The University of Jordan

Accreditation & Quality Assurance Center

COURSE Syllabus
Practical Physics-2 (0302112)
1. Course title: Practical Physics-2

2. Course number: 0302112

3. Credit hours (theory, practical): 1 practical
   Contact hours (theory, practical): 3 practical

4. Prerequisites/corequisites: General Physics-2 (0302102)

5. Program title: BSc. In Physics

6. Program code: 

7. Awarding institution: The University of Jordan

8. Faculty: Faculty of Science

9. Department: Department of Physics

10. Level of course: 1st year

11. Year of study and semester(s): 1st Semester 2016/2017

12. Final Qualification: Bachelor

13. Other department(s) involved in teaching the course: -

14. Language of Instruction: English

15. Date of production/revision: September 2016/December 2016

16. Course Coordinator:

   Dr. Hanan Sa’adeh
   Office hours: Announced on the website: eacademic.ju.edu.jo/hanan.saadeh/default.aspx
   Office Tel.: 065355000 Ext.: 22029
   Email: hanan.saadeh@ju.edu.jo

17. Other instructors:

   Faculty Members of the Department of Physics

18. Course Description:

19. Course aims and outcomes:

**A- Aims:**
1. Understanding the fundamental concepts in physics.
2. To develop basic skills and tools of experimental physics and data analysis.
3. To develop collaborative learning skills that are vital to success in many lifelong endeavors.
4. To gain an appreciation of the art of experimentation.

**B- Intended Learning Outcomes (ILOs):**
Upon successful completion of this lab course students will be able to
1. Conduct experimental investigations of simple electric and magnetic phenomena.
2. Carry out measurements utilizing appropriate techniques.
3. Practice record keeping of experimental work and data graphing.
4. Analyze data using simple statistics and compare the results with the relevant theory.
5. Work and coordinate effectively in a group to accomplish laboratory-based tasks.

20. Topic Outline and Schedule:

<table>
<thead>
<tr>
<th>Exp.#</th>
<th>Experiment Title</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Electric Field Mapping</td>
<td>18/9-22/9</td>
</tr>
<tr>
<td>2</td>
<td>Specific Charge of Copper Ions</td>
<td>25/9-29/9</td>
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<tr>
<td>3</td>
<td>Ohm’s Law</td>
<td>2/10-6/10</td>
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<tr>
<td>6</td>
<td>Potentiometer</td>
<td>9/10-13/10</td>
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<tr>
<td>5</td>
<td>Wheatstone Bridge</td>
<td>16/10-20/10</td>
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<tr>
<td>4</td>
<td>Power Transfer</td>
<td>23/10-27/10</td>
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<tr>
<td>9</td>
<td>Kirchhoff’s Laws</td>
<td>30/10-3/11</td>
</tr>
<tr>
<td>7</td>
<td>RC Time Constant</td>
<td>6/11-10/11</td>
</tr>
<tr>
<td>8</td>
<td>Magnetic Field of a Current</td>
<td>13/11-17/11</td>
</tr>
<tr>
<td>10</td>
<td>Electromagnetic Induction</td>
<td>20/11-24/11</td>
</tr>
<tr>
<td>11</td>
<td>Lenses</td>
<td>27/11-1/12</td>
</tr>
</tbody>
</table>
21. Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:
- Experimentation
- Data Analysis

22. Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:
- Reports
- Quizzes, Pre-lab Quizzes

23. Course Policies:

A- Attendance policies:
Lab attendance is mandatory.
A student whose absence exceeds 15% of lab sessions will be dismissed.

B- Absences from exams and handing reports on time:
Absence from exams without an acceptable excuse means ZERO.
Absence from lab sessions without an acceptable excuse means ZERO in report.

C- Health and safety procedures:
No special precautions.

D- Honesty policy regarding cheating, plagiarism, misbehavior:
All these issues will be considered according to the regulations and laws adopted at the University of Jordan.

E- Grading policy:
Lab Reports: 40%
Quizzes: 20%
Final Exam: 40%

F- Available university services that support achievement in the course:
Lab Room, Library

24. Required equipment:
Lab Manual, Lab Notes, Scientific Calculator.
25. References:

A- Required book(s), assigned reading and audio-visuals:
"Laboratory Experiments: Physics-112" by N. Saleh, B. Bulos, I. Shahin, and A. Hindeleh (The University of Jordan, 1997).

B- Recommended books, materials, and media:
2- "Physics For Scientists and Engineers with Modern Physics" by Raymond A. Serway and John W. Jewett Jr., 9th edition, (Thomson Learning, Belmont, CA, USA, 2014).

26. Additional information:

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Name of Course Coordinator: Dr. Hanan Sa’adeh  Signature: ------------------------  Date: 14/12/2016
Head of curriculum committee/Department: -------------------------  Signature: ------------------------
Head of Department: ------------------------  Signature: ------------------------
Head of curriculum committee/Faculty: ------------------------  Signature: ------------------------
Dean: ------------------------  -Signature: ------------------------

Copy to:
Head of Department
Assistant Dean for Quality Assurance
Course File