

Review of Performance: VEM 240 Industrial Wiring  
 Submitted by: Cirilo Recana

No. of Student: 7  
 Semesters: Spring 2017

**Institutional Student Learning Outcomes (ISLO's)**

1. Effective oral communication
2. Effective written communication
3. Critical thinking
4. Problem solving
5. ***Intercultural knowledge and competence***
6. Information literacy
7. ***Foundations and skills for life-long learning***
8. Quantitative reasoning

**Program Learning Outcomes (PLO's)**

1. Practice safety and occupational health procedures in the workplace.
2. Use electricity hand and power tools competently.
3. Test electrical equipment.
4. Interpret schematic wiring diagrams and waveforms.
5. Determine the amount of load per circuit.
6. Install residential wiring circuits according to given specification and plan.
7. Identify and interpret basic solid state (electronics) symbols and circuits schematics commonly found in the electrical industry.
8. Analyze circuit operation on basic motors.
9. Perform basic troubleshooting on basic motors.
10. Install and perform basic maintenance on air-conditioning units.
11. ***Interpret and install circuits according to rules and regulations of the National Electrical Code book.***
12. ***Install and analyze basic motor control circuits.***

SLO#	PLO	I, D, M	ISLO	Reflection/Comment									
SLO#1 State the purpose and general principles of control components and circuits.	12	I (introduced level)	5	<p>SLO was assessed by written test questions using the assessment criteria as stated in the course outline. Result of assessment is shown below:</p> <table border="1"> <thead> <tr> <th>No. of students</th> <th>Score</th> <th>Comment</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>69 or lower</td> <td>Failed</td> </tr> <tr> <td>7</td> <td>70 or better</td> <td>Passed</td> </tr> </tbody> </table> <p>100% of the students passed</p>	No. of students	Score	Comment	0	69 or lower	Failed	7	70 or better	Passed
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SLO#2 Identify pilot devices both physically and schematically and describe their operating principles.	12	I,D (introduced and demonstrate level)	5	<p>SLO was assessed by written test questions using the assessment criteria as stated in the course outline. Result of assessment is shown below:</p> <table border="1" data-bbox="1220 306 1892 415"> <thead> <tr> <th>No. of students</th> <th>Score</th> <th>Comment</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>69 or lower</td> <td>Failed</td> </tr> <tr> <td>6</td> <td>70 or better</td> <td>Passed</td> </tr> </tbody> </table> <p>86% of the students passed</p>	No. of students	Score	Comment	1	69 or lower	Failed	6	70 or better	Passed
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1	69 or lower	Failed											
6	70 or better	Passed											
SLO#3 Interpret motor control wiring, connection, and ladder diagrams.	11, 12	I,D (introduced and demonstrate level)	5	<p>SLO was assessed by written test questions using the assessment criteria as stated in the course outline. Result of assessment is shown below:</p> <table border="1" data-bbox="1220 596 1892 704"> <thead> <tr> <th>No. of students</th> <th>Score</th> <th>Comment</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>69 or lower</td> <td>Failed</td> </tr> <tr> <td>6</td> <td>70 or better</td> <td>Passed</td> </tr> </tbody> </table> <p>86% of the students passed</p>	No. of students	Score	Comment	1	69 or lower	Failed	6	70 or better	Passed
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1	69 or lower	Failed											
6	70 or better	Passed											
SLO#4 Select and size contactors, relays and timing relays and overload relays both physically and schematically and describe their operating principles.	11, 12	D (demonstrate level)	7	<p>SLO was assessed by written test questions using the assessment criteria as stated in the course outline. Result of assessment is shown below:</p> <table border="1" data-bbox="1220 885 1892 993"> <thead> <tr> <th>No. of students</th> <th>Score</th> <th>Comment</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>69 or lower</td> <td>Failed</td> </tr> <tr> <td>6</td> <td>70 or better</td> <td>Passed</td> </tr> </tbody> </table> <p>86% of the students passed</p>	No. of students	Score	Comment	1	69 or lower	Failed	6	70 or better	Passed
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SLO #5 Connect motor controllers for specific applications with emphasis on safety practices and in accordance with National Electrical Code (NEC) requirements.	11, 12	D,M (demonstrate and mastery level)	7	<p>SLO was assessed by performance test using the assessment criteria as stated in the course outline. Result of assessment is shown below:</p> <table border="1" data-bbox="1220 1174 1892 1282"> <thead> <tr> <th>No. of students</th> <th>Score</th> <th>Comment</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>69 or lower</td> <td>Failed</td> </tr> <tr> <td>6</td> <td>70 or better</td> <td>Passed</td> </tr> </tbody> </table> <p>86% of the students passed</p>	No. of students	Score	Comment	1	69 or lower	Failed	6	70 or better	Passed
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SLO#6 Troubleshoot control and motor control circuit for basic to intermediate level faults.	11, 12	D,M (demonstrate and mastery level)	7	<p>SLO was assessed by performance test using the assessment criteria as stated in the course outline. Result of assessment is shown below:</p> <table border="1" data-bbox="1220 305 1892 415"> <thead> <tr> <th>No. of students</th> <th>Score</th> <th>Comment</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>69 or lower</td> <td>Failed</td> </tr> <tr> <td>7</td> <td>70 or better</td> <td>Passed</td> </tr> </tbody> </table> <p>100% of the students passed</p>	No. of students	Score	Comment	0	69 or lower	Failed	7	70 or better	Passed
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**Additional observations:** In reference with the data presented above, students' interest in hands-on activities shows high percentage. This means that competency skills develop by the students in hands-on are more effective way of transferring knowledge and assimilation of technology transfer.

**FINAL GRADES:**

A = 2            B = 5  
C = 0            D = 0  
F = 0

**Recommendations:** Laboratory equipments must be sufficiently provided so that lab exercises will be well performed by the students. A ratio of 1:2 laboratory equipments per students is ideal. Course modification should be schedule every 3 years to keep in phase with the current equipment and competencies students must learn. The Simutech Troubleshooting Skills software should be keep updated to the current version as available. Funding must be instituted to cope with the course expenses for purchasing instructional materials.

Signature: **Cirilo B. Recana**  
Electrical Instructor

Date Submitted: May 2017