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| <br><b>FLORIDA ATLANTIC UNIVERSITY</b>   | <b>NEW COURSE PROPOSAL</b><br><b>Undergraduate Programs</b>   |  | UUPC Approval <u>3/27/23</u><br>UFS Approval _____<br>SCNS Submittal _____<br>Confirmed _____<br>Banner Posted _____<br>Catalog _____ |
|   | Department N/A<br>College Wilkes Honors College<br>(To obtain a course number, contact <a href="mailto:erudolph@fau.edu">erudolph@fau.edu</a> ) |  |   |
| Prefix PHY<br>Number 2053   | (L = Lab Course; C = Combined Lecture/Lab; add if appropriate)<br>Lab Code  | Type of Course<br><input style="border: 1px solid red;" type="text" value="Lecture"/>  | Course Title<br>Honors College Physics 1  |
| Credits (See <a href="#">Definition of a Credit Hour</a> )<br>4   | Grading (Select One Option)<br>Regular <input checked="" type="radio"/><br>Sat/UnSat <input type="radio"/>                                      | Course Description (Syllabus must be attached; see <a href="#">Template</a> and <a href="#">Guidelines</a> )<br>The algebra- and trigonometry-based course surveys fundamental laws and phenomena of mechanics, fluids, heat, wave motion, and sound. Emphasis on understanding of physical concepts through examples drawn from the physical and life sciences. No credit for physics majors. |   |
| Effective Date (TERM & YEAR)<br>Fall 2023   | Prerequisites, with minimum grade*<br>Minimum grade of "C" in one of the following: MAC 1114 or 1147 or 2233 or 2281 or 2311.                   |  | Corequisites<br>PHY 2048L<br>Registration Controls (Major, College, Level)<br>Must be enrolled in Honors College.                     |
| <b>*Default minimum passing grade is D-. Prereqs., Coreqs. &amp; Reg. Controls are enforced for all sections of course</b>  |   |  |   |
| WAC/Gordon Rule Course<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>WAC/Gordon Rule criteria must be indicated in syllabus and approval attached to proposal. See <a href="#">WAC Guidelines</a> .   |   | Intellectual Foundations Program (General Education) Requirement (Select One Option)<br>None<br>General Education criteria must be indicated in the syllabus and approval attached to the proposal. See <a href="#">Intellectual Foundations Guidelines</a> .  |   |
| <b>Minimum qualifications to teach course</b><br>Terminal degree in physics or related discipline, or at least 18 graduate hours in physics.  |   |  |   |
| Faculty Contact/Email/Phone<br>Yaouen Fily / <a href="mailto:yfily@fau.edu">yfily@fau.edu</a> / 561-299-0879  |   | List/Attach comments from departments affected by new course<br>Physics department. See attached.  |   |
| <b>Approved by</b><br>Department Chair <u>Miguel Ángel Vázquez</u><br>College Curriculum Chair <u>Rachel Corr</u><br>College Dean <u>Julie Charles</u><br>UUPC Chair <u>Thlyn Williams</u><br>Undergraduate Studies Dean <u>Dan Meeroff</u><br>UFS President _____<br>Provost _____ |   |  | <b>Date</b><br><u>3/15/23</u><br><u>3/14/23</u><br><u>3/20/23</u><br><u>3/27/23</u><br><u>3/27/23</u><br>_____<br>_____               |

Email this form and syllabus to [mieming@fau.edu](mailto:mieming@fau.edu) seven business days before the UUPC meeting.

**SYLLABUS**  
**PHY 2053**  
**Honors College Physics 1**  
**4 credits**

### **Course Description**

The algebra- and trigonometry-based course surveys fundamental laws and phenomena of mechanics, fluids, heat, wave motion, and sound. Emphasis on understanding of physical concepts through examples drawn from the physical and life sciences. No credit for physics majors.

### **Instructional Method**

In person.

### **Prerequisites**

Minimum grade of C in one of the following: MAC 1114, MAC 1147, MAC 2233, MAC 2281, MAC 2311. **Corequisite** PHY 2048L.

### **Course Objectives/Student Learning Outcomes**

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

- Describe fundamental laws and phenomena of mechanics, fluids, heat, wave motion, and sound.
- 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/](http://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    | Introduction. Mathematical concepts.    |
| 2    | Kinematics in one dimension.            |
| 3    | Kinematics in two dimensions.           |
| 4    | Review. Exam 1.                         |
| 5    | Forces. Newton's Laws of Motion.        |
| 6    | Uniform circular motion.                |
| 7    | Work and energy.                        |
| 8    | Review. Exam 2.                         |
| 9    | Linear momentum. Collisions.            |
| 10   | Rotational motion. Torque. Equilibrium. |
| 11   | Harmonic motion. Review.                |
| 12   | Exam 3. Fluids.                         |
| 13   | Heat transfer. Thermodynamics.          |
| 14   | Waves.                                  |
| 15   | Review. Exam 4.                         |