Review of Performance: Course: **VEM 104 Basic Electricity II** No. of Student: 15 Semesters: *Spring 2014*

Submitted by: Romino Victor

Institutional Learning Outcomes (ILO):

ILO1: communicate effectively

ILO2: employ critical thinking *[& problem solving]*

ILO3: possess specific knowledge and skills in a major discipline or professional program of study

ILO4: take responsibility and develop skills for learning

ILO5: interact responsibly with people, cultures, and their environment

Program Learning Outcomes (PLO)

PLO1: Practice Safety and occupational health procedures in the workplace.

PLO2: Use electricity tools and test equipment competently.

PLO3: Test electrical equipment

PLO4: Interpret schematic wiring diagrams and waveform.

PLO5: Determine the amount of load per circuit.

PLO6: Install residential wiring circuits according to given specification and plan.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SLO#** | **Program** **SLO#** | **IDM** | **ILO** | **Reflection/Comment** |
| 1 Describe electrical principles of principles of alternating current and various AC waveforms | 2 | I, D | 4 | SLO was assessed by written test questions using the assessment criteria as stated in the course outline. Result of assessment is shown below:

|  |  |  |
| --- | --- | --- |
| No. of students | Score | Comment |
| 5 | 69 or lower | failed |
| 10 | 70 or better | passed |

33% failed, 67% passed***Observation:*** *students with low scores – reason was due to reading comprehension problem.*  |
| 2. Competently use AC test equipment | 2 | I, D | 4 | SLO was assessed by written test questions and a performance exam using the assessment criteria as stated in the course outline. Result of assessment is shown below:

|  |  |  |
| --- | --- | --- |
| No. of students | Score | Comment |
| 8 | 69 or lower | failed |
| 7 | 70 or better | passed |

53%failed, 47%passed***Observation:*** *students with low scores – reason was due to poor math skills, mainly the application of engineering (scientific) notations and using scientific calculators.**Program needs to purchase 5 analog multi-meters* ***Note:*** *Circuit board construction was also introduced to transform circuit sketching to actual circuits. Additionally, circuit analysis is also conducted to compare circuit calculations to circuit measurements.*  |
| 3.Calculate resistance, inductance  And capacitance of an AC circuit. | 2 | I,D |  4 | SLO was assessed by written test questions and a performance exam using the assessment criteria as stated in the course outline. Result of assessment is shown below:

|  |  |  |
| --- | --- | --- |
| No. of students | Score | Comment |
| 6 | 69 or lower | failed |
| 9 | 70 or better | passed |

40% failed, 60% passed***Observation:*** *students with low scores – reason was due to poor math skills, mainly the application of engineering (scientific) notations and using scientific calculators.****Observation:*** *To master the use of testing equipment, students must first have a full understanding of the theoretical aspects of the testing equipment. Poor English skills were a contributing factor in mastering this SLO. In addition, SLO required more time for students to practice.*  |
| 4.Calculate and perform RCL Circuit troubleshooting | 2 | I,D | 4 | SLO was assessed by written test questions using the assessment criteria as stated in the course outline. Result of assessment is shown below:

|  |  |  |
| --- | --- | --- |
| No. of students | Score | Comment |
| 6 | 69 or lower | failed |
| 9 | 70 or better | passed |

40% failed, 60% passed *Program needs to purchase 5 analog multi-meters* ***Observation:*** *Contributing factors for low scores were due to poor English skills, poor math skills, and the lack of studying. Due to the pace of the class, most parts of hands-on experimentation were not delivered because of needed additional time spent on theoretical concept and circuit calculation.*  |
| 5. Demonstrate transformer action and relays and electrical circuit. |  |  |  | SLO was assessed by written test questions using the assessment criteria as stated in the course outline. Result of assessment is shown below:

|  |  |  |
| --- | --- | --- |
| No. of students | Score | Comment |
| 4 | 69 or lower | failed |
| 11 | 70 or better | passed |

26% failed, 74% passed***Observation:*** *Contributing factors for low scores were due to poor English skills, poor math skills, and the lack of studying. Due to the pace of the class, most parts of hands-on experimentation were not delivered because of needed additional time spent on theoretical concept and circuit calculation.*  |

**I – Introduced, D – Developing, M - Mastery**

FINAL GRADES:

A = 5 B = 7 C = 2 D = 1 F = 0

**Recommendations:**

*To improve fundamental knowledge and practical hands-on skills, utilize* ***more*** *circuit construction activities with bread-boarding techniques, in which will allow students to design, construct, analyze (calculation and measurement), and perform basic troubleshooting skills on series and parallel circuits.*

Signature: \_\_\_\_\_\_\_Romino Victor\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_05/6/14\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_