

 FLORIDA ATLANTIC UNIVERSITY	NEW COURSE PROPOSAL Undergraduate Programs		UUPC Approval <u>3/27/23</u> UFS Approval _____ SCNS Submittal _____ Confirmed _____ Banner Posted _____ Catalog _____
	Department N/A College Wilkes Honors College (To obtain a course number, contact erudolph@fau.edu)		
Prefix PHY Number 2054	(L = Lab Course; C = Combined Lecture/Lab; add if appropriate) Lab Code	Type of Course <input type="text" value="Lecture"/>	Course Title Honors College Physics 2
Credits (See Definition of a Credit Hour) 4	Grading (Select One Option) Regular <input checked="" type="radio"/> Sat/UnSat <input type="radio"/>	Course Description (Syllabus must be attached; see Template and Guidelines) The algebra- and trigonometry-based course surveys fundamental laws and phenomena of electricity and magnetism, optics, special relativity, atomic and nuclear physics. Emphasis on understanding of physical concepts through examples drawn from the physical and life sciences.	
Effective Date (TERM & YEAR) Fall 2023	Prerequisites, with minimum grade* PHY 2053		Corequisites PHY 2049L
		Registration Controls (Major, College, Level) Must be enrolled in Honors College.	
*Default minimum passing grade is D-. Prereqs., Coreqs. & Reg. Controls are enforced for all sections of course			
WAC/Gordon Rule Course <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No WAC/Gordon Rule criteria must be indicated in syllabus and approval attached to proposal. See WAC Guidelines .		Intellectual Foundations Program (General Education) Requirement (Select One Option) None General Education criteria must be indicated in the syllabus and approval attached to the proposal. See Intellectual Foundations Guidelines .	
Minimum qualifications to teach course Terminal degree in physics or related discipline, or at least 18 graduate hours in physics.			
Faculty Contact/Email/Phone Yaouen Fily / yfily@fau.edu / 561-299-0879		List/Attach comments from departments affected by new course Physics department. See attached.	
Approved by Department Chair <u>Miguel Ángel Vázquez</u> College Curriculum Chair <u>Rachel Corr</u> College Dean <u>Julie Earles</u> UUPC Chair <u>Ethlyn Williams</u> Undergraduate Studies Dean <u>Dan Meeroff</u> UFS President _____ Provost _____			Date <u>3/15/23</u> <u>3/14/23</u> <u>3/20/23</u> <u>3/27/23</u> <u>3/27/23</u> _____ _____

Email this form and syllabus to mjenning@fau.edu seven business days before the UUPC meeting.

SYLLABUS
PHY 2054
Honors College Physics 2
4 credits

Course Description

The algebra- and trigonometry-based course surveys fundamental laws and phenomena of electricity and magnetism, optics, special relativity, atomic and nuclear physics. Emphasis will be on understanding of physical concepts through examples drawn from the physical and life sciences.

Instructional Method

In person.

Prerequisites/Corequisites

PHY 2053 / PHY 2049L

Course Objectives/Student Learning Outcomes

Upon successful completion of this course, students will be able to:

- Describe fundamental laws and phenomena of electricity and magnetism, optics, special relativity, atomic and nuclear physics.
- Explain core concepts in mechanics, fluids, heat, wave motion, and sound and their relevant applications.
- Develop problem solving skills, critical thinking, and scientific methods.
- Apply principles of physics to solve real-world applications.
- Demonstrate the ability to communicate scientific information effectively.

Course Evaluation Method

Homework	20%
Exam 1	20%
Exam 2	20%
Exam 3	20%
Exam 4	20%

Course Grading Scale

Grade	A	A-	B+	B	B-	C+	C	C-	C+	D	D-	F
<	100	94	90	87	84	80	77	74	70	67	64	61
≥	94	90	87	84	80	77	74	70	67	64	61	0

Policy on Makeup Tests, Late Work, and Incompletes

Homework submitted after the submission deadline but before the solution is posted will receive 50% of the earned grade; after that the grade drops to zero. Bar a provable, legitimate excuse (e.g. serious illness, jury duty, participation in a University-approved activity such as athletic or scholastics teams, musical and theatrical performances, and debate activities), notified in advance of the exam or as early as physically possible, any missed exam will result in a zero grade.

Policy on the Recording of Lectures

Students enrolled in this course may record video or audio of class lectures for their own personal educational use. A class lecture is defined as a formal or methodical oral presentation as part of a university course intended to present information or teach students about a particular subject. Recording class activities other than class lectures, including but not limited to student presentations (whether individually or as part of a group), class discussion (except when incidental to and incorporated within a class lecture), labs, clinical presentations such as patient history, academic exercises involving student participation, test or examination administrations, field trips, and private conversations between students in the class or between a student and the lecturer, is prohibited. Recordings may not be used as a substitute for class participation or class attendance and may not be published or shared without the written consent of the faculty member. Failure to adhere to these requirements may constitute a violation of the University's Student Code of Conduct and/or the Code of Academic Integrity.

Attendance Policy

Students are expected to attend all their scheduled University classes and to satisfy all academic objectives as outlined by the instructor. The effect of absences upon grades is determined by the instructor, and the University reserves the right to deal at any time with individual cases of non-attendance. Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations or participation in University-approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence, ordinarily by the next scheduled class meeting. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence.

Counseling and Psychological Services (CAPS) Center

Life as a university student can be challenging physically, mentally and emotionally. Students who find stress negatively affecting their ability to achieve academic or personal goals may wish to consider utilizing FAU's Counseling and Psychological Services (CAPS) Center. CAPS provides FAU students a range of services – individual counseling, support meetings, and psychiatric services, to name a few – offered to help improve and maintain emotional well-being. For more information, go to <http://www.fau.edu/counseling/>

Disability Policy

In compliance with the Americans with Disabilities Act Amendments Act (ADAAA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS) and follow all SAS procedures. SAS has offices across three of FAU's campuses – Boca Raton, Davie and Jupiter – however disability services are available for students on all campuses. For more information, please visit the SAS website at www.fau.edu/sas/.

Code of Academic Integrity

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see [University Regulation 4.001](#).

Students of the Wilkes Honors College are also expected to abide by the College's Academic Honor Code, see <http://www.fau.edu/honors/academics/honor-code.php>.

Note on Honors Distinction

This course is an Honors course. It differs substantially from its non-Honors counterpart. The course fulfills the mission of the Honors College to develop in students the capacity to combine knowledge from different fields (e.g., Physics and Biology) and apply it to the creation of original research. The course employs Honors-level assessment standards designed to prepare students for work on their Honors Thesis. Students will be expected to articulate their reasoning clearly in speech and in writing, to combine knowledge from different fields, to deploy the ideas learned in the class in their own field of study, and to develop the critical attitudes and skills needed for self-directed learning.

Course Outline

Week	Topic
1	Electric field.
2	Electric potential.
3	Electric circuits.
4	Review. Exam 1.
5	Magnetic field.
6	Electromagnetic induction. AC circuits.
7	Electromagnetic waves.
8	Review. Exam 2.
9	Reflection and refraction of light.
10	Lenses. The eye.
11	Interferences.
12	Review. Exam 3.
13	Quantum physics. The atom.
14	Mass-energy equivalence. Nuclear physics. Radioactivity.
15	Review. Exam 4.