PHYS 1212 Principles of Physics II

CRN 52484, Summer 2021

SYLLABUS

This course syllabus is tentative and any changes (if necessary) will be announced to the class

Course Information:
Class Time: Monday – Friday 1**:00 pm – 2:00 pm**
Class Location: Physics Building Room 202

Instructor Information:
Instructor Name: Dr. Joseph D. Ametepe
Cell phone: (678) 471-1988
E-mail: jametepe@ggc.edu

Course Description
PHYS 1212 Principles of Physics II, is the second part of the Calculus-based introductory physics course designed for science majors. Topics to be covered include materials from geometric & wave optics, electric forces/fields, electricity & circuits, magnetic fields/forces, and electromagnetic waves. Elementary differential and integral calculus will be used.

Course Format
This course is listed as "hybrid synchronous."

- Instructor will physically be present and conduct class via zoom.
- Students
  - Auditorium setting: All students will attend class in-person.
  - On Fridays, instructor and students will meet virtually.

Course prerequisites:
Students must have successfully completed PHYS 1211-Principles of Physics I with a grade of C or better to enroll in PHYS 1212.

Required Text and Supplies
Text: Physics with Modern Physics for Scientists and Engineers, 4th edition, by Randall D. Knight (Publisher – Pearson) will be the standard text for this course. If you are using an older version of the text, make sure that the weekly homework questions are appropriately matched with the right question numbers in the version that you are using. Mastering Physics **WILL NOT** be required. Scientific calculator is required.

Grading Policy:

Grades will be assigned according to the following scale:

Overall score (%)	Receives at least (grade)		Overall score (%)	Receives at least (grade)		Overall score (%)	Receives at least (grade)
≥ 95	A		≥ 90	A-		≥ 87	B+
≥ 83	B		≥ 80	B-		≥ 77	C+
≥ 73	C		≥ 70	C-		≥ 60	D
≥ 60	D						

Grading Basis:

Events	Percentage (%)
Final Exam	30
Tests (4 tests)	20
Homework	20
Reading Quizzes/Examples	10
Lecture grade totals	**80**
Laboratory activities (to include lab report)	20
Laboratory grade totals	**20**

Events explanation:

Daily Grades (10%): These include quizzes on reading assignments (RQ), class participation, and example problems (EP) worked in class with your participation. The reading assignments for the daily quizzes are listed in the "Daily Course Schedule." You are expected to read the power point on each section and will complete a short RQ in the first 10 minutes of each class.

Tests (20%): There will be 4 tests throughout the semester covering the 4 units as described in the schedule. Tests will be conducted in-person. Each test will include questions on vocabulary, conceptually based multiple choice questions (MCQ's), and several problems that will require calculation.

Homework (20%): Homework (HW) is assigned every weekday and posted via eLC. The HW assignments are meant to be worked outside of class and due at 11:59 pm (EST) on listed days on the course schedule. You may receive help on HW assignments from your peers, TA, or the instructor. I strongly suggest that you keep a copy of your work, which includes explanations of steps and assumptions, for the purposes of study and asking for help. **You learn physics by consistently working problems!** If you have questions, arrange to see instructor outside the regular class periods or be in the Friday sessions.

Final Exam (30%): The final exam for this course will be cumulative (covering all the 4 units), be in-person, and will take place in Physics Building Room 202. You can expect a few questions that utilizes multiple concepts from different chapters to assess how well you have integrated the concepts.

Testing Policy:

Be sure to bring your calculator to tests. Only scientific and graphing calculators may be used during tests. Calculators may not be shared and **No** cell-phones are allowed during tests. Clarity and organization of your work enhances the likelihood of being awarded partial credit.

Missed/Late Work:

Due to the condensed course schedule, missing class is not recommended. Late (missed without a valid excuse) work will be penalized one letter grade (10 pts) and must be turned in before the test for that unit. No work will be accepted for credit after the unit test is given.

PHYS 1212: Principles of Physics| Summer 2021|Tentative Daily Schedule| UGA

Date	Topic	Notes
F June 11	Introduction (Syllabus, expectations, tests, & exams)	Q&A
UNIT 1	**Chapters 33 - 35**	
M June 14	Geometric Optics Part I	RQ-01, EP-01, HW-01

	Sections: 34.1 – 34.3	
T June 15	Geometric Optics Part II Sections: 34.4 – 34.5	RQ-02, EP-02, HW-02
W June 16	Geometric Optics Part III Sections: 34.6 – 34.7	RQ-03, EP-03, HW-03
Th June 17	Optical Instruments Part I Sections: 35.1 – 35.4	RQ-04, EP-04, HW-04
F June 18	Optical Instruments Part II: Sections: 35.5 – 35.6	
M June 21	Wave Optics Part I Sections: 33.1 – 33.4	RQ-05, EP-05, HW-05
T June 22	Wave Optics Part II Sections: 33.4	RQ-06, EP-06, HW-06
W June 23	Wave Optics Part III Sections: 33.6 – 33.7	RQ-07, EP-07, HW-07
Th June 24	Combination of concepts – Unit 1	RQ-08, EP-08, HW-08
F June 25	Unit I Test #1	(In-person)
UNIT II	**Chapters 22 - 24**	
M June 28	Electric Charges and Forces Part I Sections: 22.1 – 22.3	RQ-09, EP-09, HW-09
T June 29	Electric Charges and Forces Part II Sections: 22.4	RQ-10, EP-10, HW-10
W June 30	Electric Charges and Forces Part III Sections: 22.5	RQ-11, EP-11, HW-11
Th July 1	Electric Fields Part I Sections: 23.1 – 23.2	RQ-12, EP-12, HW-12
F July 2	Electric Fields Part II Sections: 23.3 – 23.4	
M July 5	Electric Fields Part III Sections: 23.5 – 23.6	RQ-13, EP-13, HW-13
T July 6	Gauss's Law Part I Sections: 24.1-24.2	RQ-14, EP-14, HW-14
W July 7	Gauss's Law Part II	RQ-15, EP-15, HW-15

	Sections: 24.3 – 24.4	
Th July 8	Gauss's Law part III Sections: 24.5 – 24.6	RQ-16, EP-16, HW-16
F July 9	Unit II Test #2	(In-person)
UNIT III	**Chapters 25 - 28**	
M July 12	Electric Potential Part I Sections: 25.1 – 25.4	RQ-17, EP-17, HW-17
T July 13	Electric Potential Part II Sections: 25.5 – 25.7	RQ-18, EP-18, HW-18
W July 14	Electric Potential & Fields Part I Sections: 26.1 – 26.4	RQ-19, EP-19, HW-19
Th July 15	Electric Potential & Fields Part II Sections: 26.5 – 26.7	RQ-20, EP-20, HW-20
F July 16	Current and Resistance Part I Sections: 27.1 – 27.3	
M July 19	Current and Resistance Part II Sections: 27.4 – 27.5	RQ-21, EP-21, HW-21
T July 20	Circuits and Kirchhoff's Laws Part I Sections: 28.1 – 28.3	RQ-22, EP-22, HW-22
W July 21	Circuits and Kirchhoff's Laws Part II Sections: 28.4 – 28.6	RQ-23, EP-23, HW-23
Th July 22	Circuits and Kirchhoff's Laws Part III Sections: 28.7 – 28.8	RQ-24, EP-24, HW-24
F July 23	Unit III Test #3	(In-person)
UNIT IV	**Chapters 29 – 32**	
M July 26	Magnetism and Fields Part I Sections: 29.1 – 28.4	RQ-25, EP-25, HW-25
T July 27	Magnetism and Fields Part II Sections: 29.5 – 29.8	RQ-26, EP-26, HW-26
W July 28	Electromagnetic Induction Part I Sections: 30.1 – 30.4	RQ-27, EP-27, HW-27
Th July 29	Electromagnetic Induction Part II Sections: 30.5 – 30.8	RQ-28, EP-28, HW-28

F July 30	Electromagnetic Fields and Waves Part I Sections: 31.1 – 31.4	
M August 2	Electromagnetic Fields and Waves Part II Sections: 31.5 – 31.7	RQ-29, EP-29, HW-29
T August 3	AC Circuits Sections: 32.1 – 32.2	RQ-30, EP-230, HW-230
W August 4	Unit IV Test #4	(In-person)
F August 5	**Final Exams (In-person)**	**3:30 – 6:30 pm**
M August 9	**Grade Due Date**	

Scores/Grades:

Paper based HW scores and test scores will be posted under "Grades" link on eLC. Note that it is the student's responsibility to check their scores and discuss any discrepancies with the instructor within a week of scores being posted.

Academic Integrity:

As a University of Georgia student, you have agreed to abide by the University's academic honesty policy, "A culture of Honesty," and the Student Honor Code. All academic work must meet the standards described in "A Culture of Honesty" found at https://honesty.uga.edu/Academic-Honesty-Policy/. Lack of knowledge of the academic honesty policy is not a reasonable explanation for a violation. Questions related to course assignments and the academic honesty policy should be directed to the instructor.

Accommodations:

Students with disabilities who require accommodations in order to participate in course activities or meet course requirements should contact the Disability Resource Center situated in Clark Howell Hall, Athens, GA 30602. The instructor will devise reasonable accommodations based on the recommendations of the Disability Resource Center. Visit http://drc.uga.edu/ for more information. Web accessibility information for eLC can be found at https://documentation.brightspace.com/EN/accessibility/-/learner/accessibility_and_navigation_intro.htm .