PHY 122/124 (3 credits lecture + 1 credit laboratory)

Time & Location: MWF (11:45-2:45); 001 Earth and Space Sciences Building

Instructor: Prof. F. Douglas Swesty

Office: Room 463 Earth and Space Sciences Building
Phone: 631-632-8055
Email: dswesty@mail.astro.sunysb.edu
(avoid email and communicate by phone on any matter of importance)
(*no grade issues will be discussed via email or phone*)
Office Hours: MWF 3:00-4:00 PM or by appointment

Purpose:

This course is designed to provide an introduction to electromagnetism, optics, and modern physics

Academic Requirements: You must be registered for both PHY 122 and PHY 124. *Students who register for only PHY 122 will receive a grade of "F" for that course.*

Required background: You must have completed PHY 121 or it's equivalent, You must also have completed the first semester of Calculus.

Required texts:

College Physics, **volume 2,** 8th edition by Serway & Vuille

Other Required Material:

1. All Course Information handed out in lecture
2. A Non-programmable calculator from the approved list (posted on the course web site). The calculator should have trig functions, log functions, and square root capabilities but must not store alphabetic or symbolic information.

Course Grading: The grading for the course will be based on quizzes (10%), a midterm examination (30%), homework assignments (10%), laboratory (20%) and the final examination (30%). The course grade distribution may be curved. The lab grades will be normalized (brought to the same mean) between lab sections. The grades for PHY 122 and PHY 124 will be the same.

Important University Policies If you have a physical, psychological, medical or learning disability that may impact your ability to carry out assigned course work, contact the staff in the Disabled Student Services office (DSS), 128 Educational Communications Center, 632-6748/9. DSS will review your concerns and determine with you what accommodations are necessary and DSS will advise me. All information and documentation of disability is confidential.

Stony Brook University expects students to maintain standards of personal integrity that are in harmony with the educational goals of the institution; to observe national, state, and local laws and University regulations; and to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, and/or inhibits students' ability to learn.

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Any suspected instance of academic dishonesty will be reported to the Academic Judiciary. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website.

SPECIAL NOTE REGARDING PLAGIARISM AND DISHONESTY: All instances of plagiarized work or academic dishonesty will be brought before the Academic Judiciary Committee. All parties involved (both the copier and the person who produced the original work) will be held accountable for any instance of plagiarism or dishonesty. Additionally, quizzes will be administered via electronic response pads. Any student using a response pad other than their own will receive a failing grade for the course as will the student who owns the response pad.

Additional Course Policies:

- **Missed quizzes and labs: No makeups will be given under any circumstances!**
- **Missed examinations:** Make-up exams will be given only on the basis of valid medical absence that can be verified by the instructor or because of Jury Duty or military service. In all cases arrangements for a makeup exam must be made with the instructor **prior to the time of the exam**.
- **Grade challenges:** Any challenge to a grade must be made within three business days of the graded being returned or posted online. No changes to grades will be made after three business days have elapsed.
- **Missed quizzes and labs: No makeups will be given under any circumstances!**
- **Student Responsibilities:** You will be expected to abide by by all University regulations, procedures, requirements, and deadlines as described in the *Undergraduate Student Bulletin.*
- **Attendance:** As per the University policy outlined in the *Undergraduate Student Bulletin*, students are expected to regularly attend all classes and to participate in the classroom experience. You must attend the lab sections for which you are registered. **Labs carried out in a section other than you own will be given a zero score. There are no exceptions to this policy for any reason.**
- **Classroom Behavior and Conduct:** You are expected to conduct yourself in accordance with the minimal undergraduate student responsibilities described in the Undergraduate Student Bulletin including:
    - You are expected to arrive for class promptly.
    - Avoid behavior that is disruptive to the classroom especially the use of cell phones.
    - Avoid conversations during class
    - Be familiar with material presented in previous lectures.

Exams & Quizzes: The examinations will cover material presented in class and contained within reading assignments. The exams and quizzes will be cumulative. The lowest two quiz scores will be dropped. **No makeup quizzes will be given.** You must bring a **non-programmable calculator** to class and to the exams. Quizzes will be administered at random times via electronic response pads which you may purchase through the campus

bookstore. It is the students responsibility to bring a non-programmable calculator and their response pad to each class in order to complete quizzes. A forgotten or non-functional calculator or response pad will not be an acceptable excuse for missing a quiz. No make-up exams or quizzes will be given because of schedule conflicts. In accordance with University policies, *it is the students responsibility to schedule classes so as to avoid final examination conflicts.* ***You must posses your University ID during Exams and Quizzes***

Blackboard: Where possible, course materials will be made available through the University's Blackboard System. All students must regularly monitor Blackboard for notices and changes to course information including the syllabus. Grades for quizzes, exams, and the course will also be posted through blackboard.

Homework: Homework will be administered online through WebAssign (www.webassign.com). A WebAssign access code is included with the textbook purchased through the campus bookstore. If you purchased the book through another source you may have to separately purchase an access code. Details of how to access WebAssign will be made available through the course website under Blackboard. WebAssign creates homework problems that are unique to each student. It is important to try to complete these problems yourself.

Electronic Response Pads: Quizzes will be administered via electronic response pads which can be purchased through the campus bookstore. The response pads, more commonly known as “clickers”, must be registered online. Details of how to do this will be posted on the course web page under Blackboard.

Help Room: A help room, A133 Graduate Physics Building, will be staffed by your Teaching Assistants in order to help you with problems you may have in the class. You may make use of the help room while it is staffed by any TA (it is not necessary for you to wait until your TA is in the room). Please do not ask the TAs to do your web assign homework for you. They will assist you in working through problems on paper but will not assist you in completing your homework assignments.

Laboratory Experiments: Any student who completes fewer than 7 lab reports ***will receive a failing grade for the course!!!!*** Lab writeups will be available through the course website under blackboard. You must read the lab writeup and be prepared to carry out the experiment prior to the lab session. The labs will be run by Teaching Assistants who will issue their own instructions about the labs.

Computer access: Many aspects of the course (homework, registering your response pad, etc.) can only be done online. If you do not have a personal computer you may use

the campus SINC sites located around campus. Not all SINC sites may be open during the summer sessions but the Melville Library SINC site is. Access to the SINC site computers requires your NetID and password. You may set this under SOLAR. See the Stony Brook website for more information.

Acknowledgement of Student Responsibilities: The last page of this syllabus contains a statement that you must sign and present to your section TA at the beginning of the first lab. It requires that you read this syllabus in it's entirety.

Schedule: A tentative Lecture schedule is given below but is subject to change. **Labs and Exams will be held on the specified dates regardless of changes in the lecture schedule.**

Date	Class #	Topic	Reading	Lab
Jul 13	1	Electric Forces and Fields	Ch 15	No lab
Jul 15	2	Electrical Energy and Capacitance	Ch 16	Oscilloscope
Jul 17	3	Current and Resistance	Ch 17	Field plot
Jul 20	4	Direct Current Circuits	Ch 18	No lab
Jul 22	5	Magnetism	Ch 19	DC circuits
Jul 24	6	Induced Voltages and Inductance	Ch 20	No lab
Jul 27	7	AC Circuits and EM Waves	Ch 21	Magnetic force
Jul 29	8	Reflection and Refraction of Light	Ch 22	E/M
Jul 31	9	Midterm Exam; Mirrors & Lenses	Ch 23	No lab
Aug 3	10	Wave Optics	Ch 24	AC circuits
Aug 5	11	Optical Instruments	Ch 25	Diffraction
Aug 7	12	Relativity	Ch 26	No lab
Aug 10	13	Quantum Physics	Ch 27	Atomic spectrum
Aug 12	14	Atomic Physics	Ch 28	Nuclear decay
Aug 14	15	Nuclear Physics	Ch 29	No lab
Aug 17	16	Nuclear Energy and Elementary Particles	Ch 30	No lab
Aug 19	17	Final Exam		No lab

I _____(print name) hereby acknowledge that I have read and understand the policies outlined in the course syllabus for PHY 122/124.

Signature:_____

Date: _____