

Fall 2015

PHYS 1061

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PHYSICS 1061

Fall 2015 Syllabus

CLASS MEETS: 1:00 – 1:50 pm MWF CSB 103

TEXT: Mosca & Tipler **Physics for Scientists and Engineers**, 6th Ed.

ALSO REQUIRED: Sapling Learning access and clicker from iClicker

INSTRUCTOR: Dr. C. Gregory Seab SC 2014 504-280-6341 cseab@uno.edu

OFFICE HOURS: 11:00 AM - 1:00 PM MWF or by appointment

This is the first semester of an introductory Physics sequence for science and engineering majors and others who need calculus-based physics. Credit or registration in Math 2114 is required. Concurrent registration in the accompanying lab course PHYS 1063 is also required.

Subject matter: This semester deals with classical mechanics, beginning with kinematics in one and two dimensions, dynamics with Newton's laws of motion, rotations, and concepts of work and energy. It also covers equilibrium, elasticity, oscillations, and fluid mechanics.

Student Learning Objectives: These provide for both a conceptual and a mathematical understanding of Newtonian mechanics.

- Understand the basic physical principles involving force and motion, momentum, energy, rotational motion and motion of bodies in a gravitational field.
- Develop mathematical skills for solving science and engineering problems using these concepts.
- Provide background necessary for sophomore-junior level engineering or science courses in statics and dynamics

Class participation: Science is an active pursuit; understanding cannot be imparted to a passive audience. Students are expected to not only attend class, but to participate actively in the discussion of the concept tests with their classmates and with the instructor. An important part of this class will be the *concept questions* presented in class as a challenge to the thinking and understanding of the student. To this end, we will use *clickers* in the class to record responses to questions. The clicker total will contribute to the final grade.

Homework problems: Physics cannot be learned without doing problems. Homework assignments and grading will be done through the SaplingLearning system. A SaplingLearning code card good for two semesters is bundled with the text sold in the bookstore, or it can be purchased separately online for one or two semesters. The total of all homework grades will nearly equal one exam grade. Group work is strongly encouraged, as this has been found to be an effective way to learn. Problems assignments are designed to help students learn techniques for working a class of problems and to illustrate the types of problems that will appear on exams. The object is to *learn how* to work a type of problem, not just to get the “right” answer. Most exam problems will be similar to one or more homework problems, sample problems, or examples worked out in lecture. Late homework receives reduced credit, or no credit after the exam for that material.

Exams: There will be three hourly exams during the semester, plus a comprehensive final exam. The exams will consist of a mix of concept questions and problems. The concept questions will be similar to the concept questions done in class and the Conceptual Problems in the text and the homework. The problems will be similar to the assigned homework problems and examples done in the class. *No makeup exams will be given. Instead, the lowest hourly exam grade will be dropped.*

Pace of work: We will roughly one chapter every week. Because of the rapid pace, it is imperative that class attendance be regular and that students keep up with the work. Students are responsible for getting class notes to cover any absences.

Final grade: The final grade in the course will be based on a weighted Grand Average score:

2 Hourly exams @ 20%	45%	(lowest of 3 exams dropped)
Comprehensive final	30%	Friday, May 12, 12:30-2:30 pm
Graded homework	15%	On Sapling
Clicker questions	10%	Daily in class
Total	100%	100%

Preliminary grading scale is: 85-100 A; 75-85 B; 65-75 C; 55-65 D; <55 F. This is preliminary and subject to change by announcement in class.

Academic Integrity: Students are expected to conduct themselves according to the principles of academic integrity as defined in the statement on Academic Dishonesty in the UNO Judicial Code. Any student or group found to have committed an act of academic dishonesty shall have their case turned over to Judicial Affairs for disciplinary action which may result in penalties as severe as indefinite suspension from the University. Academic dishonesty includes, but is not limited to: cheating, plagiarism, fabrication, or misrepresentation, and being an accessory to an act of academic dishonesty.

ODS Services: It is University policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have disabilities that may affect their ability to participate in course activities or to meet course requirements. Students with disabilities are encouraged to contact their instructors and/or the Office of Disability Services to discuss their individual needs for accommodations.

UNO Physics 1061 Physics Engr Sci I Fall 2015 - Seab 1:00-1:50 pm MWF SC 1053									
Week	Class	Date			Chap	Topic	HW due	Warm-up due	
1	1	Aug	19	W	Ch 1	Measurement & Vectors			
	2		21	F					
2	3		24	M					Add date 8/25 Tues midnight
	4		26	W	Ch 2	1-D Motion	HW01	Ch01	
	5		28	F				Ch02	
3	6		30	M					
	7	Sep	2	W	Ch 3	2-D Motion		Ch03	
	8		4	F			HW02		
4			7	M	Labor Day Holiday				14th day Tues 9/8 drop w/o W "W" for drops
	9		9	W					
	10		11	F	Ch 4	Newton's Laws	HW03	Ch04	
5	11		14	M					
	12		16	W	Ch 5	Newton's Laws II	HW04	Ch05	
	13		18	F					
6	14		21	M					
	15		23	W	review				
	16		25	F	Exam 1	Chs 1-5			File for commencement
7	17		28	M	Ch 6	Work & Kinetic Energy	HW05	Ch06	
	18		30	W					
	19	Oct	2	F	Ch 7	Conservation of energy	HW06	Ch07	
8	20		5	M					midterms
	21		7	W					
	22		9	F	Ch 8	Conservation of momentum	HW07	Ch08	
9	23		12	M					mid-term grades Tues 10/13 9am
	24		14	W					Drop Day 11:59pm
			16	F	Fall Break				Fall Break Th-F
10	25		19	M	Ch 9	Rotation	HW08	Ch09	
	26		21	W					
	27		23	F					
11	28		26	M	Ch 10	Angular Momentum	HW09	Ch10	
	29		28	W					
	30		30	F			HW10		registration for spring
12	31	Nov	2	M	Exam 2	Ch 6 - 10			
	32		4	W	Ch 11	Gravity (skip 11-4)		Ch11	
	33		6	F					
13	34		9	M	Ch 12	Equilibrium & Elasticity	HW11	Ch12	
	35		11	W					
	36		13	F	Ch 13	Fluids	HW12	Ch13	
14	37		16	M					
	38		18	W					
	39		20	F	Ch 14	Oscillations	HW13	Ch14	
15	40		23	M					
	41		25	W			HW14		
			27	F	Thanksgiving				Thanksgiving Th-F
16	42		29	M	Ch R-1	Relativity			
	43	Dec	2	W	Exam 3	Ch 11 - 14			
	44		4	F	review		HWR1	ChR1	
			11	F	12:30 - 2:30 pm FINAL EXAM Comprehensive				

UNO Syllabus Attachment Fall 2015

Important Dates*

Last day to adjust schedule w/out fee	08/18/2015
Semester Classes Begin.....	08/19/2015
Last day to adjust schedule w/fee, or withdraw with 100% refund	08/25/2015
Last day to apply for December commencement	09/25/2015
Final day to drop a course or resign	10/14/2015
Mid-semester examinations	10/05-10/09/2015
Final examinations	12/07-12/11/2015
Commencement.....	12/18/2015

*Note: check Registrar's website for Saturday and A/B sessions, and for items not listed here: <http://www.registrar.uno.edu>

Fall Semester Holidays

Labor Day	09/07/2015
Mid-semester break.....	10/15-10/16/2015
Thanksgiving.....	11/26-11/27/2015

Withdrawal Policy – Undergraduate only

Students are responsible for initiating action to resign from the University (withdraw from all courses) or from a course on or before dates indicated in the current Important dates calendar. Students who fail to resign by the published final date for such action will be retained on the class rolls even though they may be absent for the remainder of the semester and be graded as if they were in attendance. Failure to attend classes does not constitute a resignation. Check the dates on the Registrar's website, <http://www.registrar.uno.edu>. Please consult The Bulletin for charges associated with dropping and adding courses.

Incomplete Policy – Undergraduate only

The grade of I means *incomplete* and is given for work of passing quality but which, because of circumstances beyond the student's control, is not complete. The issuance of the grade of I is at the discretion of the faculty member teaching the course. For all graduate and undergraduate students, a grade of I becomes a grade of F if it is not converted before the deadline for adding courses for credit (as printed in the Important Dates Calendar) of the next regular semester including summer semester.

Repeat Policy

When a student is permitted to repeat a course for credit, the last grade earned shall be the one which determines course acceptability for degree credit. A student who has earned a C or better in a course may not repeat that course unless, (1) the catalog description indicates that the course may be repeated for credit, or (2) the student's Dean gives prior approval for documented extenuating circumstances.

Graduate Policies

Graduate policies often vary from undergraduate policies. To view the applicable policies for graduate students, see the Graduate Student Handbook: <http://www.uno.edu/grad/documents/GraduateStudentHandbook2014.pdf>

Academic Dishonesty Policy

<http://www.uno.edu/student-affairs-enrollment-management/documents/academic-dishonesty-policy-rev2014.pdf>

Safety Awareness Facts and Education

Title IX makes it clear that violence and harassment based on sex and gender is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. If you or someone you know has been harassed or assaulted, you can find the appropriate resources here:

<http://www.uno.edu/student-affairs-enrollment-management/>

UNO Counseling Services and UNO Cares

UNO offers care and support for students in any type of distress. Counseling Services assist students in addressing mental health concerns through assessment, short-term counseling, and career testing and counseling. Find out more at <http://www.uno.edu/counseling-services/>. First-year students often have unique concerns, and UNO Cares is designed to address those students succeed. Contact UNO Cares through <http://www.uno.edu/fye/uno-cares.aspx>.

Emergency Procedures

Sign up for emergency notifications via text and/or email at E2Campus Notification: <http://www.uno.edu/ehso/emergency-communications/index.aspx>. All emergency and safety procedures are explained at the Emergency Health and Safety Office: <http://www.uno.edu/ehso/>.

Diversity at UNO

As the most diverse public university in the state, UNO maintains a Diversity Affairs division to support the university's efforts towards creating an environment of healthy respect, tolerance, and appreciation for the people from all walks of life, and the expression of intellectual point of view and personal lifestyle. The Office of Diversity Affairs promotes these values through a wide range of programming and activities. <http://diversity.uno.edu/index.cfm>

Learning and Support Services

Help is within reach in the form of learning support services, including tutoring in writing and math and other supplemental instruction. Visit the Learning Resource Center in LA 334, or learn more at <http://www.uno.edu/lrc/>.

Affirmative Action and Equal Opportunity

UNO is an equal opportunity employer. The Human Resource Management department has more information on UNO's compliance with federal and state regulations regarding EEOC in its Policies and Resources website: <http://www.uno.edu/human-resource-management/policies.aspx>