

## Class Time and Location

- **Location:** College of Science, Building number 4 (كلية العلوم مبنى ٤)

	Days	Time	Room
Lectures	Sunday, Tuesday and Thursday	Check your schedule	Check your schedule
Laboratory	One session a week See your course schedule	Two hours	Different lab locations

## Instructor Information

Name	Dr. Abdulaziz Saleh Alqasem
Office	2A57
Email	<a href="mailto:AbdAlqasem@ksu.edu.sa">AbdAlqasem@ksu.edu.sa</a>
Office Hours	To be announced soon. Also we can meet anytime by appointment.



## Course page

The course materials are available at: <https://faculty.ksu.edu.sa/en/abdalqasem/course/427730>

## Grading Policy

Assessment	First Midterm	Second Midterm	Laboratory	Final Exam
Weight	15%	15%	30%	40%

## General Policies

- **Attendance:** Regular attendance is expected (**75% minimum**) and crucial for success in this course.
- **Eating and Drinking:** You can, but please do not disturb others with noise or strong odors.
- **Leaving the Classroom:** Please be respectful and minimize disruptions when entering or leaving the classroom. You do NOT need to ask for permission.

## Course Description

This course provides a foundation in the principles of classical mechanics, focusing on the motion of objects and the forces that govern them. Topics include vectors, motion in one and two dimensions (with applications to projectile and circular motion), Newton's laws of motion, work and energy, potential energy and conservation of energy, linear momentum and collisions, and the rotation of rigid bodies about a fixed axis. Emphasis is placed on developing problem-solving skills and applying physical principles to real-world situations.

## Main Textbook

Serway, R. A., & Jewett, J. W. (2003). **Physics for Scientists and Engineers** (6th ed.)

## Secondary Textbook

Halliday, D., Resnick, R., & Walker, J. (2013). **Fundamentals of Physics** (10th ed.). Wiley.

## Resources

Online simulations (e.g., [PhET](#))

## Tentative Schedule

Chapter	Title	Section	Hours	Suggested Problems
1	Physics and measurement	1.1, 1.4, 1.5	2	13, 15, 21, 25, 31
2	Motion in One Dimension	2.1, 2.2, 2.3, 2.5, 2.6	4	4, 5, 11, 15, 16, 20, 21, 22, 23, 25, 27, 28, 29, 32, 33, 40, 42, 43, 46, 48, 51, 52
3	Vectors	3.1–to–3.4	4	1, 4, 19, 21, 27, 30, 31, 33, 39, 49, 50
4	Motion in Two Dimensions	4.1–to–4.5	4	1, 3, 5, 6, 8, 14, 15, 17, 19, 20, 22, 23, 25, 29
5	The Laws of Motion	5.1–to–5.8	6	3, 7, 11, 16, 18, 24, 25, 26, 28, 30, 31, 37, 41, 44, 45, 46, 68
6	Circular Motion and Other Applications of Newton's Laws	6.1	2	1, 2, 5, 7, 59

7	Energy and Energy Transfer	7.2–to–7.8	4	1, 4, 7, 13, 14, 15, 16, 19, 21, 24, 25, 26, 28, 31, 32, 33, 35, 37, 40
8	Potential Energy	8.1–to–8.5	4	2, 5, 6, 11, 13, 17, 31, 33, 36, 38, 42, 55, 57, 59, 60
9	Linear Momentum and Collisions	9.1–to–9.4	5	1, 2, 4, 5, 7, 8, 9, 10, 13, 15, 16, 17, 18, 21, 25, 27, 32, 33, 35
10	Rotation of a Rigid Object About a Fixed Axis	10.1–to–10.8	6	1, 3, 5, 6, 8, 12, 13, 16, 17, 18, 20, 21, 31, 35, 37, 46, 70, 71

### Note

Students are expected to be able to solve all examples in the assigned sections, as well as the suggested problems, under the instructor's supervision. Questions are encouraged during class, and students should attend office hours for clarification or additional assistance.

## Study Progress Form (SPF)

- A+ for (PHYS 103) is *possible* if you plan well for it.
- After completing each chapter, go back to the slides/book and do the examples and suggested problems by yourself.
- You *must* be able to solve all examples and suggested problems without looking at the solutions, as you will do so during the exams.
- Use [SPF](#) to track your studying progress, after completing each chapter.
- I will be checking the form regularly to make sure you are on track for A+.
- If you cannot solve an example or a problem, please seek help from your peers or come to office hours as soon as possible.
- The main objective of this form is to find areas where you need improvement as early as possible. Also, next chapters are built on previous ones, so it is crucial to keep up with the material.
- No grades will be assigned based on this form; it is solely for your benefit.

