Course: Electronics lab for Mechatronics – 0908322 (1 Cr. – RequiredCourse)
Instructor: Eng. Hisham Hatem
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Office Hours: Sun Tue Thu 09:00-11:00AM, Wed 09:30-11:00AM
Course website: http://elearning.ju.edu.jo

Prerequisites by course: MX0908222 Electronics for Mechatronics (pre- or co-requisite)
Prerequisites by topic: The student should have the basic knowledge of electrical and electronic circuits and the characteristics of their components.

Schedule: 11-12 Weeks, 10 lab sessions (3 hours each) plus exams.
Course goals: The objectives of this course are to make the student perform set of experiments needed to examine the electronic components and how it works.
Course learning outcomes (CLO) and relation to ABET student outcomes (SO):
Upon successful completion of this course, a student should:
1. Learn the basics of electrical laboratory instrumentation, to Conduct experiment and
2. Perform fundamental measurements on electrical circuits.
3. Analyze basic diode and amplifier configurations.
4. Analyze electronic circuits using simulation software such as MultiSim or PSpice.

Course topics:
1. Lab Equipment Familiarization
2. Diode Characteristics and Rectification
3. Diode Clippers and Clampers
4. Zener Diode Characteristics & Voltage Regulator
5. Bipolar Junction Transistor Characteristics
6. BJT Applications
7. Frequency Response of BJT Amplifier
8. Operational Amplifier Applications (1)
9. Operational Amplifier Applications (2)
10. MOSFET Characteristic and Applications

Ground rules: Attendance:

Students are expected to attend EVERY LAB SESSION and they are responsible for all material, announcements, schedule changes, etc., discussed in class. The university policy regarding the attendance will be strictly adhered to.

Assessment & grading policy:

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<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Quizzes</td>
<td>10%</td>
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<tr>
<td>Midterm (SO-B)</td>
<td>25%</td>
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<tr>
<td>Reports(SO-B,D)</td>
<td>25%</td>
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<tr>
<td>Final Exam(SO-B)</td>
<td>40%</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
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Last Revised: February 2, 2018