# Course Syllabus

## Course Information

<table>
<thead>
<tr>
<th>Course ID</th>
<th>0902202</th>
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<tbody>
<tr>
<td><strong>Course Title</strong></td>
<td>Electric Circuits I</td>
</tr>
<tr>
<td><strong>Prerequisite</strong></td>
<td>0304102 General physics (2)</td>
</tr>
<tr>
<td><strong>Time &amp; Date</strong></td>
<td>14:00qm – 15:00pm (Room)</td>
</tr>
<tr>
<td><strong>Coordinator</strong></td>
<td>-</td>
</tr>
<tr>
<td><strong>Instructor</strong></td>
<td>Assistant. Prof. Dr. Takialddin Al-Smadi</td>
</tr>
<tr>
<td>Faculty of Engineering</td>
<td></td>
</tr>
<tr>
<td>E-mail: <a href="mailto:dsmadi@rambler.ru">dsmadi@rambler.ru</a></td>
<td></td>
</tr>
<tr>
<td>Telephone: ext.</td>
<td></td>
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## Office hours


## Course Objectives

1. Ability to apply basic circuit laws and rules.
2. Understand and apply circuit theorems.
3. Ability to analyze first and second order transient circuits.

## Course Outcomes

## Course Topics

1. Introduction to Circuit Analysis and Design
2. Basic Components and Electric Circuits
3. Voltage and Current Laws
4. Basic Nodal and Mesh Analysis
5. Circuit Analysis Techniques
6. The Operational Amplifier
7. Capacitors and Inductors
8. Basic RL and RC Circuits
9. The RLC Circuit
10. Sinusoidal Steady State Analysis
### Course Text Book

   James W. Nilson and Susan A. Rie
   Addison Wesley 19097
   902201
2. *Engineering circuit Analysis 5th Edition*

### Course References


### Course delivery

- Lectures
- Tutorial
- Lab
- Homework
- Project
- Computer
- Internet
- Industrial Visit

### Course Assessment

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>First Exam</td>
<td>20%</td>
</tr>
<tr>
<td>Second Exam</td>
<td>20%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>10%</td>
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<tr>
<td>Final Exam</td>
<td>50%</td>
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<tr>
<td>Total</td>
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</tbody>
</table>

### Updated

Dr. Takialddin AL-Smadi
ABET a-k Engineering and Technology program outcome

(a) An ability to apply knowledge of mathematics, science, and engineering
(b) An ability to design and conduct experiments, to analyze and interpret data
(c) An ability to design a system, component, or process to meet desired needs
(d) An ability to function on multi-disciplinary teams
(e) An ability to identify, formulate, and solve engineering problems
(f) An understanding of professional and ethical responsibility
(g) An ability to communicate effectively
(h) The broad education necessary to understand the impact of engineering solutions in a global and societal context
(i) A recognition of the need for, and an ability to engage in life-long learning
(j) A knowledge of contemporary issues
(k) An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

Plagiarism
Deliberate plagiarism is a serious act of academic misconduct. Students may be suspended from the University if they are found to have plagiarized their course work. Whether inadvertent or deliberate, plagiarism includes the following:
(a) word-for-word copying of sentences or whole paragraphs or presenting of substantial extracts from either paper-based or electronic sources the work or data of others that are published or unpublished (such as books, internal reports, and lecture notes or tapes) without clearly indicating their origin;
(b) using very close paraphrasing of sentences or whole paragraphs without due acknowledgement in the form of reference to the original work;
(c) submitting another student’s work in whole or in part;
(d) using of another person’s ideas, work or research data without acknowledgement;
(e) copying computer files, algorithms or computer code without clearly indicating their origin;
(f) submitting work that has been written by someone else on the student’s behalf; and
(g) submitting work that has been derived, in whole or in part, from another student’s work by a process of mechanical transformation (e.g., changing variable names in computer programs).