

Physics 1111K

Section A

Fall 2021

Instructor: Shafat Mubin

Office: Nevins Hall 3021

Email: smubin@valdosta.edu

Weekly Schedule

Lectures:	T R	2:00 pm	Nevins Hall 1061
Recitation:	T	3:30 pm	Nevins Hall 3012
Lab:	M	2:00 pm	Nevins Hall 3041

Office Hours: T R 11:00 am – 12:00 pm

Textbook: College Physics by OpenStax College Publishing, 2013 (*available for free download on Blazeview*)

Laboratory Manual: PHYS 1111K Laboratory Manual by Dr. D. J. Drake, Ed. 5

Course Description: Part I of an introductory course in physics. Topics include mechanics, thermodynamics, and waves. Elementary algebra and trigonometry will be used. Three lecture hours, one 2-hour laboratory, and 1-hour recitation session per week.

Hours of Credit: 4

Core Curriculum Objectives:

Area D: Students will demonstrate understanding of the physical universe and the changing nature of science, and they will use scientific methods and/or mathematical reasoning and concepts to solve problems.

Departmental Curriculum Objectives:

- Students will demonstrate knowledge in the fundamental branches of physics
- Students will apply techniques of mathematical analysis (algebra, geometry, trigonometry, and calculus) to physics problems

Topics

1. Kinematics

- position, velocity, acceleration
- equations of motion
- graphical representation of motion
- projectile motion

2. Forces

- free-body diagram
- Newton's laws of motion
- friction
- inclined plane
- connected objects
- torque
- equilibrium
- angular velocity and acceleration

3. Momentum

- conservation of momentum
- impulse

4. Energy

- work
- kinetic energy and potential energy
- conservation of energy

5. Harmonic Motion

- position, velocity, acceleration
- time period
- oscillation
- waves

Lectures (subject to change)

Week		Topics
1	Aug 16	Math review, introduction
2	Aug 23	Kinematics – position, velocity, acceleration; graphs; 1D motion
3	Aug 30	Kinematics – 2D motion; vectors; projectile motion
4	Sep 6	Forces – free-body diagrams; Newton’s laws; MIDTERM 1
5	Sep 13	Forces – friction; inclined planes
6	Sep 20	Forces – connected objects
7	Sep 27	Forces – torque; equilibrium
8	Oct 4	MIDTERM 2
9	Oct 11	Momentum – conservation of momentum; impulse (<i>no class Mon, Tue</i>)
10	Oct 18	Energy – work; kinetic energy; potential energy
11	Oct 25	Energy – conservation of energy
12	Nov 1	MIDTERM 3
13	Nov 8	Harmonic Motion - oscillations
14	Nov 15	Harmonic Motion - waves
15	Nov 22	Harmonic Motion - energy (<i>no class Wed, Thu</i>)
16	Nov 29	Fluid Flow
17	Dec 6	FINAL (Wed, Dec 8, 2:45 – 4:45 pm)

Grading

Homework and Labs:	40%
Midterm 1:	Extra-credit (5%)
Midterm 2:	20%
Midterm 3:	20%
Final:	20%

The **three** lowest homework and lab scores will be dropped from the final evaluation.

Extra credit: Project/presentation: 5%

In borderline cases, grades may be adjusted favorably taking into account attendance and participation in lectures.

Grading Scale

<u>Score Range</u>	<u>Grade</u>
≥ 90	A
80 to 89	B
70 to 79	C
60 to 70	D
< 60	F

Student Opinion of Instruction (SOI): At the end of the term, all students will be expected to complete an online Student Opinion of Instruction survey (SOI) that will be available on BANNER. Students will receive an email notification through their VSU email address when the SOI is available (generally at least one week before the end of the term). SOI responses are anonymous to instructors/administrators. Instructors will be able to view only a summary of all responses three days after they have submitted final grades. While instructors will not be able to view individual responses or to access any of the data until after final grade submission, they will be able to see which students have or have not completed their SOIs, and student compliance may be considered in the determination of the final course grade. These compliance and non-compliance reports will not be available once instructors are able to access the results.

Disruptive Behavior Policy: Disruptive students may be removed from the class. Disruptive behavior includes but is not limited to: offensive language and behavior, incessant talking, interrupting class with personal or non-academic concerns, distracting students from the task at hand, drawing on desk tops, taking frequent unscheduled breaks, annoying other students, tardiness, leaving early, using cell phones, or pagers in class, etc. All cell phones, pagers, and beepers must be turned off or set on vibrate during class time. If you realize that you have an incoming call that you must attend to, leave the room quietly to do so. Do not attend to it in class. Students are responsible for being aware of the policies, procedures and student responsibilities contained within the current edition of the Valdosta State University Catalog and Student Handbook.

Classroom and Laboratory Emergency Procedure: In the event of a bomb threat, tornado, or fire, students and staff may be asked to evacuate the building or move to a secure location

within the building. Evacuation routes for movement to an external location or to a shelter within the building are posted at the front of the room. Students should review the maps and make sure that the exit route and assembly location for the building are clearly understood. If you have a disability that may require assistance during an evacuation, please let your faculty know at the end of the first class.

Disability Services Policy: Valdosta State University is an equal opportunity educational institution. As such, students with disabilities who are experiencing barriers in this course may contact the Access Office for assistance in determining and implementing reasonable accommodations. The Access Office is located in Farbar Hall. The phone numbers are 229-245-2498 (V), 229-375-5871 (VP) and 229-219-1348 (TTY). For more information, please visit VSU's Access Office or email: access@valdosta.edu.

Title IX Statement: Valdosta State University (VSU) is committed to creating a diverse and inclusive work and learning environment free from discrimination and harassment. VSU is dedicated to creating an environment where all campus community members feel valued, respected, and included. Valdosta State University prohibits discrimination on the basis of race, color, ethnicity, national origin, sex (including pregnancy status, sexual harassment and sexual violence), sexual orientation, gender identity, religion, age, national origin, disability, genetic information, or veteran status, in the University's programs and activities as required by applicable laws and regulations such as Title IX. The individual designated with responsibility for coordination of compliance efforts and receipt of inquiries concerning nondiscrimination policies is the University's Title IX Coordinator: Maggie Viverette, Director of the Office of Social Equity, titleix@valdosta.edu, 1208 N. Patterson St., Valdosta State University, Valdosta, Georgia 31608, 229-333-5463.

Students Experiencing Academic Difficulties: Tutoring will be available in the Physics and Astronomy Learning Center, located in Nevins Hall 3027. Look for a schedule of days/times on the door. Students with academic concerns are strongly encouraged to use the learning center.

Students who would like one-on-one tutoring can also contact the staff of the Student Success Center or call them at 229-333-7570. The Student Success Center is located on first floor of Langdale Residence Hall on the main VSU campus. Services provided by the Success Center include tutoring, writing assistance, and help with time management. Students are encouraged to make appointments with Center Staff through the website or by telephone. The center is available to all VSU students, and evening appointments are available at www.valdosta.edu/ssc.

Technology Assistance: This course may require access to a computer. Students having technology problems may contact the Help Desk by phone at 229-245-4357 or e-mail a question at helpdesk@valdosta.edu. The Help Desk is located on the 2nd floor of the Odum Library.

Academic Misconduct and Dishonesty Policy: Students are expected to abide by the VSU Academic Integrity code. "Academic integrity is the responsibility of all VSU faculty and students. Faculty members should promote academic integrity by including clear instruction on the components of academic integrity and clearly defining the penalties for cheating and plagiarism in their course syllabi. Students are responsible for knowing and abiding by the Academic Integrity Policy as set forth in the Student Code of Conduct and the faculty members' syllabi. All students are expected to do their own work and to uphold a high standard of academic ethics." Violation of academic honesty includes, but is not limited to, the following actions:

1. Cheating on an examination or quiz – either giving or receiving information.
2. Copying information from another person for graded assignments, including that information obtained from an Internet source.
3. Using unauthorized materials during tests.
4. Collaborating during examinations.
5. Buying, selling or stealing examinations.
6. Arranging a substitute for oneself during an examination.
7. Substituting for another person or arranging such a substitution.
8. Plagiarism – the intentional or accidental presentation of another's words or ideas as your own.
9. Submission of work other than your own for written assignments.
10. Incorporating the words or ideas of an author into one's paper without giving the author due credit.
11. Collaboration with another person or persons in submitting work for credit in class or lab, unless such collaboration is approved in advance by the instructor.

For more information visit: <https://www.valdosta.edu/academics/academic-affairs/academic-honesty-policies-and-procedures.php>

Course Compliance Statement: Enrollment in this class signifies that the student has agreed to abide by and adhere to the policies and regulations specified above. It is understood that the instructor may adapt or change this syllabus and the assignments contained within it according to circumstances that may arise during the course of the semester.