

PHYSICS 122-Physics for Life Sciences – Stony Brook University

SAMPLE SYLLABUS

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Current Course Information, Policies & General Guidelines

INSTRUCTOR: Professor Edward Pascuzzi

Office: A139A (Help Room hours are in the PHY121-122 Help Room A131 TBA)

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Course ID for Mastering Physics Login; **SBUPHY122PASCUZZIXXXXXX**

GOALS: To ensure that you become adept, confident and highly skilled at problem-solving with some emphasis on achieving success on the Physics portion of the MCAT examination.

NATURE OF THE COURSE MATERIAL: PHY122 encompasses the principles of freshman physics with applications to problems related to the life sciences and medical fields. The material is heavily laden with challenging concepts, algebra and trigonometry, but no calculus. You should be aware that, upon enrolling into an intensive and fast paced introductory course such as this, there is a serious level of commitment and investment of time required of you should you wish to be successful and earn a good grade. The course pace is very fast and the demands on you are great.

HOW TO EARN A HIGH GRADE: As with any other college course, you can always do quite a bit to improve your grades, just like doing nothing will hurt your grade. These include;

- 1) Take notes on the required chapter readings and be sure to highlight key items such as laws or important equations that are always true (and not just specific for one question). Read the chapter sections very carefully, to be sure you understand it. If you don't, ask for help. You should also work every worked example in the chapter readings to be sure you know/understand how to apply the particular concept at hand.
- 2) Don't memorize every equation in the book...this is counterproductive. Instead, focus on laws and rules that are always true, rather than trying to "find" an equation that looks like it works. Remember that there is a big difference between laws which are always true and formulae which are specific for a certain question.
- 3) Sit in the FRONT of the lecture hall/classroom so your attention is better focused and pay attention.
- 4) Leave your cell phone and your laptop OFF; you DO NOT need them during class.
- 5) Get the Schaum's Outline book for College Physics and do all the worked problems until you understand the angle/approach for each one. Then, do the problems again.
- 6) Take your education and work seriously and ask questions if you have to...the worst questions are the ones which are never asked.
- 7) Come to the Help Room during office hours (Room A131 in the Physics building) and ask for help. Everyone needs help with physics...you are not the first one. You will be glad that you did, and you will feel more confident after, and will be happy to finally understand something that has bugged you for weeks.
- 8) Be assertive and caring when it comes to your own education...laying low for the first 2/3 of the semester and then trying to raise your grade by two letters at the last minute doesn't work. Hard and consistent good work will work.
- 9) There is no such thing as an extra credit project to take the place of not working hard all semester. Don't even ask.

- 10) Don't miss exams or quizzes...you will not be permitted to make them up and no soap opera will be considered as a valid medical reason for having done so.
- P** 11) Form a regular study group (not a gossip group that wastes time) and solve physics problems regularly, or hire a private tutor and meet with him/her at least 4 times per week.
- 12) Do your own work, and keep it to yourself. You are only hurting yourself by not doing so.

TEXTBOOK AND REQUIRED MATERIALS: The text used is **College Physics- A Strategic Approach**, by Randall D. Knight, 2nd edition, 2010 by Pearson publishing (ISBN # 9780321595485 is the hard cover, which includes the Student Access Code) and is available with the Student Access Code to facilitate logging on to **MasteringPhysics.com** to complete homework assignments. If you choose not to purchase the text, you will still be responsible for purchasing the Student Access Code for access to **MasteringPhysics.com** to complete online homework assignments. You can also purchase a **MasteringPhysics** account directly through their website.

CLICKERS: As part of in-class participation grade, we will be using clickers which you must purchase at the campus bookstore. Set your clicker to Channel 41 and bring it every day to class as we'll do questions in class for which you can obtain credit (of course, only if you are present!). Clicker questions are typically multiple choice questions (MCQ) like exam and quiz questions and are a good way to obtain feedback regarding your understanding of a topic. **FOR YOU TO RECEIVE FULL CREDIT FOR YOUR CLICKS, YOUR CLICKERS MUST BE CORRECTLY REGISTERED BY 9AM ON THE FIRST DAY OF CLASSES (Tue 8/26/14).**

LECTURE: Lecture time encompasses the introduction of necessary physics material, concepts and demonstrations commensurate with the course, problem-solving time and quiz time.



BLACKBOARD: Nearly all of the course administration will be done via Blackboard.

“Blackboard” is blackboard.stonybrook.edu and nearly all of the administration of the course will be done through Blackboard, so you must be sure that your correct email address is listed there. During the course, announcements will be posted and sent via email to you concerning updates, changes, etc., and you will also have access to many other items such as supplementary problems for practice to prepare for things like exams etc. Note that in order to keep up to date with course postings on Blackboard, you must a) have a valid and real email address posted there with your course registration and b) **you must READ your SBU email daily.**

LABORATORY: **The laboratory course is mandatory and you must register separately for it under a different course heading (PHY124).** All lab grades will count so if you skip one, your grade will suffer. Labs will be conducted in rooms labeled “PHY124” on the **Z** level of the Physics Building and each lab activity should be available beforehand on Blackboard so check for them and download/print them. **Do not come to the laboratory without having read/understood what you are supposed to do with a certain lab.** This way, your time will be used efficiently. You should also bring with you a laptop which has MSExcel so you can quickly and efficiently tabulate and then plot any data you need to finalize your lab report. Also check the “Lab Documents” folder for information about how to use MSExcel for plotting and also for documents relating to how to write a lab, how to make graphs and how to perform uncertainty propagation. **Please note that there will be no lab meeting during the first week of our class.**

MAIN TOPICS: Electrostatics, Electricity, Circuits, Magnetism, Light, Interference & Diffraction, Geometric Optics, Modern Physics, predominantly. If there are changes, they will be announced as the course develops.

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OMEWORK: The importance of learning and understanding physics lies predominantly with becoming adept at problem-solving, a necessity we will cover constantly during every class. To better facilitate both the administration and grading of your homework problems, the Physics Department has invoked online homeworks through MasteringPhysics.com, for which you must purchase an access code (provide your access code to create an account and then access course homework using the code given at the top of this document). The responsibility is yours when it comes to working out homework problems in order to best understand the applications of the laws and concepts involved. Therefore, there will be numerous homework problems assigned during each class which will be graded during the following class during recitation. If you find that you are having any difficulty, please do not hesitate to come for extra help. Since the semester is only about six weeks, it is imperative that you stay on top of your own work. Assignment due dates will be clearly shown on MasteringPhysics.com and it will be up to you to check for the next assignments as the course moves along.

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QUIZZES: Short quizzes will be most likely be given rather frequently, during lecture time, if the group is small enough to facilitate this. Further information regarding this will be disseminated as the semester gets underway.

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XAMS: There will be three (3) scheduled midterm exams each approximately a quarter of the way through the course, followed by a cumulative final exam, during exam week. Dates and times are clearly posted in the online class calendars posted on the course webpage on Blackboard. All exams are given during the class time, not at night due to logistical reasons. **Additionally, there are no make-up exams offered, so you must be present for all three midterm exams and the final exam, unless there is a valid documented (in writing) medical reason. Oversleeping, attending a wedding, vacation or starting spring break early etc. are not valid medical reasons for missing an exam. You must present a doctor's letter (not a prescription note pad with a scribbled signature) with contact information from a physician who examined you who can verify that you were indeed under his/her care for the time in question.**

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OURSE POLICIES & GRADING: Your course grade will be based on the following assignments with the percentages shown (**PLEASE NOTE THESE ARE APPROXIMATE AND MAY CHANGE**);

Clicker Questions – 6%	Online homework problems – 15%
Quizzes – 12%	Midterm Exams – 25%
Lab Work – 12%	Final Exam – 30%

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The approximate grading schema (“curve”) for letter grades in PHY121 is as shown below. Note there are no curves on exams, however the grading scheme below incorporates a “curve” based on years of teaching and the fact that averages on exams typically fall in the mid to upper 60% range.

	A	A-	B+	B	B-	C+	C	C-	D+	D	F
Percentage	90-100	87-89	84-86	78-83	72-77	68-71	63-67	58-62	53-57	50-52	below 50

DISABILITY SUPPORT SERVICES (DSS) STATEMENT:

P If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Disability Support Services, ECC (Educational Communications Center) Building, room 128, (631) 632-6748. They will determine with you what accommodations, if any, are necessary and appropriate. All information and documentation is confidential. Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Disability Support Services. For procedures and information go to the following website: <http://www.stonybrook.edu/ehs/fire/disabilities>.

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PLEASE NOTE THAT, SHOULD YOU REQUIRE EXTRA TIME FOR TESTING (OR OTHER ACCOMODATIONS) DUE TO A LEGITIMATE MEDICAL DISABILITY YOU ARE REQUIRED TO SUBMIT YOUR MEDICAL DOCUMENTS TO THE DSS OFFICE BY THE END OF BUSINESS OF THE FIRST WEEK OF CLASSES. FAILURE TO REGISTER WITH THE DSS OFFICE WILL CAUSE YOU TO LOSE SUCH PRIVELAGES FOR TESTING ACCOMODATIONS AND YOU WILL BE FORCED TO TAKE YOUR EXAM IN THE LECTURE HALL WITH ALL OTHER STUDENTS FOLLOWING THE USUAL CLASS TIME CONSTRAINTS.

THIS POLICY IS STRICTLY ENFORCED

ACADEMIC INTEGRITY STATEMENT:

P 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. Faculty are required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology & Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website at <http://www.stonybrook.edu/uaa/academicjudiciary> **Please note that using multiple clickers during class time also constitutes cheating and if caught you will face the Academic Judiciary for hearings to determine what penalty you will experience. Furthermore, opening several accounts on MasteringPhysics.com to cheat on homework assignments also constitutes dishonesty; remember that every movement you make at MasteringPhysics.com is tracked to your name, ID and IP address. NOTE THAT STUDENTS WHO ARE DISCOVERED TO BE CREATING GHOSTING ACCOUNTS ON MASTERINGPHYSICS.COM OR WHO HAVE CHANGED WRITTEN EXAM ANSWERS FOLLOWING THE GRADING OF AN EXAM WILL HAVE THEIR NAMES SUBMITTED TO THE ACADEMIC JUDICIARY COMMITTEE AND MAY FACE POSSIBLE EXPULSION FROM THE UNIVERSITY.**

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CRITICAL INCIDENT MANAGEMENT:

Stony Brook University expects students 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, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures.

ELECTRONIC COMMUNICATION

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Email to your University email account is an important way of communicating with you for this course. For most students the email address is 'firstname.lastname@stonybrook.edu', and the account can be accessed here: <http://www.stonybrook.edu/mycloud>. **It is your responsibility to read your email received at this account!**

For instructions about how to verify your University email address see this:

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<http://it.stonybrook.edu/help/kb/checking-or-changing-your-mail-forwarding-address-in-the-epo> .

You can set up email forwarding using instructions here:

<http://it.stonybrook.edu/help/kb/setting-up-mail-forwarding-in-google-mail>.

If you choose to forward your University email to another account, we are not responsible for any undeliverable messages.

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**PALL COURSE COMMUNICATION IS DONE
ONLY THROUGH YOUR SBU EMAIL
ACCOUNT. SHOULD YOU CHOOSE NOT TO
READ THIS EMAIL YOU WILL MISS CRUCIAL
COURSE ANNOUNCEMENTS AND OTHER
VITAL INFORMATION.**

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PHY122 FAQs:

"I **P**o't like my lab TA and want to switch to another lab section. Can I?"

The short answer is ...no. Here's the long answer;....In life, you will be required to work with all types of people from all walks of life with all sorts of personalities, some acceptable, some intolerable, and as a result, you must learn to accept this, taking a deep breath and being mature about it. If there is a specific problem concerning grading or if something is unclear, simply ask your TA and come to a mutual and mature agreement.

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"I want a higher grade!" or "I want my course grade changed; it is too low!"

Then you must work for it. As described above, the grade you earn is the grade **YOU** EARN...it is not a made-up number pulled out of a hat. Physics is very challenging, and what is even more challenging is taking two physics courses over the summer, which means that you must eat, breathe, sleep and involve yourself in physics 24/7. If **S** you are still having trouble, get a review book, do ALL the problems, get a private tutor or come for free extra help in the Help Room, A131. Again, just to reiterate;

GRADES ARE NOT CHANGED TO SUIT YOUR NEEDS/WANTS AND DESIRES.

If you NEED a certain letter grade in this course to advance to some other course, you must EARN IT. We do not "create" or "give" you your numerical grade; it instead it arises from YOUR achievements. Translation; after the course is over, please DO NOT send a barrage of emails complaining about your grade and requesting a grade change because you earned a C- as they will not be replied to. If you need a C, your final numerical average must be 62.5 or higher. Furthermore, students who wish to convince us that their grade should be changed often used the argument that "I worked so hard!" Yes, it is true, many students do work hard, and I do greatly appreciate that, however, your grade is not based on how hard you work because we do not have a camera watching you 24/7 to actually see how hard you are working. Some students who earn a grade of A may not do any work, while some who earn a grade of D may work 100 hours a week. Final grades are based solely on the combination of nearly 30 assignments in the categories of labs, homeworks, clicker questions, exams and quizzes. Thus, you have 30 chances to earn a very good grade.

If you find that you are having great difficulty achieving the grade you need, please refer to the items listed above on the first page of this syllabus.

"I have to attend a party and will miss a quiz. Can I make it up?"

No. There are no makeups for anything in the course unless there is a dire emergency WITH a documented letter from a family or ER physician which can be verified.

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“I have to attend a party and will miss an exam. Can I make it up?”

P No. There are no makeups for anything in the course unless there is a dire emergency WITH a documented letter from a family or ER physician which can be verified.

“I have to go to the beach to work on my tan and will miss a lab. Can I make it up?”

A There are no makeups for anything in the course unless there is a dire emergency WITH a documented letter from a family or ER physician which can be verified.

“My clicker doesn’t work, it must be your fault.”

Clickers are funny and unpredictable things as they deal with a wireless system. First, check the following:

- S** 1) Did you register the clicker CORRECTLY through Blackboard? Note you will NOT receive credit for your clicks if they come in from an UNREGISTERED clicker as they show up with no name.
2) Did you set the clicker channel correctly (Ch. 41)?
3) Are you clicking and sending “note to teacher?” This does not count as a click.
4) Did you go to the Faculty Center in the library to see the clicker expert, Jennifer Adams?
5) Did you try calling the Clicker Helpline at 1-866-746-3015?

“My Exam was misgraded and I want a regrade.”

C Generally, exams and quizzes are NOT regraded once a student leaves the room in which the exams and quizzes are returned, for obvious reasons. Therefore, you must look your paper over VERY carefully immediately after it is returned to you and then return it to your TA, WITH A VERY SPECIFIC NOTE ON THE FRONT DETAILING THE PROBLEM who will in turn submit it to your professor for a regrade. You must realize that if a paper of yours is regraded, the final score may actually turn out to be lower than the original score.

“Since I’m enrolled in a very competitive university and tough class, can I just cheat instead of working hard?”

Z Being mature young adults, this choice is in your hands to decide, however, once you are caught, you face a disciplinary hearing board which will decide whether or not to permanently expel you from the university (without tuition reimbursement) and give you an F for the course. Further, you will have to face your parents and family and explain this, and this will likely be something that will accompany you through your entire college career (if you are lucky to continue having one after being caught).

Z Additionally, students must realize that every motion they make on MasteringPhysics.com is tracked, and analyzed to unearth cheaters, and that students who make ghosting accounts on that website are immediately flagged by cross-referencing with the Blackboard roster for the class. Such accounts are immediately disabled for the duration of the course, whereupon disciplinary actions are taken against the student/s, as outlined above.

In short, do your own work and seek extra help when necessary.