San José State University
Electrical Engineering Department
EE101 Circuit Concepts and Problem Solving, Sec 01
Fall 2017

Instructor: David W. Parent
Office Location: ENG 355
Telephone: (408) 924-3963
Email: David.Parent@SJSU.edu
Office Hours: https://sjsu.gradesfirst.com
Class Days/Time: Thursday 14:00-15:00
Classroom: ENG 339
Prerequisite: EE98 and Math 133A or equivalent with a grade of “C” or better
Course Coordinator David Parent

Course Description
Development of skill and proficiency in solving electric circuit, calculus, and differential equations problems; techniques for analyzing DC circuits, AC circuits, and transients.

Starting in Fall 2016 neither the EE101 course nor the EE101 placement exam will be required for computer engineering majors.

EE101 remains worth 1 credit unit (CR/NC) but the credit no longer counts for graduation. The course can no longer be challenged, so the only way to get that credit is to pass the final exam for the course on 23 May 2017.

Passing the EE101 placement exam will remain a prerequisite for EE110, EE110L and EE112. There is no requirement for credit in the EE101 course, but it is strongly suggested that students who did not pass the placement exam register for the course.

For more information on the placement exam, which does NOT require enrolling in the EE101 course, see the “EE101 Placement Exam FAQ”,

Course Goals and Student Learning Objectives
Development of skill and proficiency in solving electric circuit problems; techniques for analyzing DC circuits, AC circuits, transients, and Calculus and Differential Equation problems.

Topics covered:
- Ohm’s law and Kirchhoff’s laws
- Series and parallel circuits
- Superposition
- Thevenin and Norton Equivalent
- Maximum power transfer
- Nodal and mesh analysis
- Active and op amp circuits
- Capacitors and inductors
- Transient analysis
- Steady state analysis
- AC power

**GE/SJSU Studies Learning Outcomes (LO), if applicable**

N/A

**Course Content Learning Outcomes**

Upon successful completion of this course, students will be able to:

LO1 Evaluate all voltages and currents for a given circuit (a)
LO2 Determine Thevenin and Norton equivalent circuit for a given circuit (a and e)
LO3 Analyze the transient characteristics of a given first and second order circuit (a, and e)
LO4 Analyze sinusoidal steady state response of a reactive circuit (a, and e)
LO5 Evaluate the voltage gain and voltage and current values in a simple op amp circuit (a and e)
LO6 Calculate power delivered and absorbed by all elements in an RLC circuit (a)

**ABET Outcomes**

The letters in parentheses in the course learning objectives refer to ABET criterion 3 outcomes satisfied by the course. These are listed below as a reference:

(3.a) An ability to apply knowledge of mathematics, science, and engineering

(3.e) An ability to identify, formulate, and solve engineering problems

**Required Texts/Readings**

Current EE98 or a Circuits Analysis text book
Reference EE101 problem bank

Students may be added to the Canvas section “EE101 Practice” by the instructor, coordinator or EE department office. It is NOT necessary to enroll in the course to be added to the “EE101 Practice” section, which contains practice exams.

Grading Policy

This is a Credit/No-Credit course.

Students who pass an EE101 placement exam with a score of 80% or better are eligible to take EE110, EE110L and EE112. They should not enroll in the EE101 course.

The EE101 final exam for students enrolled in EE101 will be given at **Tuesday, December 19, Classroom, 12:15-14:30** A score of at least 80% in this final exam is required for credit in the EE101 course.

University Policies

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs’ [Syllabus Information web page](http://www.sjsu.edu/gup/syllabusinfo/) at

**EE Department Honor Code**

*The Electrical Engineering Department will enforce the following Honor Code that must be read and accepted by all students.*

“I have read the Honor Code and agree with its provisions. My continued enrollment in this course constitutes full acceptance of this code. I will NOT:

- Take an exam in place of someone else, or have someone take an exam in my place
- Give information or receive information from another person during an exam
- Use more reference material during an exam than is allowed by the instructor
- Obtain a copy of an exam prior to the time it is given
- Alter an exam after it has been graded and then return it to the instructor for re-grading
- Leave the exam room without returning the exam to the instructor.”
**Measures Dealing with Occurrences of Cheating**

- *Department policy mandates that the student or students involved in cheating will receive an “F” on that evaluation instrument (paper, exam, project, homework, etc.) and will be reported to the Department and the University.*
- *A student’s second offense in any course will result in a Department recommendation of suspension from the University.*
The schedule is subject to change by announcement in class and/or on Canvas.

## Course Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics, Readings, Assignments, Deadlines</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Review</td>
</tr>
<tr>
<td>2</td>
<td>Review</td>
</tr>
<tr>
<td>3</td>
<td>Review</td>
</tr>
<tr>
<td>4</td>
<td>Review</td>
</tr>
<tr>
<td>5</td>
<td>Review</td>
</tr>
<tr>
<td>6</td>
<td>Review</td>
</tr>
<tr>
<td>7</td>
<td>Review</td>
</tr>
<tr>
<td>8</td>
<td>Review</td>
</tr>
<tr>
<td>9</td>
<td>Review</td>
</tr>
<tr>
<td>10</td>
<td>Review</td>
</tr>
<tr>
<td>11</td>
<td>Review</td>
</tr>
<tr>
<td>12</td>
<td>Review</td>
</tr>
<tr>
<td>13</td>
<td>Review</td>
</tr>
<tr>
<td>14</td>
<td>Review</td>
</tr>
<tr>
<td>15</td>
<td>Review</td>
</tr>
<tr>
<td>Final Exam</td>
<td><strong>Per university catalog</strong></td>
</tr>
</tbody>
</table>