



The University of Jordan

Accreditation & Quality Assurance Center

COURSE Syllabus

1	Course title	General physics – lab
2	Course number	5512111
3	Credit hours (theory, practical)	1 credit hour - practical
	Contact hours (theory, practical)	3 contact hours - practical
4	Prerequisites/corequisites	5512101 or Concurrently
5	Program title	Coastal Environment
6	Program code	2
7	Awarding institution	University of Jordan/Aqaba
8	Faculty	Faculty of Marine Sciences
9	Department	Coastal Environment
10	Level of course	1st year
11	Year of study and semester (s)	2nd semester 2014/2015
12	Final Qualification	Bachelor Degree
13	Other department (s) involved in teaching the course	Marine biology
14	Language of Instruction	English
15	Date of production/revision	

16. Course Coordinator:

Office numbers, office hours, phone numbers, and email addresses should be listed.
 Office number: 345
 Office hours: Mon, Wed (11:00-12:30)
 Phone number (office): 03-2090450/35076
 Email address: e.alabsi@ju.edu.jo

17. Other instructors:

Office numbers, office hours, phone numbers, and email addresses should be listed.
 Office number: 345
 Office hours: Mon, Wed (11:00-12:30)
 Phone number (office): 03-2090450/35076
 Email address: e.alabsi@ju.edu.jo

18. Course Description:

As stated in the approved study plan.
 This lab consists of 12 experiments, collecting and analyzing data, measurement and precise, vectors, forces table, motion in one dimension, force and motion, Newton's laws, collisions in two dimensions, rotational motion, simple pendulum oscillation, gases' laws, viscosity parameter, and specific heat.

19. Course aims and outcomes:

<p>A- Aims:</p> <ul style="list-style-type: none"> • Gain practical experience with concepts presented in your lecture section • Gain familiarity with physical measurement equipment • Present data and results in a clear and logical manner • Analyze data and draw conclusions • Describe and calculate uncertainty. <p>B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to ...</p> <ul style="list-style-type: none"> • Use units, unit conversions and significant figures correctly in all experiments • Learn how to collect and analyze data • Learn how to use a vernier caliper and micrometer and then to compare errors • Study Archimedes's principle • Learn how to apply vectors in life by using a force table • Study motion in one dimension through free fall experiment • Study motion in two dimension through projectile motion experiment • Apply Newton's second law • Learn how to calculate the friction forces • Study the conservation of linear momentum • Study Hooke's law and then calculate the spring constant • Learn what is simple harmonic motion by using a simple pendulum

20. Topic Outline and Schedule:

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
Experimental error and data analysis	1	Eman Al-Absi	Use units, unit conversions and significant figures correctly in all experiments	Lab report	Physics Manual: "Laboratory Experiments for physics lab - 1", Eman Al-Absi, 2015, The University of Jordan, Aqaba.
Experiment 1: Collection and analysis of data	2		Learn how to collect and analyze data	Lab report	
Experiment 2: Measurements and uncertainties	3		Learn how to use a vernier caliper and micrometer and then to compare errors	Lab report	
Experiment 3: Archimedes's principle	4		Study Archimedes's principle	Lab report, Quiz	
Experiment 4: Vectors: force table	5		Learn how to apply vectors in life by using a force table	Lab report, Quiz	
Experiment 6: Motion in one dimension: free fall	6		Study motion in one dimension through free fall experiment	Lab report, Quiz	
Experiment 7: Motion in two dimension: projectile motion	7		Study motion in two dimension through projectile motion experiment	Lab report	
Experiment 8: Force and motion (Newton's second law)	8		Apply Newton's second law	Lab report, Quiz	

Experiment 9: Friction force	9		Learn to calculate the friction forces	Lab report, Quiz
Experiment 10: Conservation of linear momentum	10		Study the conservation of linear momentum	Lab report
Experiment 11: Hooke's law	11		Study Hooke's law and then calculate the spring constant	Lab report
Experiment 12: Simple harmonic motion: simple pendulum	12		Learn what is simple harmonic motion by using a simple pendulum	Lab report, Quiz

21. Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods: Teaching with using data show, lecture by teacher, use of whiteboard marker by instructor as aid in teaching, lab experiments, and student reports by individuals.

22. Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements: Exams, quizzes, lab reports, and attendance.

23. Course Policies:

A- Attendance policies:

As you will see below, attendance counts as a small portion of your final grade in this class. These are basically free points that I am offering as an incentive for you to learn the good habit of attending class. If you miss more than 2 lab sessions, you must drop the course, or receive an F.

B- Absences from exams and handing in assignments on time:

Failure to attend the lab on the day an assignment is given or due does not mean that you may turn it in late without penalty. You will take 0 for lab report and there will be no makeup quizzes, though your lowest quiz score for the semester will be dropped. If you miss a scheduled exam, then you will be given a 0 for that exam unless you give an acceptable excuse within three days.

C- Honesty policy regarding cheating, plagiarism, misbehavior:

Cheating and plagiarism will not be tolerated at all. If any work you turn in is found not to be entirely your own, unless previously permitted, the work will not be accepted and no credit will be awarded for the work. A repeat offense will be considered for automatic failure. Cheating includes getting or giving *unauthorized* help for any class assignments, as well as "wondering eyes" – gazing at someone else's paper during a quiz or exam. Use of unauthorized notes during a test is also cheating. This calls attention to the use of some of the newer, high capacity alphanumeric memory calculators or of cell phones. If you use such a calculator, or any device of similar capability, activation of the alphanumeric memory in any form will be treated as cheating. Plagiarism is using material from any source, even the internet, without giving credit.

D- Grading policy:

- **Attendance and Class participation:** 5 marks
- **Reports:** 30 marks
- **Quizzes:** 5 marks
- **Midterm exam:** 20 marks
- **Final exam:** 40 marks

Total: 100 marks

