COURSE OUTLINE PHY122 – Physics for the Life Sciences II

Suffork COUNTY COMMUNITY COLLEGE

CRN: 38400, 4 credits; Instructor: Glenda Denicoló (PhD), e-mail: denicog@sunysuffolk.edu Meeting times: Tue Thu 8:00 am – 9:40 am, Thu 10 am – 11:50 am; classroom: T-14 (SMTSC), on campus Websites: most course materials will be posted in D2L-Brightspace.

Instructor office hours:	Online hour (via e-mail, not on campus): Mondays 6pm-7pm
	In office (T-218): Tuesdays 10am-11:45am
The instructor's schedule is also	In office (T-218): Wednesday 10am-11:45am
available in D2L-Brightspace.	In office (T-218): Thursdays 1:30pm-2pm

CATALOG DESCRIPTION

Second of a two-semester sequence of fast-paced introduction to physics with applications to biology, primarily for students majoring in biological sciences or pre-clinical programs. It focuses on electric circuit theory, electromagnetism, wave motion, optics, and radiation phenomena. Strong algebra skills and knowledge of the ideas of calculus are required. Three lecture hours, one recitation hour and two laboratory hours per week. PHY 122 may not be taken for credit in place of PHY 119, 220 or 230. Prerequisite: PHY 121, MAT 141.

COURSE LEARNING OUTCOMES

- 1. Students will demonstrate mastery of physics concepts related to wave motion, interference, diffraction, reflection, refraction, geometric optics, electrostatics, electric circuit theory, magnetostatics, electromagnetism, atomic and nuclear physics.
- 2. Students will be able to think critically and apply appropriate physics concepts in analyzing qualitative problems in classical physics.
- 3. Students will demonstrate the ability to apply algebraic and calculus-based mathematical reasoning in solving quantitative physics problems.
- 4. Students will demonstrate proficiency in science process skills by designing and performing experiments to measure physical phenomena and minimize experimental error.
- 5. Students will demonstrate scientific communication skills through thoughtful discussion, collaborative problem solving, and dissemination of experimental results.

COURSE GRADE POLICY

Activity	Points
(3 + 1) Lecture Tests: highest grade of 3 will count twice, making it "4 th " test	50%
(13 – 3) "Practice problems" assignments in Mastering Physics – homework	20%
(13 – 3) "Reading questions" assignments in Mastering Physics – homework	10%
(11-1) Lab reports: must attend the lab in person, and prepare report as homework	20%
1 math review + 3 Pre-tests available as extra credit assignments in D2L (optional)	4%
TOTAL =	104%!!

The final course grade will be based on a combination of several homework assignments, lab reports and 3 non-cumulative tests. The highest test grade will count twice, making a total of 4 test grades for the calculation of the final grade. Several homework grades will be dropped at the end. Any "curving" is provided by the 4 optional extra credit assignments. There will be no other form of extra credit.

In general, <u>make-up for lecture tests</u> will be allowed only ONCE and will ONLY be given to students who show documentation proving an emergency, or extenuating circumstances communicated ASAP to the instructor:

DO NOT WAIT. Communications done much later after the fact, may have no effect at all. Communications of extenuating circumstances only at the end of the semester will have no effect. **Reach out and speak up as soon as possible always.**

Once a grade is returned to you and you find any inconsistency (such as grade posted in D2L not equal to the one you have in paper), you have ONE WEEK to talk to your instructor and sort out the problem. The same ONE WEEK PERIOD is applied to any other issue, including lab activities.

There will be NO curving of the grades in this course. Your final grade is non-negotiable. This is the letter grade breakdown that will be used throughout the semester:

 $89.5 \le A \le 100$ $84.5 \le B + \le 89.4$ $79.5 \le B \le 84.4$ $74.5 \le C + \le 79.4$ $69.5 \le C \le 74.4$ $64.5 \le D + \le 69.4$ $59.5 \le D \le 64.4$

F ≤ 59.4

Important Notice:

At the end of the course, once all the grades are in, a 69.3 for example, translates into a D+ and not to a C. "YOUR FINAL GRADE IS NOT NEGOTIABLE" means that the grade breakdown shown IS FIRM. A difference of even 0.1 point in your final grade is NOT NEGOTIABLE. **Tweaks to your grade can be done BY YOU using extra credit.** However, at the end of the course, no other activity will be given to change your final grade: at the end of the course, after your last test, take responsibility for what YOU have achieved.

According to the Family Educational Rights and Privacy Act (FERPA), grades will never be discussed by e-mail or phone, only in person.

HOMEWORK: PRACTICE PROBLEMS AND READING ASSIGNMENTS (to be done INDIVIDUALLY always)

Reading questions and practice problems are the homework assignments required in PHY122 and worth 30% of your final grade in total. Access these assignments inside our **Brightspace** course page, under "Homework with Mastering Physics". Assignments cannot be submitted late (past deadline grade is zero) but will remain available for consultation until the end of the semester (please alert the instructor as soon as possible if having trouble accessing anything).

R# = Reading questions (number of items, estimated time required), 10% of final grade		Available	Due date
P# = Practice problems (number of items, estimated time required), 20% of final grade		on	(11 PM)
Assignments before Test 1 (Tue Feb 20) Coverage: Chaps 15 (15.1-15.7), 16 (16.1-16.7), 17 (17.1-17.8), 18 (18.1-18.5), 19 (19.1-19.3, 19.5-19.8), 20 (20.3)	R1 (11q, 11 min), P1 (17q, 87 min)	Jan 22	Fri, Feb 2
	R2 (10q, 12 min), P2 (16q, 73 min)	Jan 22	Mon, Feb 12
	R3 (10q, 8 min), P3 (17q, 81 min)	Jan 22	Mon, Feb 12
	R4 (8q, 7 min), P4 (14q, 56 min)	Jan 22	Fri, Feb 16
	R5 (14q, 16 min), P5 (18q, 85 min)	Jan 22	Mon, Feb 19
Assignments before Test 2 (Thu Apr 4)	R6 (12q, 17 min), P6 (17q, 98 min)	Feb 21	Fri, Mar 1
Coverage: Chaps 21 (21.1-21.7), 22 (22.1-	R7 (14q, 18 min), P7 (24q, 95 min)	Feb 21	Wed , Mar 13
22.3, 22.5-22.6), 23 (23.1-23.3), 24 (24.1- 24.6), 25 (25.1-25.7)	R8 (9q, 12 min), P8 (15q, 67 min)	Feb 21	Wed, Mar 20
	R9 (8q, 4 min), P9 (19q, 82 min)	Feb 21	Wed, Apr 3
Assignments before Test 3 (Tue May 14)	R10 (11q, 11 min), P10 (14q, 61 min)	Apr 5	Fri, Apr 19
Coverage: Chaps 26 (26.1-26.5), 27 (27.1-	R11 (11q, 10 min), P11 (17q, 82 min)	Apr 5	Fri, Apr 26
27.7), 28 (28.1-28.8), 29 (29.1-29.8), 30	R12 (10q, 5 min), P12 (15q, 68 min)	Apr 5	Fri, May 3
(30.1-30.5)	R13 (10q, 8 min), P13 (24q, 103 min)	Apr 5	Mon, May 13

There are 13 "reading questions" assignments (always start with those) and 13 "practice problems" assignments (tackle these after each respective "reading questions" assignment). Three of the lowest grades of each type of assignment will be dropped at the end of the semester. There is a limit of 4 attempts per question (no deductions per attempt) up until the deadline. You will be able to see if the answer is correct or incorrect after each attempt. Only the best grade will be recorded and posted in D2L.

GUIDELINES FOR SUCCESSFUL TESTS

Your tests will require written answers (**not multiple choice**). Your grade will come from step-by-step complete solutions. This is how to prepare for tests and succeed:

- You must present your work in a legible manner.
- You must clearly show your work for each step of each problem, no matter how trivial the step might be.
- You must show your reasoning in a mathematical or numerical manner, even if the problem does not explicitly say so.
- You must show that each step follows logically from the previous one. If you have tried several different ways of doing the same problem, you will not get partial credit unless your work shows a logical progression.
- No credit will be given even if the final answer is correct, but the work shown does not support it.
- Points are deducted if there is a conceptual mistake at an intermediate step even if the final answer is correct.

LAB POLICY

- Attendance is based on the completion of the experiment AND submission of the required lab report.
- Students who are not present on the day of the experiment cannot submit a report and will receive zero unless they attend the following lab make-up date.
- All experiments will be performed in groups of no more than 3 people. Data acquisition must be performed as teamwork, everyone must participate, and all are equally responsible for the quality of the data.
- Once data acquisition is completed and the groups had a chance to review and discuss the experiment during the lab, the remaining activities MUST BE COMPLETED INDIVIDUALLY.
- Lab assignments/reports must be submitted 1 week after experiment, and before the next class meeting. Lab reports that are turned in 1 day late (not 1 class late) will be penalized with a 20% reduction in grade. Anything after that will receive a zero.
- If going through extenuating circumstances, communicate ASAP with the instructor: DO NOT WAIT.
- There are 3 lab make-up days this semester, available to students who need to make-up one lab from the immediately previous "period", either by collecting data from scratch, or re-submitting a report for improvement of the grade. A "period" mentioned above consists of the time between two consecutive lab make-up days. Only one lab is allowed per make-up day.

LAB (20% of final grade)	Date of lab	Report is due on
Lab 1: Simple pendulum (photogate sensor)	Thu, Jan 25	Thu, Feb 1
Lab 2: Standing waves on string (string, hanging masses and oscillator)	Thu, Feb 1	Thu, Feb 8
Lab 3: Interference and diffraction (laser pointers, gratings)	Thu, Feb 8	Thu, Feb 15
Lab 4: Formation of images with lenses and spherical mirror (optical bench)	Thu, Feb 15	Thu, Feb 22
Lab make-up day for labs 1, 2, 3 or 4 (collect data or re-submit)	Thu, Feb 22	Thu, Feb 29
Lab 5: Coulomb's law (video analysis)	Thu, Feb 29	Thu, Mar 7
Lab 6: Ohm's law	Thu, Mar 7	Thu, Mar 14
Lab 7: Resistors in series and parallel	Thu, Mar 14	Thu, Mar 21
Lab 8: RC circuit	Thu, Mar 21	Thu, Apr 4
Lab make-up day for labs 5, 6, 7, or 8 (collect data or re-submit)	Thu, Apr 4	Thu, Apr 11
Lab 9: Earth's magnetic field (compass apparatus)	Thu, Apr 11	Thu, Apr 18
Lab 10: Faraday's law (video analysis)	Thu, Apr 18	Thu, Apr 25
Lab 11: The hydrogen atom (LoggerPro and spectrometer)	Thu, Apr 25	Thu, May 2
Lab make-up day for labs 9, 10 or 11 (collect data or re-submit)	Thu, May 2	Thu, May 9

E-MAIL COMMUNICATION WITH THE INSTRUCTOR

E-mail is the preferred means of communication with your instructor. The instructor will reply to your question/request within 24 hours (with the exception of weekends and holidays). If your instructor does not reply within 24 hours it is most likely because you did NOT succeed in sending the message, and it is YOUR RESPONSIBILITY to check whether you typed the correct e-mail address or any other simple issue like that. Notice that in the case of an emergency, the instructor may also try to get in touch with you via e-mail. The instructor will always write an e-mail to your official college e-mail address (ending in @sunysuffolk.edu). This is the e-mail address you should be reading at all times concerning SCCC official announcements.

WITHDRAWAL POLICY

This instructor will NOT grant "W" after the cutoff date to any student, unless a very well justified case comes up, with documentation proving this extreme case. The "W" cutoff date for Spring 2024 is April 4. Only students who submit a <u>course withdrawal form</u> on or before this date are guaranteed a grade of "W". Please note that this means if you stop attending class without officially withdrawing in the time period provided, you will very likely be given an F by your instructor. It is common courtesy to communicate to your instructor the fact that you are leaving the course. It is important to know also that the instructor has no means to give you a W at the end of the semester (this option is NOT available in the school system when entering the final grades). Thus a W MUST BE AN ACTION STARTED BY THE STUDENT ALWAYS, and well before the end of the semester!

COLLEGE POLICIES

Testing Positive for COVID-19

If you test positive for COVID-19, as per current CDC recommendations, you should isolate from others and stay home for 5 days. After you have completed your 5 days of isolation, upon your return to campus, you should continue to wear a well-fitting mask for the next 5 days.

Attendance Policy

Regular attendance is considered essential for academic success. Students are expected to attend every class session, no matter the modality, of each course for which they are registered. Excessive absences may have a negative impact on a student's academic performance and/or eligibility for financial aid.

Each instructor must provide an attendance policy in the course syllabus, allowing for a minimum of one week's worth of absences including absences due to illness or other unforeseen circumstances. For example, if a class meets twice a week in a 15-week term, a student must be entitled to at least two absences. The equivalent of one week may differ depending on the length of the term.

The College defines attendance in online courses as regular participation in course-related activities, which may include, but is not limited to: contributing to online discussion, engaging in virtual live instruction (when applicable), submitting an assignment, taking a quiz or exam, viewing and/or completing a tutorial, or communicating with a faculty member regarding course content. Logging into an online class is not sufficient, by itself, to demonstrate attendance or participation by the student.

Students absent from a class for any reason are responsible for any missed work and any other relevant requirements stated in the course syllabus. In the event that a student is absent, it is always recommended that the student contact the instructor to discuss missed work and class content.

Federal financial aid regulations require the College to report a student's last date of attendance for each course; in most cases faculty will be asked to confirm this date. Consequently, faculty must take attendance at each class meeting.

In accordance with New York State Education Law, Section 224-a, any student who is unable, because of religious beliefs, to register or attend classes on a particular day or days will be excused from any examination, study, or work requirements [scheduled on that day]. It is the responsibility of the faculty to make available [to the student] an equivalent opportunity to make up any examination, study, or work requirements within a reasonable amount of time of the religious observance. It is the responsibility of students to notify their professor at least one week prior to the religious observance, via their College email accounts or otherwise in writing, of their intention to be absent from class.

Service for Students with Disabilities

PLEASE SELF-IDENTIFY TO THE INSTRUCTOR AT THE START OF THE SEMESTER, DO NOT WAIT.

Suffolk County Community College provides reasonable accommodations to registered students with disabilities who have self-identified and been approved by the Office of Disability Services. Once approved for reasonable accommodations, such students will be provided with an Accommodation Letter, describing the specific accommodations. Students must present this letter to each of their professors before accommodations can be provided. Students are encouraged to email this letter to their faculty member.

Students who have, or think they may have, a disability are invited to contact Disability Services for a confidential consultation. Students are encouraged to contact the office by email this semester.

Disability Services Contact Information - Ammerman Campus: Call the Disability Services Office at 631-451-4045 or email the Office at disabilityA@sunysuffolk.edu

Diversity

In alignment with our institutional mission and strong support of diversity, equity and inclusion, Suffolk County Community College reaffirms its commitment to providing access to higher education and a welcome environment to all students. No matter your age, race, ethnicity, national origin, gender identity or expression, sexual orientation, family status, U.S. citizenship status, religion, socio-economic status, political ideology, military-connected status, or intellectual or physical ability - you belong here. Therefore, in this class, we will maintain an atmosphere of mutual respect, civil discourse and cross-cultural communication.

The college prohibits discrimination and harassment and you can read more at: www.sunysuffolk.edu/nondiscrimination.

SCCC Cares

At Suffolk, we are **C**REATING **A**WARENESS and **R**EADINESS to **E**ND **S**TIGMA about mental health issues and we know that the past year has presented unprecedented challenges to our mental health and wellness. Please know that if you need support related to your psychological, emotional, or social wellbeing, there are resources available to you through Mental Health & Wellness Services. To learn more about MHWS or for other wellness related resources, visit MHWS on the SCCC website under the Experience Student Life tab.

If you would like to connect with a MHWS counselor at SCCC, for **free and confidential** counseling, email us at mentalhealth@sunysuffolk.edu. You can also reach out to one of us directly:

Ammerman Campus – Sarah Boles (451-4530/boless@sunysuffolk.edu) or Evan Haun (451-4060/haune@sunysuffolk.edu.

ACADEMIC INTEGRITY

I do not tolerate dishonesty.

If I'm sure, I'll give a failing grade. If it's serious, I'll report it. If it's bad enough, you could be expelled. Examples of dishonesty include plagiarizing, falsifying data, copying another's work without acknowledgement, or receiving help from someone on a quiz or test. Please refer to the SCCC Academic Integrity and Plagiarism Guide (see excerpt below). Any work you present as your own must be your own work.

Suffolk County Community College provides students with the opportunity to demonstrate their knowledge by submitting coursework that is uniquely theirs and giving proper attribution to the work of others. Participating honestly in the SCCC academic community ensures that students can take pride in their education and their contributions to scholarship. Without academic integrity, students gain unfair advantage over others and prevent their own intellectual progress. As a student in this class, you are expected to uphold the SCCC core value of Integrity and understand the Special Procedures for Academic Dishonesty in the relevant sections of the SCCC Student Code of Conduct.

The Code prohibits academic misconduct, which includes any action that results in students giving or receiving unauthorized assistance in an academic exercise, or receiving credit for work that is not their own. Academic exercise includes all forms of work submitted for credit. Academic misconduct includes, but is not limited to, the following behaviors: cheating on exams; plagiarizing - using another person's work or ideas without crediting them; complicity - helping a student, or being helped, to engage in academic misconduct; multiple submissions - submitting the same work for credit in more than one course without the instructor's permission; falsification and forgery - inventing information or falsifying the identity of a student.

Information about the Student Code of Conduct, plagiarism and the citation process is in the <u>Academic</u> Integrity and Plagiarism Guide.

It is an academic crime to use Chegg, ChatGPT or similar services to copy answers, which classifies as cheating and plagiarism. Your professors and SCCC tutors are willing to help you understand questions and problems. You must do your own thinking, but ask for help when needed.

NEVER COPY.

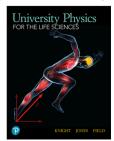
Lab reports and homework assignments must be done individually.

Cell phones, online browsing and communication tools in general are NOT allowed during any test.

TEXTBOOK STUDY LIST:

PHYSICS IS ABOUT PRACTICE & ADAPTATION, NOT MEMORIZATION. PRACTICE IS THE KEY TO SUCCESS IN PHYSICS.

LOOKING AT SOLUTIONS IS MEMORIZATION, NOT PRACTICE. ONCE YOU UNDERSTOOD A TOPIC, USE A BLANK SHEET OF PAPER TO SOLVE NEW PROBLEMS FROM SCRATCH: THIS IS PRACTICE. Required textbook (etext and mastering registration in D2L):



University Physics for the Life Sciences

by Knight, Jones, Field Pearson, 1st edition (mastering physics must be included to access homework) Print ISBN: 978-0-13-582218-0

- To succeed in this course, the homework in Mastering Physics is not enough.
- Read the book, study the examples already solved in the book, then practice the questions and problems at the end of each chapter (odd-numbered have answers in appendix A-15).
- Make sure to solve all problems of difficulty levels I and II for the sections covered in PHY122.
- Go over ALL multiple-choice questions and MCAT-style problems pertinent to PHY122's coverage in the textbook.

TEST 1

Chapter 15 (Oscillations)

<u>What you can skip:</u> there will be no mathematical coverage of vertical springs (but yes to horizontal springs) and physical pendulum.

Conceptual questions: all

Problems: 1-28, 32, 34-54, 56-63, 70-71, 75-79.

Chapter 16 (Traveling Waves and Sound)

<u>What you can skip:</u> there will be no mathematical coverage of doppler effect for directional ultrasound waves (but yes for non-directional doppler effect for sound waves in general). Conceptual questions: 1, 2, 4, 5, 7, 9, 11.

Problems: 1-57, 63-70, 74-75, 80.

Chapter 17 (Superposition and Standing Waves)

Conceptual questions: all

Problems: solve all problems of difficulty levels I and II first, then practice with III.

Chapter 18 (Wave Optics)

What you can skip: sections 18.6, 18.7 (mentioned, but no math).

Conceptual questions: all corresponding to what's covered. Problems: solve all problems of difficulty levels I and II first, then practice with III.

Chapter 19 (Ray Optics)

What you can skip: section 19.4 (but mention that objects in water appear closer and why).

Conceptual questions: all corresponding to what's covered. Problems: solve all problems of difficulty levels I and II first, then practice with III.

Chapter 20 (Optical Instruments)

<u>What you can skip:</u> the only section covered is 20.3, skip all the rest; microscopes may be presented subject to time.

Conceptual questions & problems: you got the idea, same advice as in previous chapters. Apply to all future chapters.

TEST 2

Chapter 21 (Electric Forces and Fields)

Chapter 22 (Electric Potential)

<u>What you can skip:</u> sections 22.4, 22.7 (22.7 gets mentioned, but no math).

Chapter 23 (Biological Applications of Electric Fields and Potentials)

What you can skip: sections 23.4, 23.5

Chapter 24 (Current and Resistance)

What you can skip: section 24.7 (no alternating current).

Chapter 25 (Circuits)

What you can skip: section 25.8 (mentioned, but no math).

TEST 3

Chapter 26 (Magnetic Fields and Forces)

What you can skip: section 26.7 (mentioned, but no math).

Chapter 27 (Electromagnetic Induction and EM Waves)

What you can skip: section 27.8 (mentioned, but no math).

Chapter 28 (Quantum Physics)

Chapter 29 (Atoms and Molecules)

Chapter 30 (Nuclear Physics)

What you can skip: sections 30.6-30.8 (mentioned, but no math).

PHY122 – Physics for the Life Sciences 2

CRN 38400

LECTURE & RECITATION: Tuesdays and Thursdays, 8-9:40am, T14 LAB: Thursdays, 10-11:50am, T14

W e e k	Date	Topics covered Labs: reports are due 1 week after experiment	Homework assignments due at 11pm R# = Reading questions (10%) P# = Practice problems (20%)
1	Tue, Jan 23 Thu, Jan 25	Introduction to course; Chap 15 (Oscillations): §15.1-15.3 Chap 15 (Oscillations): §15.4-15.7 Lab 1: Simple pendulum	Introduction to Mastering; Physics Primer; Math Skills modules (open all semester)
2	Tue, Jan 30 Thu, Feb 1	Chap 16 (Traveling waves and sound): §15.6-15.7, §16.1,16.3 Chap 16 (Traveling waves and sound): §16.3-16.6 Lab 2: Standing waves on string	Math review due Tue Jan 30 R1+P1(C15) due Fri Feb 2
3	Tue, Feb 6 Thu, Feb 8	no class (prof. dev. day) Chap 16 (Traveling waves and sound): §16.7, Chap 17 (Superpositions and standing waves): §17.1-17.8, Chap 18 (Wave optics): §18.1-18.5 Lab 3: Interference and diffraction (take home lab)	
4	Tue, Feb 13 (snow; async.) Thu, Feb 15	Chap 18 (Wave optics): exercises; Chap 19 (Ray optics): §19.1-19.3, 19.5 Chap 19 (Ray optics): §19.6-19.8; Chap 20 (Optical instruments): §20.3 Lab 4: Formation of images with lenses and spherical mirror	R2+P2(C16) due Mon Feb 12 R3+P3(C17) due Mon Feb 12 R4+P4(C18) due Fri Feb 16
5	Tue, Feb 20 Thu, Feb 22	Test1 (8-9:40 am) (PreTest-EC1 due before Test 1) Chap 21 (Electric forces and fields): §21.1-21.4 Lab make-up (1, 2, 3, or 4)	R5+P5(C19,20) due Mon Feb 19
6	Tue, Feb 27 Thu, Feb 29	Chap 21 (Electric forces and fields): §21.5-21.7 Chap 22 (Electric potential): §22.1-22.3 Lab 5: Coulomb's law	R6+P6(C21) due Fri Mar 1
7	Tue, Mar 5 Thu, Mar 7	Chap 22 (Electric potential): §22.5-22.6 Chap 23 (Biological applications): §23.1-23.3 Lab 6: Ohm's law	
8	Tue, Mar 12 Thu, Mar 14	Chap 24 (Current and resistance): §24.1-24.4 Chap 24 (Current and resistance): §24.5-24.6 Lab 7: Resistors in series and parallel	R7+P7(C22,23) due Wed Mar 13
9	Tue, Mar 19 Thu, Mar 21	Chap 25 (Circuits): §25.1-25.3 Chap 25 (Circuits): §25.4-25.6 Lab 8: RC circuit	R8+P8(C24) due Wed Mar 20
10	Spring break Tue, Apr 2 Thu, Apr 4	no classes Chap 25 (Circuits): §25.7-25.8 Test 2 (8-9:40 am) (PreTest-EC2 due before Test 2) Lab make-up (5, 6, 7 or 8)	R9+P9(C25) due Wed Apr 3
12	Tue, Apr 9 Thu, Apr 11	Chap 26 (Magnetic fields and forces): §26.1-26.3 Chap 26 (Magnetic fields and forces): §26.4-26.5 Lab 9: Earth's magnetic field	
13	Tue, Apr 16 Thu, Apr 18	Chap 27 (Electromagnetic induction and waves): §27.1-27.4 Chap 27 (Electromagnetic induction and waves): §27.4-27.8 Lab 10: Faraday's law	R10+P10(C26) due Fri Apr 19
14	Tue, Apr 23 Thu, Apr 25	Chap 28 (Quantum physics): §28.1-28.3 Chap 28 (Quantum physics): §28.4-28.8 Lab 11: Hydrogen spectral lines	R11+P11(C27) due Fri Apr 26
15	Tue, Apr 30 Thu, May 2	Chap 29 (Atoms and molecules): §29.1-29.3 Chap 29 (Atoms and molecules): §29.4-29.8 Lab make-up (9, 10 or 11)	R12+P12(C28) due Fri May 3
16	Tue, May 7 Thu, May 9	Chap 30 (Nuclear physics): §30.1-30.4 Chap 30 (Nuclear physics): §30.5-30.8 Lab final grades available	R13+P13(C29,30)
17	Tue, May 14	Test 3 (8-9:40 am) (PreTest-EC3 due before Test 3)	due Mon May 13

DISCLAIMER:

General rules are posted in your course outline. But even if a rule is not specifically shown in your course outline, it may be announced only in class and it is a valid new rule that must be followed. If there are changes to any existing rules, these too will be announced in class whether or not they are in print.

Students are responsible for apprising themselves of anything that transpires in class whether or not they are in attendance. All students need to be aware of all announcements whether or not they are in attendance. Ask another student. E-mail the professor and ask to update you on any new announcements. If you missed a class, you must ask: it is YOUR responsibility to ask.

Professors are not "babysitters", i.e., they will not remind you all the time of the requirements presented in the course outline: you have the responsibility to know what is strictly expected from you.

All students are personally accountable for all submitted work. You must keep track of your own progress in class. Learn to calculate your average grade at all times; estimate your own final grade to know where you are heading to. This only requires basic knowledge of math: ask for help if needed right at the start of the semester. You MUST be able to calculate your own final grade.

YOU are responsible for the grade you receive.

Professors are just messengers in the classroom: the grade you get is not "given" by the professor – it is **the grade that you gave to yourself, the grade you have earned**, in direct correspondence to how much YOU have studied, worked and learned about the subject. Taking responsibility for your own acts and taking responsibility for your own work is a good rule for life.

cut here ⊁	cut here ⊁	cut here ⊁

Please hand in this signed slip within the first week of class.

I have read and am aware of all the information contained in the course outline of PHY122.

Name (please print):	Date:/	
Your signature:		