



PHY2053 Syllabus

PHY 2053 PHYSICS 1 – 07DA (UF ONLINE)

4 CREDITS

SPRING 2018

Section 07DA is a fully-online section of PHY2053. Students will achieve the student learning outcomes through assigned course readings, video lectures, problem solving videos, problem solving practice, and contributions to discussions in an online forum. Evaluation of these learning outcomes is similar to the structure for evaluating students in campus-based sections and consists of assigned homework problem sets, reading quizzes, and proctored exams. The rigor of the fully-online course is as close as possible to that of campus-based sections.

INSTRUCTORS	DR. SHAWN WEATHERFORD	MS. ALEXANDRIA EDER
ROLE	LEAD INSTRUCTOR	TA
OFFICE LOCATION	NEW PHYSICS BUILDING 2142	NEW PHYSICS BUILDING 2161
PHONE	352-392-8747	392-392-8756
OFFICE HOURS	MW 2:00 – 3:00 PM EST	TBD

Office hours will be held online using Canvas conferences or by phone. Appointments are available for additional office hours during regular business hours, using Canvas or possibly face-to-face in our offices. Email Dr. Weatherford in Canvas for availability.

COURSE WEBSITE: <https://ufl.instructure.com/courses/346291>

Questions about materials or course content: Please use **the Discussion Boards in Canvas** for all questions about class mechanics. If you have a question about the class or subject material, others probably share the same question and posting it to the discussion boards allows everyone to see the question and answer (This is just as if you had raised your hand in class and asked the question).

Personal questions, problems, or appointments: Please use the **email function in Canvas** to communicate with Dr. Weatherford during the semester, rather than regular university email, except in extreme emergencies. Dr. Weatherford will field any questions pertaining to deadlines and course mechanics. Either Dr. Weatherford or Ms. Eder will field questions about understanding course content. Email, discussion posts, and phone messages will generally receive a reply within 24 hours on the weekdays. The instructors will post an announcement when there are times that they are out of reach.



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Technical support: If you experience difficulties with accessing components of the site, including lectures, quizzes or tests, contact the UF help desk *immediately*. **(352) 392-HELP (4357) | helpdesk@ufl.edu**

If they are not able to resolve your problem, contact Dr. Weatherford with your help desk ticket number and a description of the problem and steps taken to resolve it. Extensions for due dates will be granted for documented technical problems, as needed.

REQUIRED RESOURCES: The required text is College Physics, third edition, by Knight, Jones, and Field, published by Pearson. The course is set up for an All-Access opt-in to purchase the text online for students who have registered in the course. The opt-in procedure begins with this link: <https://www.bsd.ufl.edu/G1CO/IPay1f/start.aspx?TASK=INCLUDED>, which is also listed on the course Canvas website with further instructions.

The required online homework system is *Mastering Physics*, access to which is included in the purchase of the online textbook described above. Access *Mastering Physics* using the link provided in the course Canvas website.

In addition, a ProctorU registration and scheduling is required for examinations. You need access to a computer with a video camera, a microphone, and a good internet connection. In order to take exams under the supervision of ProctorU, these technology resources must be available in a quiet room where you can take the exams in privacy.

COURSE DESCRIPTION: PHY2053

This course is a first semester of algebra-based introductory physics. The topics covered include kinematics, Newton's laws, circular and rotational motion, equilibrium, elasticity, energy, momentum, fluids, oscillations, waves, and sound.

PREREQUISITE KNOWLEDGE AND SKILLS: High-school physics or PHY 2020, basic algebra, geometry, and trigonometry.

PURPOSE OF COURSE: The purpose of this course is to provide you with opportunities to practice gaining a foundation in the concepts, fundamental principles, and analytic techniques needed to solve problems arising in the context of Newtonian mechanics. Examples include being able to calculate the maximum height of a projectile, the tension in a support beam, the velocity of an object after a collision, the pressure at a given depth in a fluid, and the resonant sound frequencies in an open pipe. The course is designed for people who have already had a basic introduction to physics in high-school or otherwise.



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COURSE GOALS AND/OR OBJECTIVES: By the end of this course, students will have improved their existing foundation in the concepts, principles, terminology, and methodologies used to describe motion (translational, rotational and combined) of simple objects, the basic properties of matter, harmonic oscillations, and wave motion. Specifically, students will be able to:

- **Analyze** particular physical situations, and thus identify the fundamental principles pertinent to those situations to make successful predictions of system behavior,
- **Apply** fundamentals principles to formulate mathematical equations describing the relation between physical quantities in these particular situations,
- **Solve** mathematical equations to find the values of physical quantities,
- **Communicate** unambiguously both the principles that apply to a situation and the results of specific calculations resulting from the steps above.

INSTRUCTIONAL METHODS: This course runs primarily in the Canvas e-Learning system, which can be accessed through <http://elearning.ufl.edu/>

STUDENT EXPECTATIONS:

To achieve the learning outcomes, students are expected to:

- Read the assigned chapters in the textbook and to view the corresponding lecture videos
- Work through the examples presented in the text and in the practice problem videos in order to learn the physics concepts, principles, and problem-solving techniques of introductory physics.
- Complete reading quizzes and homework assignments to self-assess your understanding of the module's concepts and problem solving strategies on a weekly basis.
- To seek help from your instructors and other students when specific content does not make sense, and to seek out additional practice when needed to gain mastery before moving on to future modules. These additional materials should include problems at the end of the chapter that are not assigned as part of your homework.

This course requires an extensive amount of time to do all of the above, and students should plan accordingly to spend 15 hours per week on course preparation and practice.

COURSE POLICIES:

ATTENDANCE POLICY: You are expected to watch the lecture and problem solving videos and to attempt the online reading quizzes, homework, and exams by their assigned deadlines. You are



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also expected to interact with the instructor and with your fellow students through discussions of the material through the Canvas discussion forum.

ASSIGNMENT POLICY: Homework, reading quiz, and exam windows are announced in the course calendar, which may be accessed via the Canvas “Syllabus” link.

HOMEWORK AND READING QUIZ POLICY: Reading quizzes and homework sets are completed online through *Mastering Physics* at any time between the opening of the assignment and the deadline announced in the course calendar. These assignments are not timed or proctored, but they are subject to the UF Policy on Academic Misconduct (see below).

Collaboration is not permitted on reading quizzes.

It is permissible to seek assistance or collaborate on homework with your instructor or your assigned study group partners only. This assistance may include help with interpreting the problem, identifying relevant information in the textbook or course videos, or identifying one’s errors. No credit is available for late assignments. (See “Getting Help” below for what to do in the event of technical problems with the Canvas e-Learning system.)

EXAM POLICY: Three mid-term exams and a cumulative final exam will be taken online, each under the supervision of ProctorU during a time window announced in the course calendar. Exams are not collaborative and are completed alone. You need both to register with ProctorU and to schedule each exam with ProctorU at least 72 hours (3 full days) ahead of time. Details are in the introductory material.

CLASS DISCUSSION: Each week will introduce a new module (chapter) on physics. Please post your observations or questions on the material, or help answer your fellow classmates’ questions, using the Canvas discussion forum. Your discussion postings are graded based on the quality of the questions posed about course content, the quality of the feedback offered to other students, and the amount of interaction you offer to the course. Discussion postings are evaluated four times throughout the semester, coinciding with each exam.

MAKE-UP POLICY: Requirements for class attendance and make-up exams, assignments, and other work are consistent with university policies that can be found at <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>. For a foreseeable absence, it is your responsibility to identify yourself as requiring an accommodation at least one week prior to the absence.

UF POLICIES:

UNIVERSITY POLICY ON ACCOMMODATING STUDENTS WITH DISABILITIES: Students requesting accommodation for disabilities must first register with the Disability Resource



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Center (352-392-8565, <http://www.dso.ufl.edu/drc/>) by providing appropriate documentation. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

UNIVERSITY POLICY ON ACADEMIC MISCONDUCT: Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Student Honor Code at <https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>.

****NETIQUETTE: COMMUNICATION COURTESY:** All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats.

<http://teach.ufl.edu/wp-content/uploads/2012/08/NetiquetteGuideforOnlineCourses.pdf>

COURSE EVALUATION: course by completing online evaluations at <https://evaluations.ufl.edu/>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>

ATTENDANCE AND MAKE-UP POLICY: Excused absences and allowances for make-up work are consistent with university policies in the undergraduate catalog (<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>) and require appropriate documentation.

GETTING HELP:

For issues with technical difficulties for E-learning in Canvas, please contact the UF Help Desk at:

- Learning-support@ufl.edu
- (352) 392-HELP - select option 2
- <https://lss.at.ufl.edu/help.shtml>

**** Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from LSS when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request a make-up.**

Other resources are available at <http://www.distance.ufl.edu/getting-help> for:

- Counseling and Wellness resources
- Disability resources
- Resources for handling student concerns and complaints



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- Library Help Desk support

Should you have any complaints with your experience in this course please visit <http://www.distance.ufl.edu/student-complaints> to submit a complaint.

GRADING POLICIES:

Grades in the course are awarded based on an overall course score made up as follows:

Assignment	Max Points
Exam 1 (Modules 1-4)	20
Exam 2 (Modules 5-7)	20
Exam 3 (Modules 8-10)	20
Exam 4 (Modules 11-14; cumulative)	20
Homework	10
Reading Quizzes	5
Discussion Postings	5
Total Course Points	100



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Your course grade will not be assigned based on a curve, but based on a 100-point fixed scale rounded to the nearest point (e.g. 84.6 = A, 84.4 = A-):

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
85	80	75	70	65	60	55	50	45	40	35	<35

COURSE SCHEDULE:

On Sunday of each week, a new module will become available providing access to lecture videos, worked example videos, a reading quiz (due on Wednesday at 11:59pm EST) and a homework assignment (due eight days later on the following Monday at 11:59pm EST). Further, an adaptive homework assignment may be offered for additional practice based on your total homework assignment score.

An exam window opens for 48 hours during an exam week beginning on the Tuesday of the exam week (at 12:00am EST) and closing on the next Wednesday (at 11:59pm EST). Exam 4 is offered on Monday April 30th – Tuesday May 1st. Please note that Florida observes Daylight Savings Time.

Module #	Week Starting	Exams	Topics
0	1/3/17		Orientation, introductions, and math review
1	1/7/17		Notation, standards, and units <i>Reading: 1.1, 1.2, 1.4, 1.5, 3.1, 3.3</i>
2	1/14/17		Motion along a straight line <i>Reading: 2.1 – 2.7</i>
3	1/21/17		Motion in a plane <i>Reading: 3.1,3.2,3.5-3.7</i>
4	1/28/17		Force and Newton’s laws of motion <i>Reading: 4.1-4.7, 5.3</i>



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5	2/4/17	Exam 1 (Mod 1-4)	Applications of Newton's laws <i>Reading: 5.1,5.2,5.3,5.5,5.6,5.8</i>
6	2/11/17		Circular motion and gravity <i>Reading: 3.8,6.1-6.6</i>
7	2/18/17		Rotational motion <i>Reading: 7.1-7.7</i>
8	2/25/17	Exam 2 (Mod 5-7)	Equilibrium and elasticity <i>Reading: 81-8.4</i>
--	3/4/17		Spring Break
9	3/11/17		Energy and work <i>Reading: 10.1-10.6, 10.8</i>
10	3/18/17		Momentum <i>Reading: 9.1-9.7, 10.7</i>
11	3/25/17	Exam 3 (Mod 8-10)	Fluids <i>Reading: Chapter 13</i>
12	4/1/17		Oscillations <i>Reading 14.1-14.7</i>
13	4/8/17		Traveling waves and sound <i>Reading: 15.1-15.7</i>
14	4/15/17		Superposition and standing waves <i>Reading: 16.1-16.7</i>
17	4/30/17 – 5/1/17	Exam 4 (Mod 11-14; cumulative)	

Disclaimer: This syllabus represents my current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.