *Boone*'s MCAT Physics Guide)
a different textbook's treatment (Drinko or Sci.159) might be helpful for some topic(s)
(by *Walker* or *Knight* for serious self-study; by *Hewitt* or *Dixon* for easy-read concepts)
color-coding your concept map (in notebook) parallel to your Physics I concept map

Objectives: Phy.203 is the second half of a two-semester sequence introducing concepts and principles which describe and explain the physical world's behavior. Fundamental fields (Gravity, Electric, Magnetic, Strong) arise from sources, and cause influences to objects' properties (*via* Force, Energy, momentum, Action); each conserved quantity has a current (*via* geometry). Students will apply theories to simplified scenarios in diverse situations (involving biology, chemistry, technology) to arrive at conceptual and quantitative descriptions of processes which would ensue. Students will use diagrams to represent the invisible, graphs to show relationships, cause-effect wording to describe processes; will translate words & diagrams to and from symbolic forms (equations & formulae), will manipulate symbols to obtain new statements, and will interpret their calculated results in terms of predicted behavior in the original scenario. Students should become familiar with typical magnitudes for important quantities, on several scales.

Absences: if you miss a quiz or an exam, schedule with me before the next class to make it up – otherwise the make-up quiz will probably not be of similar difficulty.

Schedule Plan: the course will split into 4 Units (each contains about 4 Serway chapters)
(1) Electricity ; (2) Magnetism ; (3) Optics ; (4) Atoms & Nuclei
see www.science.marshall.edu/foltzc/P203116w.htm for current schedule detail.

Homework assignments will be posted there (www.marshall.edu/foltzc/P203116w.htm)
"suggested practice" will not be graded, but should guide our classroom activities.
most graded homework will be on MUonline, and should inform your study activities.

Do some exercises before trying the problems that are graded! (it saves time, eventually)
do some practice problems before the Quiz … do some others before the Exam.
look at the topic's pictures & read their captions, to parse the equation (before class).
ask questions in class when you don't understand what we're doing, and why

A topic Quiz – 15 minute, closed-book, closed-notes solo event, will *focus on* the recent topic.
completion/mult.choice for vocabulary, units, facts; a couple "plug & chug" scenarios;
one or two indirect (4-6 sentence or 2-3 equation) scenarios.

A Unit Exam – 60 minute, closed-book, closed-notes solo event, to relate topics of that Unit
to each other and to topics of previous Units (Exams are essentially "comprehensive").
Exam page 1 will include formulas not equations. NO 3x5 cards , NO graphing calculators.
1st Exam will be Jul.21 (R); 2nd Exam Jul.28 (R); 3rd Exam Aug.5 (F); 4th Exam Aug.12 (F)

Point Plan: 4 exams x 50 points/exam = 200 points (half the total course grade)
12 quizzes x 10 points/quiz = 120 points (one-third of the course grade)
15 home-works x 4 pts/hw = 60 points (one-sixth of the course grade)
The quizzes and home-works count is approximate … if the count changes, then the
"points each" will remain constant, so total points (and %) in that category will change.

Letter Plan: 100% > A > 85% > B > 75% > C > 65% > D > 55% > F
I may adjust any letter boundary(ies) downward at any time without advance notice.

Statements that are valid for ALL Classes at Marshall:

Academic Dishonesty Policy : honesty is the foundation of science. see pp.66-70 in
the catalog : www.marshall.edu/catalog/undergraduate/ug_10-11_published.pdf

Affirmative Action Policy : equal opportunity at Marshall is on pp.63-64 of the catalog

Computing Services' Acceptable Use Policy : don't "lend" your account to others ;
don't send spam from it, or solicit from it. see www.marshall.edu/ucs/CS/accptuse.asp

Incomplete Grade Policy: to receive a grade "I" , you must have done ¾ of the course work,
at an acceptable (passing) proficiency (percentage) ; see pp.86-87 in the catalog.

Students with Disability Policy : the student must initiate procedures … first, see info at
www.marshall.edu/disabled/ … then, contact the Office of Disabled Student Services
(in Prichard Hall 117 , phone 696-2271) , which will communicate with me.

Inclement Weather Policy: don't over-risk your safety trying to get to/from class in a
blizzard, flood, or tornado. See pg.64 in the catalog.