Review of Performance: **VEE 103 Electronics Fundamentals I** Fall 2016, (17 students) **P2**
Submitted by: Danilo S. Ibarrola

Institutional Student Learning Outcomes (ISLO):
ILO1: Effective oral communication.
ILO2: Effective written communication.
ILO3: Critical Thinking
ILO4: Problem Solving
ILO5: Inter-cultural knowledge and competence.
ILO6: Information literacy.
IL07: Foundations and skills for life-long learning.
ILO8: Quantitative reasoning.

Program Learning Outcomes (PLO)
PLO1: Practice Safety and occupational health procedures in the workplace.
PLO2: Use electronic tools and test equipment competently.
PLO3: Interpret schematic diagrams and waveforms.
PLO4: Build electronic projects to a given specification.

<table>
<tr><th>SLO#</th><th>Program SLO#</th><th>I, D, M</th><th>ISLO</th><th colspan="2">Reflection/Comment</th></tr>
<tr><td rowspan="3">1. Describe the fundamentals of voltage and current and the behavior of these parameters in simple electrical circuits.</td><td rowspan="3">3. Interpret schematic diagrams and waveforms.</td><td rowspan="3">I, D</td><td rowspan="3">6, 7</td><td>Course Result</td><td>SLO was assessed by written test questions using the assessment criteria as stated in the course outline. 14 (12 male & 2 female) out of 18 students (77.8%) completed the CSLO.</td></tr>
<tr><td>Target Met</td><td>Yes</td></tr>
<tr><td colspan="2">Students need more time in hands-on and other practical procedure to reach mastery level performance.</td></tr>
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<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>2. Explain the purpose and identify the various types of resistors and their symbols. Identify the value, power rating and tolerance of resistors using various types of industry codes.</td><td>3. Interpret schematic diagrams and waveforms.</td><td>I,D</td><td>6, 7</td><td><table><tr><td>Course Result</td><td>SLO was assessed by written test questions using the assessment criteria as stated in the course outline. 14 (11 male & 3 female) out of 18 students (77.8%) completed the CSLO.</td></tr><tr><td>Target Met</td><td>Yes</td></tr></table>Students need more time in hands-on and other practical procedure to reach mastery level performance.</td></tr>
<tr><td>3. Describe the purpose and types of switches, fuses and circuit breakers and identify their schematic symbols.</td><td>3. Interpret schematic diagrams and waveforms.</td><td>I, D</td><td>6, 7</td><td><table><tr><td>Course Result</td><td>SLO was assessed by written test questions using the assessment criteria as stated in the course outline. 16 (13 male & 3 female) out of 18 students (88.9%)</td></tr><tr><td>Target Met</td><td>Yes</td></tr></table>Students need more time in hands-on and other practical procedure to reach mastery level performance.</td></tr>
<tr><td>4. Define magnetism and electromagnetism and their characteristics; describe how these characteristics are utilized in the operation of the relay, magnetic circuit breaker and meter.</td><td>3. Interpret schematic diagrams and waveforms.</td><td>I, D</td><td>6, 7</td><td><table><tr><td>Course Result</td><td>SLO was assessed by written test questions using the assessment criteria as stated in the course outline. 18 (14 male & 4 female) out of 18 students (100%) completed the CSLO.</td></tr><tr><td>Target Met</td><td>Yes</td></tr></table>Students need more time in hands-on and other practical procedure to reach mastery level performance.</td></tr>
<tr><td>5. Describe the function of the multimeter and</td><td>1. Practice safety and</td><td>I, D, M</td><td>6, 7</td><td><table><tr><td>Course Result</td><td>SLO was assessed by written test questions using the assessment criteria as stated in the course outline. 18</td></tr></table></td></tr>
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<tr>
<td>its controls. Safely and accurately use a multimeter to measure the circuit quantities of resistance, voltage, and current.</td>
<td>occupational health procedures in the workplace.
2. Use electronics tools and test equipment competently.
3. Interpret schematic diagrams and waveforms.</td>
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<tr><td></td><td>(14 male & 4 female) out of 18 students (100%) completed the CSLO.</td></tr>
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Students need more time in hands-on and other practical procedure to reach mastery level performance.
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<td>6. Using Ohm’s Law to define the relationship between resistance, voltage, current, and power in an electrical circuit. By experimentation prove Ohm’s Law.</td>
<td>3. Interpret schematic diagrams and waveforms.</td>
<td>I, D</td>
<td>4, 6,7</td>
<td>
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<td>7. Identify the following circuits, calculate and measure the circuit parameters of voltage, resistance, and current. Troubleshoot the series, parallel and series-parallel circuits.</td>
<td>3. Interpret schematic diagrams and waveforms.</td>
<td>I, D</td>
<td>4, 6, 7</td>
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<table>
<tr><td>Course Result</td><td>SLO was assessed by written test questions using the assessment criteria as stated in the course outline. 15 (13 male & 2 female) out of 18 students (83.3%) completed the CSLO.</td></tr>
<tr><td>Target Met</td><td>Yes</td></tr>
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<tr>
<td>a. Series Circuit
b. Parallel Circuit
c. Series and Parallel Circuit
d. Voltage Divider Circuit
e. Bridge Circuit</td>
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<td colspan="2">Students need more time in hands-on and other practical procedure to reach mastery level performance.</td>
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<tr>
<td>8. Simplify and analyze complex circuits using the following methods:
a. Kirchhoff’s Laws
b. Thevenin’s Theorem
c. Norton’s Theorem.</td>
<td>3. Interpret schematic diagrams and waveforms.</td>
<td>I, D</td>
<td>6,7</td>
<td>Course Result</td>
<td>SLO was assessed by written test questions using the assessment criteria as stated in the course outline. 17 (15 male & 2 female) out of 18 students (94.4%) completed the CSLO.</td>
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<td>Target Met</td>
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</table>

Special comments: 14 out of 18 or 77.8% of the students got a grade of C and higher and 4 or 22.2% got D & F.

Summary of Grades:

A+	**=**	**0**
A	**=**	**2**
A-	**=**	**2**
B+	**=**	**1**
B	**=**	**2**
B-	**=**	**2**
C+	**=**	**1**
C	**=**	**1**
C-	**=**	**3**
D+	**=**	**0**
D	**=**	**1**
D-	**=**	**0**
F	**=**	**3**

Recommendations: Laboratory equipment (NIDA cards) for Electronics Fundamentals I must be enough for at least 3 to 5 sets to be able for the students to perform their required experimentation. Additional quality analog and digital multi-meter must also be purchase so that more hands on experimentation can be done.

Signature: DANILO S. IBARROLA
Instructor

Date: DEC. 2016