

About the Instructor

Name: Professor Abdullatif Hamad

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Virtual Office Hours: Wednesday 5:00 p.m. – 6:00 p.m. (CST) via Zoom

Bio: My research is mostly in experimental photonics. I study optical properties of materials such as materials for data storage and communication including novel glasses for laser-induced refractive index gratings; nonlinear optical properties of materials using laser techniques

Communicating with the instructor: Students should contact me via email at ahamad@siue.edu or by using the Email link in the About This Course area of the Blackboard course shell. Students are required to use their SIUE email accounts when contacting me and can expect a response within 24 hours. I will also hold online office hours each Wednesday from 5:00 p.m. to 6:00 p.m. (CST) using Zoom. A link to the online office space is available in the About This Course area.

About the Course

Course description: This course is designed to develop a conceptual understanding of the phenomena of our everyday life through the laws of physics. The emphasis is on encouraging students to understand and appreciate their environment from a new perspective. This is a **fast-paced** course involving a lot of information over a 3-week period and it is easy to fall behind. Once behind it is difficult to catch up. Please plan ahead to adequately read and understand the material on time. I suggest that only serious students with a genuine desire to learn more about concepts of physics sign up for this course.

Course goals and objectives:

1. Develop basic science literacy of students, particularly with regard to physics, so that they can better fulfill their role as knowledgeable citizens.
2. Improve students' quantitative reasoning skills.
3. Develop an appreciation for the processes by which scientific knowledge is obtained and evaluated.
4. Develop an understanding of some of the fundamental laws and principles of physics.
5. Develop an understanding of common phenomena from the perspective of physics.

Course textbooks: *Physics of Everyday Phenomenon, 8E*, by W. Thomas Griffith.

The textbook is available to registered students at Textbook Services. See the Textbook Rental web page for **Off Campus Textbook From:**
<https://www.siue.edu/textbook/forms.shtml>

Other course materials: Course materials (PowerPoint presentations, pdf files, animations, homework, quizzes, tests, etc.) are available in the **Course Materials** area.

Technology requirements: Since this is an online course, you are expected to have reliable Internet access on a regular basis. It is your responsibility to address any computer problems that might occur. Such problems are not an excuse for delays in meeting expectations or for missing course deadlines.

At a minimum, you will need the following software/hardware to participate in this course:

- Computer with an updated operating system (e.g. Windows, Mac, Linux)
- Updated Internet browsers (Apple Safari, Internet Explorer, Google Chrome, Mozilla Firefox)
- DSL or Cable Internet connection or a connection speed no less than 6 Mbps.
- Media player for MP4 files
- Adobe Reader or alternative PDF reader (free):
<http://get.adobe.com/reader/?promoid=HRZAC>
- Oracle Java plugin (free): <http://java.com/en/download/index.jsp>
- Any other specialized software or basic software (e.g., MS Office, etc.)

Technical support: Support for using Blackboard is available by calling **618-650-5500** or by visiting the **Help** link located inside of the Blackboard course shell. Technical assistance is provided 24/7 during this course. Local ITS support will be provided during normal business hours. After hours and holiday support is being provided by Blackboard's Help Desk technicians. Any issues that Bb technicians are unable to resolve will be handled within one day by local ITS support personnel. If you experience any technical problems during an assignment or exam, you are required to take a screenshot of the issue or error message and submit that evidence to me immediately.

Course requirements

Attendance/Participation: Your success in this course will depend on your communication, consistent engagement, and active participation in all course activities. Success in this course requires that adhere to the deadlines given below as you complete assignments, exams, and other course activities. Timely participation is very important and is not optional. You are expected to log into the course on a regular basis.

Course Activities and Resources:

Lectures: Lectures for each unit are available in the weekly folders in the Course Materials area.

Quizzes, Exams, and Homework Assignments: There will be a total of 6 quizzes, 2 exams, and a cumulative final exam. There will also be on-line

homework assignments at the end of each chapter (posted on Blackboard to be submitted and graded on line). See the course schedule section below for more information and due dates.

Quizzes: There are 6 total quizzes in this course.

- Your quizzes will be on Blackboard under Course Materials.
- You will only be able to take each quiz once.
- The quizzes will be made available at 1:00 PM on the days specified and will remain available until 11:59 PM of that same day.
- Each quiz set will have **15 questions** (1 point per question), **15 points total**.
- Once you begin the quiz you will have to complete it during the assigned time.
- There will be **6 quizzes**. Each quiz is worth 15 points. *Total of 90 points/6 = **15 percent of the total grade***.
- The quiz questions will be comprised of Multiple Choice and/ or True – False.

Exams: There are 3 exams in this course (2-unit exams and a cumulative final).

- The exams will be on Blackboard under Course Materials.
- You will only be able to take each exam once.
- The exams will be made available at 1:00 PM on the days specified and will remain available until 11:59 PM of that same day.
- Once you begin the exam you will have to complete it during the assigned time.
- Each exam will have 50 questions (2 points per question), 100 points total/exam. *Total of 200 points/5 = **40 percent of the total grade***.
- The exam will be comprised of: Multiple Choice and/or True – False.
- Exams will not be given earlier or later than the scheduled time.
- If you miss one or more regularly scheduled exams, you will receive a zero (0) for each exam you miss.

Homework Assignments: There are homework assignments at the end of each chapter (turned in and graded via Blackboard). Homework assignments are worth **20 percent of the total grade**.

Late or Missed Assignments: Late assignments will not be accepted in this course. There are no make-up quizzes or exams.

Assessment/Grading*Grade elements:*

Quizzes: 15 percent total

Homework: 20 percent total

Exams: 40 percent total (2 Exams, 20 percent each)

Final exam: 25 percent

Course total: **100** percent*Grading scale:*

Course grades will then be assigned according to the following scale.

Grade	%
A	\geq 90%
B	\geq 80%
C	\geq 70%
D	\geq 60%
F	$<$ 60%

Course and University policies

Subject to change notice: All material, assignments, and deadlines are subject to change with prior notice. It is your responsibility to stay in touch with me, review the course site regularly, or communicate with other students, to adjust as needed if assignments or due dates change.

Academic integrity/ plagiarism: The University gives high priority to matters of academic ethics and abhors all types of cheating, including plagiarism (<http://www.siu.edu/policies/1i6.shtml>). Plagiarism is the act of representing the work of another as one's own and may consist of copying, paraphrasing, or otherwise using written work or oral work of another without proper acknowledgment of the source or presenting oral or written material prepared by another as one's own. Instructors may impose sanctions for academic cheating in accordance with Student Conduct and Student Grievances: Rights and Responsibilities. In the case of plagiarism, the minimum sanction of the first instance of plagiarism is disciplinary probation; for the second instance of plagiarism the minimum sanction is separation from the University for one term;

and for a third instance of plagiarism, the minimum sanction is permanent separation from the University.

Reasonable Accommodations for Students with Disabilities: If you have a documented disability that requires academic accommodations, please contact Accessible Campus Community & Equitable Student Support (ACCESS) office for coordination of your academic accommodations. The ACCESS office is located in the Student Success Center, Room 1270 and is open Monday - Friday from 8:00 a.m. - 4:30 p.m.* You may contact their office by calling (618) 650-3726 or sending an email to disabilitysupport@siue.edu.

In order to request accommodations in an online course, students with disabilities will need to present an electronic copy of their ACCESS ID Card prior to application of those accommodations. To request an electronic ACCESS ID card, email disabilitysupport@siue.edu prior to requesting the accommodation of the instructor.

Please notify me no later than **December 20** concerning any academic accommodations you will need.

** Please note: The ACCESS Office is closed on days when the entire University is closed. Visit the ACCESS website located online at www.siue.edu/dss for more information.*

Important dates:

- **December 18, 2022:** Deadline for students to enroll without permission in Winter Session
- **December 19, 2022:** Winter Session Begins/Deadline for students to enroll with instructor permission (Students will not be permitted to enroll after this date)
- **December 19, 2022:** Deadline for students to drop with a full credit of tuition and fees
- **December 30, 2022:** Deadline for students to drop and receive a grade of W
- **January 04, 2023:** Deadline for students to drop with your permission and receive a grade of WP or WF
- **January 8, 2023:** Winter Session Ends

Additional information about Winter Session policies is available from the site at: <http://www.siue.edu/wintersession/>

Course Lecture, Quiz, and Exam Schedule (subject to modification):

Date	Topic/Lecture	Reading (Griffith)
Week 1 (December 19 – December 25)	Introduction	
	The scientific enterprise	1.1-1.2
	The scope of physics	1.3-1.4
	Speed, velocity, and acceleration	2.1-2.3
	Graphing motion	2.4
	Uniform acceleration	2.5
	Falling objects	3.1-3.2
Quiz #1 (December 23)		
	Projectile motion	3.3-3.4
	Projectile motion	3.5
	Newton's Laws of Motion	4.1-4.2
	Newton's Laws of Motion	4.3-4.4
Date	Topic/Lecture	Reading (Griffith)
Week 2 (December 26 – January 1)	Application of Newton's Law of Motion	4.5
Quiz #2 (Dec 27)		
Exam #1: Chapters 2, 3, and 4 (Dec 28)		
	Centripetal acceleration and force	5.1-5.2
	Planetary motion	5.3
	Planetary motion (con't)	5.3
	Newton's Laws of Universal Gravitation	5.4
	The moon and other satellites	5.5
	Work and energy	6.1
	Kinetic and potential energy	6.2-6.3
	Conservation of energy	6.4
	Momentum and impulse	7.1
Quiz #3 (January 1)		
Date	Topic/Lecture	Reading (Griffith)
Week 3 (January 2 – January 8)	Conservation of momentum	7.2
	Conservation of momentum/recoil	7.2-7.3
	Elastic and inelastic collisions	7.4
	Rotational motion	8.1

Quiz #4 (January 4)		
Exam #2: Chapters 5, 6, and 7 (January 6)		
	Torque and balance	8.2
	Pressure and Pascal's Principle	9.1
	Atmospheric pressure	9.2
	Archimedes' Principle	9.3
	Temperature and heat	10.1-10.2
Quiz #5 (January 7)		
	Electric charge	12.1-12.2
	Coulomb's Law and electric fields, voltage	12.3-12.5
	Electric Circuits	Chapter 13 (Optional/Extra credit)
	Magnets and Electromagnetism	Chapter 14 (Optional/Extra credit)
Quiz #6 (January 7)		
Final Exam: Cumulative (January 8)		

* Selected topics will be covered.