

PHYS1111 Spring Semester 2022

Introductory Physics - Mechanics, Waves and Thermodynamics

Syllabus:

27121 , Period 3: 10:20pm - 11:10am MWF Room 202 Physics Building.

27126 , Period 4: 11:30am - 12:20pm MWF Room 202 Physics Building.

This course has been assigned to be taught face-to-face with in-person lectures MWF in Room 202 Physics Building.

Course Instructor: Professor K K Mon

kkmon@uga.edu

Office: 223D, 542-3454

Online Zoom office hours by appointment. Professor Mon is also available in-person after each in-person lecture in Room 202 of Physics Building. Please maintain social distance.

Professor Mon can be reached via email.

(Sec A) The course policy on absence from in-person lecture attendance.

No record of in-person lecture attendance will be taken and no demerit for absence from in-person lecture will be given.

[Your health, safety and well-being are of the highest concerns. If you are not well or in difficult circumstances, UGA wants you to immediately seek medical and professional help provided by UGA. See (Sec J) below for more information.]

(Sec B)-----

I. AS required by UGA, this course will be taught face-to-face with in-person lectures MWF in Room 202 Physics Building.

II. Online homework assignments with Modified Mastering Physics will be assigned and graded. This course has more homework than assigned by most instructors of the same course. For that reason, the homework account for 48% of your grade.

There are a total of about 800 items in 16 homework sets. Mastering Physics estimates that it may take a total of 72 hours or 5 hours per week to complete all the homework.

The students should also expect to spend another 6 hours of reading the textbook and 3 hours of lecture time per week. This is a total of 14 hours per week. Some students may need more and some less. It will depend on your prior preparations and interest in Physics.

III. There will be two midterm-tests and another final-test. These will be online at Mastering Physics.

They will be multiple choice and machine-graded.

Test problems and answers may be different for different students.

No partial-credit and no-regrade.

It will be open-book and open notes but nothing else.

Calculators will be allowed.

Do not search for answers online or elsewhere.

Do not discuss the test questions with anyone before, during or after taking the tests, until all the tests have been graded and scores posted. Any form of assistance will constitute cheating.

There will not be a standard 3 hours final exam during the Final Exam period. The standard final exam is replaced by the final-test before the last day of class.

Dates and more specific details of the three tests will be announced. The test average is calculated using only the two highest scores of the (midterm-test 1, midterm-test 2, final-test). The lowest score of the three will not be counted.

If you have valid excuse for not taking a scheduled test, you must provide documentation. There will be no makeup midterm-tests. The score for a missing excused midterm-test will be replaced by the final-test's score. If you missed both midterm-tests for valid reasons, you should seek a withdrawal from the course.

IV. There is a separate lab component of this course, which is managed by the Lab coordinator with graduate Lab TA.

Academic integrity will be strictly enforced.

(Sec C)-----

Grading Policy:

48% (Mastering Physics Online homework)

+ 12% (average of the two highest [midterm-test 1, midterm-test 2, final-test])

+ 40% (Lab)

= 60% lecture + 40% lab = 100%

The partition of the total grade into lecture (48% + 12%) and lab (40%) is guided by the course description for PHYS 1111-1111L (3 hours lecture and 2 hours lab per week), as listed on the UGA Course Bulletin at the Registrar website.

<https://bulletin.uga.edu/CoursesHome?cid=3899>

The letter grade will be assigned as:

A = 90 to 100
A- = 87 to 89
B+ = 83 to 86
B = 80 to 82
B- = 73 to 79
C+ = 66 to 72
C = 56 to 65
C- = 50 to 55
D = 46 to 49
F = 0 to 45

Standard rounding will be used for the final numerical grade. For example, 89.4999 will be 89 and A-, but 89.5 will be 90 and A.

There are no exception to these assignments.

All withdrawals will be processed in accordance with University policy as stated in the undergraduate bulletin. For withdrawals before the midpoint, a grade of "W" will be assigned for all cases.

(Sec D) Course materials:

1. An account on Modified Mastering Physics at Pearson.com is mandatory. You must register online at pearson.com. Detailed instruction is posted at eLC. You can get a limited free-trial access to Mastering Physics. Visit the Pearson Mastering Physics site for more information.

2. The textbook is: "Physics, 5th ed" by J.S. Walker (Pearson). Other editions are also acceptable. An e-text can also be purchased with Modified Mastering Physics access. After you have access to Mastering Physics, you will need to register for Mastering Physics with the course id that I will email you.

3. You will need to enroll in the lab component of PHYS1111.

4. A simple basic scientific calculator is needed.

(Sec E) Homework assignment:

Frequent online homework assignments will be an important part of the course. Homework grade is 48% of your total score. Late homework items will be reduced in maximum credit by 10% per day for the unfinished items. Scores for all finished and submitted items of a homework set will not be affected by late-submission reduction.

This means homework items not submitted for ten calendar days or longer will received no credit. For example,

If you finished 7 items out of 9 items in the homework set receiving a score of 65 at the time they are due and submitting the 2 remaining items (which are worth 30 points) two days later:

your maximum score for the 2 late items is,

$$30 \times (1 - (2 \text{ days late}) \times (0.1/\text{day late})) = \\ 30 \times (1 - 0.2) = 30 \times (0.8) = \text{maximum of 24 points of late credit.}$$

This is the maximum for the 2 late items. You could get less for not doing them correctly.

The final score for your homework set is $65 + (\text{late credit})$. Note, your score of 65 for all finished items which were submitted before the deadline, remains unchanged.

If you no longer want to work on an item, just ask for the answer and the item will be considered to be completed.

All items (for credit, extra credit and for practice only) must be completed before the entire homework set is marked as completed.

Mastering Physics homework will be graded by machine. Since there is

no partial credit, please take your time and pay attention to details.

To account for valid excuses for not being able to submit homework, the lowest homework grade will be dropped in the calculation of grade. In addition, there will be extra-credit problems in the homework to increase your grade.

For all request of homework due-date extension, you must provide supporting documentation.

(Sec F).....

If you are not well or in difficult circumstances, UGA wants you to immediately seek medical and professional help provided by UGA.

You are encouraged to contact Student Care and Outreach in the Division of Student Affairs at 706-542-7774 or visit <https://sco.uga.edu>. They will help you navigate any difficult circumstances you may be facing by connecting you with the appropriate resources or services.

By contacting Student Care and Outreach in the Division of Student Affairs, they can also assist you with documentation to obtain relief from submitting your homework on-time or taking the tests.

(Sec G).....

Our course policy is guided by USG rules that the vaccination status of students and staff remains unknown. Further, USG policy does not mandate masks and does not provide social distance for indoor in-person instruction. This course policy is formulated to accommodate all students regardless of student vaccination status and mask preference.

(Sec H).....

Learning from your peers can be valuable and encouraged but plagiarism is forbidden. Students should make maximum use of the online Mastering Physics eLearning facility. Each student's subscription to Mastering Physics also contains access to online tutorials, simulations et etc.

We will study chapters 1-14 and 16-18.

Course Schedule: (Changes are possible and will be announced.)

# Week 1 of PHYS1111, Spring, 2022.			
date			
1/10/2022	1	Chapter 1	Intro to physics.
1/12/2022	2	Chapter 2	One-dim kinematics.
1/14/2022	3		
Week 2			
1/17/2022		Holiday: Martin Luther King Jr. Day	
1/19/2022	4	Chapter 3	Vectors.
1/21/2022	5		
Week 3			
1/24/2022	6	Chapter 4	Two-dim kinematics.
1/26/2022	7		

1/28/2022	8	Chapter 5	phys1111_s22 Newton's law of motion
	Week 4		
1/31/2022	9		
2/02/2022	10		
2/04/2022	11	Chapter 6	Applications of Newton's laws.
	Week 5		
2/07/2022	12		
2/09/2022	13		
2/11/2022	14	Chapter 7	Work and Kinetic energy.
	Date of Midterm-Test #1 and specifics to be announced.		
	Week 6		
2/14/2022	15		
2/16/2022	16		
2/18/2022	17	Chapter 8	Potential energy and conservation of energy
	Week 7		
2/21/2022	18		
2/23/2022	19		
2/25/2022	20	Chapter 9	Linear momentum and collisions.
	Week 8		
2/28/2022	21		
3/02/2022	22		
3/04/2022	23	Chapter 3	Rotational kinematics and energy.
	Week 9	Spring Break	
3/07/2022	No class.		
3/09/2022	No class.		
3/11/2022	No class.		
	Week 10		
3/14/2022	24		
3/16/2022	25		
3/18/2022	26	Chapter 11	Rotational dynamics and static equilibrium.
	Week 11		
3/21/2022	27		
3/23/2022	28		
3/25/2022	29	Chapter 12	Gravity.
	Date of Midterm-Test #2 and specifics to be announced.		
	Week 12		
3/28/2022	30		
3/30/2022	31	Chapter 13	Oscillations about equilibrium.
4/01/2022	32		
	Week 13		
4/04/2022	33		
4/06/2022	34	Chapter 14	Waves and sound.
4/08/2022	35		
	Week 14		
4/11/2022	36		

4/13/2022 37
 4/15/2022 38 Chapter 16 Temperature and heat.

Week 15
 4/18/2022 39
 4/20/2022 40 Chapter 17 Phases and phase changes.
 4/22/2022 41

Final-test is: Friday, April 29, 2022.
 This is subject to change and details to be announced.

Week 16
 04/25/2022 42
 04/27/2022 43 Chapter 18 Laws of Thermodynamics
 04/29/2022 44

Week 17
 05/02/2022 45 the last day of class for MWF classes.

There will be no three hour final exam.

(Sec I).....

UGA Student Honor Code:

"I will be academically honest in all of my academic work
 and will not tolerate academic dishonesty of others.
 " A Culture of Honesty, the University's policy and procedures for
 handling cases of suspected dishonesty, can be found at
www.uga.edu/ovpi.

(Sec J).....

Mental Health and Wellness Resources:

If you or someone you know needs assistance, you are encouraged
 to contact Student Care and Outreach in the Division of Student
 Affairs at 706-542-7774 or visit <https://sco.uga.edu>. They will
 help you navigate any difficult circumstances you may be facing
 by connecting you with the appropriate resources or services.

UGA has several resources for a student seeking mental health
 services (<https://www.uhs.uga.edu/bewelluga/bewelluga>) or crisis
 support (<https://www.uhs.uga.edu/info/emergencies>).

If you need help managing stress anxiety, relationships, etc.,
 please visit BeWellUGA (<https://www.uhs.uga.edu/bewelluga/bewelluga>)
 for a list of FREE workshops, classes, mentoring, and health
 coaching led by licensed clinicians and health educators in the
 University Health Center.

Additional resources can be accessed through the UGA App.