APPENDIX A

Course Assessment Fall 2009 – Spring 2011

Review of Performance: Course: VEE100 Soldering No. of Student: 30 Semester: Fall 2009

Submitted by: Gardner Edgar

<table>
<tr><th>SLO#</th><th>Program SLO#</th><th>I, D, M</th><th>Reflection/Comment</th></tr>
<tr><td>SLO#1: Identify and perform the techniques for printed circuit track and pad repair as well as component insertion and extraction.</td><td></td><td></td><td>SLO was assessed by written test questions, using the assessment criteria as stated in the course outline. Result of assessment revealed the following:

<table>
<tr><td>No of students</td><td>Score</td><td>Status</td></tr>
<tr><td>2</td><td>100%</td><td>passed</td></tr>
<tr><td>2</td><td>93%</td><td>passed</td></tr>
<tr><td>2</td><td>87%</td><td>passed</td></tr>
<tr><td>3</td><td>80%</td><td>passed</td></tr>
<tr><td>2</td><td>73%</td><td>passed</td></tr>
<tr><td>2</td><td>67%</td><td>failed</td></tr>
<tr><td>2</td><td>60% or below</td><td>failed</td></tr>
</table></td></tr>
<tr><td>SLO#2: Select the correct connection type and create reliable solder joints using basic hand soldering techniques.</td><td></td><td>Introductory</td><td>SLO was assessed by written test questions, using assessment criteria as stated in the course outline. Result of assessment revealed the following:

<table>
<tr><td>No of students</td><td>Score</td><td>Status</td></tr>
<tr><td>2</td><td>100%</td><td>passed</td></tr>
<tr><td>4</td><td>93%</td><td>passed</td></tr>
<tr><td>2</td><td>87%</td><td>passed</td></tr>
<tr><td>5</td><td>80%</td><td>passed</td></tr>
<tr><td>2</td><td>73%</td><td>passed</td></tr>
</table></td></tr>
</table>

<table>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td>SLO#3: Demonstrate the correct method of terminating the following basic connectors.
❑ Banana Plugs
❑ Crimp Connectors
❑ BNC Connectors</td><td></td><td>Introductory</td><td>SLO was assessed by written test questions based on assessment criteria as stated in the course outline. Result of assessment is below:
<table><tr><td>No of students</td><td>Score</td><td>Status</td></tr><tr><td>3</td><td>100%</td><td>passed</td></tr><tr><td>3</td><td>93%</td><td>passed</td></tr><tr><td>5</td><td>87%</td><td>passed</td></tr><tr><td>3</td><td>80%</td><td>passed</td></tr><tr><td>2</td><td>73%</td><td>passed</td></tr></table></td></tr>
<tr><td>SLO#4: Describe the characteristics of, and the procedures for making good wire wrap connections. Recognize common wire wrapping faults and correctly terminate wire wrap connections.</td><td></td><td>Introductory</td><td>SLO was assessed by written test questions based on assessment criteria as stated in the course outline. Result of assessment is shown below:
<table><tr><td>No of students</td><td>Score</td><td>Status</td></tr><tr><td>2</td><td>100%</td><td>passed</td></tr><tr><td>2</td><td>91%</td><td>passed</td></tr><tr><td>2</td><td>83%</td><td>passed</td></tr><tr><td>4</td><td>75%</td><td>passed</td></tr><tr><td>3</td><td>67% or below</td><td>failed</td></tr></table></td></tr>
<tr><td>SLO#5: By measurement perform basic wiring and connector troubleshooting.</td><td></td><td>Introductory</td><td>SLO was assessed by written test questions and skill-based performance test based on assessment criteria as stated in the course outline. Result of assessment is shown in the table below:
<table><tr><td>No of students</td><td>Score</td><td>Status</td></tr><tr><td>8</td><td>100%</td><td>passed</td></tr><tr><td>2</td><td>91%</td><td>passed</td></tr><tr><td>2</td><td>83%</td><td>passed</td></tr><tr><td>1</td><td>75%</td><td>passed</td></tr><tr><td>2</td><td>67% or below</td><td>failed</td></tr></table></td></tr>
</table>

Additional observations & recommendations:

The course is a 1.5 credit, with 1 ½ hour meeting per week. It's been recommended to deliver the course with no more 15 students per section due to the nature of the course and the size of workshop. Observations from students suggested the course to increase more time for practice. It's been recommended to modify course and merge it to other workshop skills enabling more practical time for practice.

Special comments: explanations on course grading, opportunities to achieve outcomes, how many students receive an A, B, C, etc.

Assessment of each SLO was based on Mid Term Exam and Final Exam with additional work from quizzes, class activities, and practical skills using the NIDA.

Signature: _____ Date:_____

Review of Performance: Course: VEE103 Electronic Fundamentals I No. of Student: 15 Semester: Fall 2009

Submitted by: Gardner Edgar

<table>
<tr><th>SLO#</th><th>Program SLO#</th><th>I, D, M</th><th>Reflection/Comment</th></tr>
<tr><td>SLO #1: Describe the basic concept of voltage and current and the behavior of these parameters in simple electrical circuits.</td><td>Since this is a fundamental course in the study of electronic/electrical, all of the course SLO support and meet all of the program SLO as listed in the catalog</td><td>All SLOs are Introductory level</td><td>SLO was assessed by written test questions, using the assessment criteria as stated in the course outline. Result of assessment revealed the following:

<table><tr><td>No of students</td><td>Score</td><td>Status</td></tr><tr><td>2</td><td>100%</td><td>passed</td></tr><tr><td>2</td><td>93%</td><td>passed</td></tr><tr><td>2</td><td>87%</td><td>passed</td></tr><tr><td>3</td><td>80%</td><td>passed</td></tr><tr><td>2</td><td>73%</td><td>passed</td></tr><tr><td>2</td><td>67%</td><td>failed</td></tr><tr><td>2</td><td>60% or below</td><td>failed</td></tr></table></td></tr>
<tr><td>SLO #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>Same as above</td><td>Introductory</td><td>SLO was assessed by written test questions, using assessment criteria as stated in the course outline. Result of assessment revealed the following:

<table><tr><td>No of students</td><td>Score</td><td>Status</td></tr><tr><td>2</td><td>100%</td><td>passed</td></tr><tr><td>4</td><td>93%</td><td>passed</td></tr><tr><td>2</td><td>87%</td><td>passed</td></tr><tr><td>5</td><td>80%</td><td>passed</td></tr><tr><td>2</td><td>73%</td><td>passed</td></tr></table></td></tr>
<tr><td>SLO #3: Describe the purpose and types of switches, fuses and circuit breakers and identify their schematic symbols.</td><td>Same as above</td><td>Introductory</td><td>SLO was assessed by written test questions based on assessment criteria as stated in the course outline. Result of assessment is below:</td></tr>
</table>

<table>
<tr><td></td><td></td><td></td><td><table><tr><th>No of students</th><th>Score</th><th>Status</th></tr><tr><td>3</td><td>100%</td><td>passed</td></tr><tr><td>3</td><td>93%</td><td>passed</td></tr><tr><td>5</td><td>87%</td><td>passed</td></tr><tr><td>3</td><td>80%</td><td>passed</td></tr><tr><td>2</td><td>73%</td><td>passed</td></tr></table></td></tr>
<tr><td>SLO #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>Same as above</td><td>Introductory</td><td>SLO was assessed by written test questions based on assessment criteria as stated in the course outline. Result of assessment is shown below:<table><tr><th>No of students</th><th>Score</th><th>Status</th></tr><tr><td>2</td><td>100%</td><td>passed</td></tr><tr><td>2</td><td>91%</td><td>passed</td></tr><tr><td>2</td><td>83%</td><td>passed</td></tr><tr><td>4</td><td>75%</td><td>passed</td></tr><tr><td>3</td><td>67% or below</td><td>failed</td></tr></table></td></tr>
<tr><td>SLO #5: Describe the function of the multimeter and its controls. Safely and accurately use a multimeter to measure the circuit quantities of resistance, voltage, and current.</td><td>Same as above</td><td>Introductory</td><td>SLO was assessed by written test questions and skill-based performance test based on assessment criteria as stated in the course outline. Result of assessment is shown in the table below:<table><tr><th>No of students</th><th>Score</th><th>Status</th></tr><tr><td>8</td><td>100%</td><td>passed</td></tr><tr><td>2</td><td>91%</td><td>passed</td></tr><tr><td>2</td><td>83%</td><td>passed</td></tr><tr><td>1</td><td>75%</td><td>passed</td></tr><tr><td>2</td><td>67% or below</td><td>failed</td></tr></table></td></tr>
<tr><td>SLO #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>Same as above</td><td>Introductory</td><td>SLO was assessed by written test questions based on assessment criteria as stated in the course outline. Result of assessment is shown below:<table><tr><th>No of students</th><th>Score</th><th>Status</th></tr></table></td></tr>
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<td>SLO #8: Simplify and analyze complex Circuit using the following methods:
a. Kirchoff’s Laws
b. Thevenin’s Theorem
c. Norton’s Theorem</td>
<td>Same as above</td>
<td>Introductory</td>
<td>The course allotted time [3 hr block per week] was not enough to allow students to be fully introduced to the SLO due to the additional time spent on other SLO.</td>
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</table>

Additional observations & recommendations:

The course is a 3-credit course, with 3 conduct hours per week throughout the semester. It is delivered 3 hour block a day per week. It has 8 SLO. SLO #1, #2, #3, #4, and #6 are mostly theory-based and SLO #5, #7, and #8 are both theory and skill-based, with strong emphasis on practical skills. The course is currently designed to integrate the NIDA training system as an instructional tool in providing students with the required practical skills as needed by the course, particularly with SLO #5, #7, and #8.

Based on previous observations on courses that use the NIDA, it has been suggested that the courses conduct times are not enough to provide students with sufficient time to be fully introduced or master the intended SLO.

Therefore, a recommendation has been proposed to modify the course to be remained as 3-credit course, with 2 hours lecture and 3 hours lab per week. With this recommendation, it will provide the course with the additional time as needed by students to be fully introduced to all SLO and to perform all the required practical skills as intended by the course.

Special comments: explanations on course grading, opportunities to achieve outcomes, how many students receive an A, B, C, etc.

Assessment of each SLO was based on Mid Term Exam and Final Exam with additional work from quizzes, class activities, and practical skills using the NIDA.

Signature: _____ Date:_____

Review of Performance: Course: VEE103 Electronic Fundamentals I No. of Student: 15 Semester: Fall 2009

Submitted by: Gardner Edgar

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<tr><td>5</td><td>100 %</td><td>passed</td></tr>
<tr><td>5</td><td>80%</td><td>passed</td></tr>
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<td>Introductory</td>
<td>The course allotted time [3 hr block per week] was not enough to allow students to be fully introduced to the SLO due to the additional time spent on other SLO.</td>
</tr>
</table>

Additional observations & recommendations:

The existing time of the course is not sufficient to

Special comments:

Assessment of each SLO was based on Mid Term Exam and Final Exam with additional work from quizzes, class activities, and practical skills using the NIDA.

Signature: _____ Date:_____

Review of Performance: Course: VEE223 PC Hardware & Software No. of Student: 10 Semester: Fall 2009

Submitted by: Gardner Edgar

<table>
<tr><th>SLO#</th><th>Program SLO#</th><th>I, D, M</th><th>Reflection/Comment</th></tr>
<tr><td>SLO #1: Build, configure, upgrade, and maintain a personal computer system.</td><td>This is an introductory course in repairing of personal computer, both hardware & software. SLO supports and meets program SLO #5 as stated in the college catalog.</td><td>Introductory</td><td>SLO was assessed by written test questions and skill-based performance exam using the assessment criteria as stated in the course outline. Result of assessment is shown below:

<table><tr><td>No of students</td><td>Score</td><td>Status</td></tr><tr><td>3</td><td>100%</td><td>passed</td></tr><tr><td>3</td><td>90%</td><td>passed</td></tr><tr><td>2</td><td>80%</td><td>passed</td></tr><tr><td>2</td><td>50%</td><td>failed</td></tr></table></td></tr>
<tr><td>SLO#2: Diagnose and resolve problems of a personal computer system.</td><td>Same as above</td><td>Introductory</td><td>SLO was assessed by written test questions and skill-based performance test using assessment criteria as stated in the course outline. Result of assessment revealed the following:

<table><tr><td>No of students</td><td>Score</td><td>Status</td></tr><tr><td>8</td><td>100%</td><td>passed</td></tr><tr><td>1</td><td>80%</td><td>passed</td></tr><tr><td>1</td><td>70%</td><td>passed</td></tr></table></td></tr>
<tr><td>SLO#3: Install and configure various computer peripheral devices.</td><td>Same as above</td><td>Introductory</td><td>SLO was assessed by written test questions and skill-based performance exam based on assessment criteria as stated in the course outline. Result of assessment is below:

<table><tr><td>No of</td><td>Score</td><td>Status</td></tr></table></td></tr>
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<table>
<tr><td></td><td></td><td></td><td>
<table>
<tr><td>students</td><td></td><td></td></tr>
<tr><td>8</td><td>100%</td><td>passed</td></tr>
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<tr><td>1</td><td>60% or below</td><td>failed</td></tr>
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<tr><td>SLO#4: Resolve network connectivity problems on a local area network using a systematic troubleshooting approach.</td><td>Same as above</td><td>Introductory</td><td>SLO was assessed by written test questions and skill-based performance exam based on assessment criteria as stated in the course outline. Result of assessment is shown below:

<table>
<tr><td>No of students</td><td>Score</td><td>Status</td></tr>
<tr><td>8</td><td>100%</td><td>passed</td></tr>
<tr><td>2</td><td>60% or below</td><td>failed</td></tr>
</table>
</td></tr>
<tr><td>SLO#5: Install, configure, upgrade, and maintain Microsoft Windows operating systems.</td><td>Same as above</td><td>Introductory</td><td>SLO was assessed by written test questions and skill-based performance test based on assessment criteria as stated in the course outline. Result of assessment is shown in the table below:

<table>
<tr><td>No of students</td><td>Score</td><td>Status</td></tr>
<tr><td>4</td><td>100%</td><td>passed</td></tr>
<tr><td>4</td><td>80%</td><td>passed</td></tr>
<tr><td>2</td><td>60% or below</td><td>failed</td></tr>
</table>
</td></tr>
<tr><td>SLO# 6: Diagnose and resolve problems using Microsoft Windows system tools.</td><td>Same as above</td><td>Introductory</td><td>SLO was assessed by written test questions and skill-based performance exam based on assessment criteria as stated in the course outline. Result of assessment is shown below:

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<tr><td></td><td></td><td></td><td><table><tr><td></td><td>below</td><td></td></tr></table></td></tr>
<tr><td>SLO#7: Utilize relevant workplace safety and environmental standards during computer maintenance.</td><td>Same as above</td><td>Introductory</td><td>SLO was assessed by written test questions and skill-based performance test based on assessment criteria as stated in the course outline. Result of assessment is shown in the table below:

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<tr><td>SLO#8: Effectively utilize a customer-oriented approach to resolve user problems.</td><td>Same as above</td><td>Introductory</td><td>SLO was assessed by written test questions and skill-based performance test based on assessment criteria as stated in the course outline. Result of assessment is shown in the table below:

<table><tr><td>No of students</td><td>Score</td><td>Status</td></tr><tr><td>6</td><td>100%</td><td>passed</td></tr><tr><td>2</td><td>70%</td><td>passed</td></tr><tr><td>2</td><td>60% or below</td><td>failed</td></tr></table></td></tr>
<tr><td>SLO#9: Provide computer hardware and software support based upon a set of standard and systematic diagnostic principles.</td><td>Same as above</td><td>Introductory</td><td>SLO was assessed by written test questions and skill-based performance test based on assessment criteria as stated in the course outline. Result of assessment is shown in the table below:

<table><tr><td>No of students</td><td>Score</td><td>Status</td></tr><tr><td>8</td><td>100%</td><td>passed</td></tr><tr><td>2</td><td>60% or below</td><td>failed</td></tr></table></td></tr>
</table>

Additional observations & recommendations:

The course uses Cisco's IT Essentials curriculum, which is a web-based instruction. It is structured with two major components. One is the theoretical aspect and the other is the skill-based aspect. The theoretical aspect uses the Cisco's web-based instruction with the support of daily lectures, student activities, and student lab work as prepared and delivered by the instructor. The skill-based aspect is developed and delivered by the instructor following the assessment criteria set by the Cisco curriculum. Course SLO are developed based on the Cisco curriculum and spread out in 10 chapters. Assessments of course SLO include on-line chapter exams, on-line final exam, and skill-based performance exams.

Due to the nature of the course, that is web-based, good Internet connection is a must to effectively deliver the course. Due to our current Internet connectivity speed, all on-line exams are scheduled from 5pm to 9pm.

Recommendation: Modify the course to include a required textbook, preferably Cisco IT Essentials from Cisco Press. Improve Internet connection speed.

Special comments: [explanations on course grading, opportunities to achieve outcomes, how many students receive an A, B, C, etc.]

The main cause of student failing the course is due to absenteeism and lack of participation in coursework.

Signature: _____ Date: _____

Review of Performance: (**VEE 100 Soldering and Mechanical Termination Techniques**, Fall 2010, 40 students)

Submitted by: Nelchor Permitez Ed. D.

<table>
<tr><th>SLO#</th><th>Program

SLO#</th><th>I, D, M</th><th>Reflection/Comment</th></tr>
<tr><td>1. Identify and perform the techniques for printed circuit track and pad repair as well as component insertion and extraction</td><td>Practice safety and occupational health procedures in the workplace</td><td>D</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table><tr><th>Letter Grade</th><th>Number of student</th></tr><tr><td>A</td><td>25</td></tr><tr><td>B</td><td>9</td></tr><tr><td>C</td><td>6</td></tr></table></td></tr>
<tr><td>2. Select the correct</td><td>Use electronics</td><td>D</td><td>The SLO was assess using hands-on troubleshooting and written quiz and</td></tr>
</table>

<table>
<tr>
<td>connection type and create reliable solder joints using basic hand soldering techniques</td>
<td>tool and test equipment competently</td>
<td></td>
<td>examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>19</td></tr>
<tr><td>B</td><td>8</td></tr>
<tr><td>C</td><td>13</td></tr>
<tr><td></td><td></td></tr>
</table>
</td>
</tr>
<tr>
<td>3. Demonstrate the

correct method of terminating basic connect</td>
<td>Use electronics tool and test equipment competently</td>
<td>M</td>
<td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure.

<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>15</td></tr>
</table>
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</table>

<table>
<tr>
<td></td>
<td></td>
<td></td>
<td>
<table>
<tr><td>B</td><td>11</td></tr>
<tr><td>C</td><td>14</td></tr>
</table>
</td>
</tr>
<tr>
<td>4. Describe t characteristics of and t procedures for

making good wire

wrap connection.</td>
<td>Use electronics tool and test equipment competently</td>
<td>M</td>
<td>
The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><td>Letter Grade</td><td>Number of student</td></tr>
<tr><td>A</td><td>19</td></tr>
<tr><td>B</td><td>8</td></tr>
<tr><td>C</td><td>13</td></tr>
</table>
</td>
</tr>
</table>

<table>
<tr>
<td>5. Test basic wiring

and connector.</td>
<td>Use electronics tool and test equipment competently</td>
<td>M</td>
<td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>19</td></tr>
<tr><td>B</td><td>8</td></tr>
<tr><td>C</td><td>13</td></tr>
</table>
</td>
</tr>
</table>

Additional observations: Need more electronics kit for practice to achieve high level of competency in soldering practice.

Special comments: In the final tally most student got B and C while there are only 6 receive A.

Recommendations: Modify the course outline and increase the time frame for the course and include the modern method of soldering such as surface mount devices (SMD), ball grid array (BGA) and the use of infra red light and hot air technique in soldering. Need to purchase hot air soldering station, Infra red soldering station and its consumable materials.

Signature:_____ Date:_____

Name typed, position

Review of Performance: (**VEE 103 Electronics Fundamental 1**, Fall 2010, 11 students)

Submitted by: Nelchor Permitez Ed. D.

<table>
<tr><th>SLO#</th><th>Program

SLO#</th><th>I, D, M</th><th>Reflection/Comment</th></tr>
<tr><td>1. Describe the basic concept of voltage and current and the behavior of these parameters in simple electrical circuits.</td><td>Practice safety and occupational health procedures in the workplace</td><td>I</td><td>The SLO was assess using and written quiz and examination.

<table><tr><th>Letter Grade</th><th>Number of student</th></tr><tr><td>A</td><td>2</td></tr><tr><td>B</td><td>4</td></tr><tr><td>C</td><td>5</td></tr></table></td></tr>
<tr><td>2. Explain the purpose and identify the various types of resistor symbols. Identify the value, power rating and tolerance of resistors using various types of industry codes.</td><td>Practice safety and occupational health procedures in the workplace</td><td>I</td><td>The SLO was assess using and written quiz and examination.

<table><tr><th>Letter Grade</th><th>Number of student</th></tr><tr><td>A</td><td>3</td></tr><tr><td>B</td><td>5</td></tr><tr><td>C</td><td>2</td></tr></table></td></tr>
</table>

<table>
<tr>
<td>3. Describe the purpose ar types of switches, fuses ar circuit breakers and identi their

schematic symbols.</td>
<td>Practice safety and occupational health procedures in the workplace devices</td>
<td>I</td>
<td>The SLO was assess using and written quiz and examination.

<table><tr><th>Letter Grade</th><th>Number of student</th></tr><tr><td>A</td><td>2</td></tr><tr><td>B</td><td>3</td></tr><tr><td>C</td><td>6</td></tr></table></td>
</tr>
<tr>
<td>4. Define magnetism a electromagnetism and th characteristics.</td>
<td>Practice safety and occupational health procedures in the workplace</td>
<td>I</td>
<td>The SLO was assess using and written quiz and examination.

<table><tr><th>Letter Grade</th><th>Number of student</th></tr><tr><td>A</td><td>2</td></tr><tr><td>B</td><td>4</td></tr><tr><td>C</td><td>5</td></tr></table></td>
</tr>
<tr>
<td>5. Describe the function</td>
<td>Practice safety</td>
<td>I</td>
<td></td>
</tr>
</table>

<table>
<tr>
<td>the multimeter and controls. Safely a accurately use a multime to measure the circ quantities of resistan voltage and current.</td>
<td>and occupational health procedures in the workplace</td>
<td></td>
<td>The SLO was assess using and written quiz and examination.

<table><tr><th>Letter Grade</th><th>Number of student</th></tr><tr><td>A</td><td>1</td></tr><tr><td>B</td><td>5</td></tr><tr><td>C</td><td>5</td></tr></table></td>
</tr>
<tr>
<td>6. Using Ohms law to def the
relationship between
resistance, voltage,
current and power in electrical circuit.</td>
<td>Use electronics tool and test equipment competently</td>
<td>I</td>
<td>The SLO was assess using and written quiz, examination and practical test.

<table><tr><th>Letter Grade</th><th>Number of student</th></tr><tr><td>A</td><td>1</td></tr><tr><td>B</td><td>3</td></tr><tr><td>C</td><td>7</td></tr></table></td>
</tr>
<tr>
<td>7. Identify circuits
and calculate and
measure voltage,</td>
<td>Use electronics tool and test equipment competently</td>
<td>I</td>
<td>The SLO was assess using and written quiz and examination.</td>
</tr>
</table>

<table>
<tr>
<td>current and resistance.</td>
<td></td>
<td></td>
<td>
<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>2</td></tr>
<tr><td>B</td><td>4</td></tr>
<tr><td>C</td><td>5</td></tr>
</table>
</td>
</tr>
<tr>
<td>8. Simplify and

analyze complex circuits.</td>
<td>Use electronics tool and test equipment competently</td>
<td>I</td>
<td>The SLO was assess using and written quiz and examination.
<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>2</td></tr>
<tr><td>B</td><td>4</td></tr>
<tr><td>C</td><td>5</td></tr>
</table>
</td>
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</table>

Additional observations: The course can be best taught if there is more hands on component to support the theory.

Special comments: Majority of the student receive B and C grades.

Recommendations: The course need to be modify for the inclusion of more hands on component and the time must be increase to reach the mastery competency level.

Signature:_____ Date:_____

Name typed, position

Review of Performance: (**VEE 222 Discrete Devices 2**, Fall 2010, 12 students)

Submitted by: Nelchor Permitez Ed. D.

SLO#	**Program SLO#**	**I, D, M**	**Reflection/Comment**
1. Describe the purpose and operating characteristics of a UJT and SCR.	Perform Troubleshooting techniques to maintain , diagnose, and repair electronic equipment and devices	D	12 out of 12 students got **B** on this SLO. The students was able to perform competently diagnosis, diagramming circuit tracing. The SLO was assess using hands-on troubleshooting and written quiz and examination. Students need more time in hands-on and other practical procedure to reach mastery level performance.
2. Describe UJT operation.	Perform Troubleshooting techniques to maintain , diagnose, and repair electronic equipment and devices	D	12 out of 12 students got **B** on this SLO. The students was able to perform competently diagnosis, diagramming circuit tracing. The SLO was assess using hands-on troubleshooting and written quiz and examination. Students need more time in hands-on and other practical procedure to reach

			mastery level performance.
3. Describe SCR trigger circuit.	Perform Troubleshooting techniques to maintain , diagnose, and repair electronic equipment and devices	M	12 out of 12 students got **B** on this SLO. The students was able to perform competently diagnosis, diagramming circuit tracing. The SLO was assess using hands-on troubleshooting and written quiz and examination.
4. Describe SCR power control Operation.	Perform Troubleshooting techniques to maintain , diagnose, and repair electronic equipment and devices	M	12 out of 12 students got **B** on this SLO. The students was able to perform competently diagnosis, diagramming circuit tracing. The SLO was assess using hands-on troubleshooting and written quiz and examination.
5. Perform SCR troubleshooting.	Troubleshooting techniques to maintain , diagnose, and repair electronic equipment and	M	12 out of 12 students got **B** on this SLO. The students was able to perform competently diagnosis, diagramming circuit tracing. The SLO was assess using hands-on troubleshooting and written quiz and examination.

	devices		
6. Describe the relationshi between triac,and SCR, Di and Four layer devices.	Troubleshooting techniques to maintain , diagnose, and repair electronic equipment and devices	M	12 out of 12 students got **B** on this SLO. The students was able to perform competently diagnosis, diagramming circuit tracing. The SLO was assess using hands-on troubleshooting and written quiz and examination.
7. Describe the constructi operation and application PUT devices.	Troubleshooting techniques to maintain , diagnose, and repair electronic equipment and devices	M	12 out of 12 students got **B** on this SLO. The students was able to perform competently diagnosis, diagramming circuit tracing. The SLO was assess using hands-on troubleshooting and written quiz and examination.

Additional observations: The Nida cards for SLO 6 and SLO 7 need to be replace.

Special comments: Majority of the students earned B grade.

Recommendations: The course outline need to modify for the inclusion of more time in hands-on activities which serves as a core of this program.

Signature:_____ Date:_____

Name typed, position

Review of Performance: (**VEE 235 Digital 2**, Fall 2010, 13 students)

Submitted by: Nelchor Permitez Ed. D.

<table>
<tr><th>SLO#</th><th>Program

SLO#</th><th>I, D, M</th><th>Reflection/Comment</th></tr>
<tr><td>1. Describe the basic operating principles of registers and memory circuits.</td><td>Interpret schematics diagrams and waveforms.</td><td>D</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>0</td></tr>
<tr><td>B</td><td>6</td></tr>
<tr><td>C</td><td>7</td></tr>
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<table>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td>2. Identify the purpose and probe the input and output of a 4 bit storage register.</td><td>Interpret schematics diagrams and waveforms.</td><td>D</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table><tr><th>Letter Grade</th><th>Number of student</th></tr><tr><td>A</td><td>0</td></tr><tr><td>B</td><td>5</td></tr><tr><td>C</td><td>8</td></tr></table></td></tr>
<tr><td>3. Identify and describe the function and probe
the input and output of
a 4 bit shift register.</td><td>Interpret schematics diagrams and waveforms.</td><td>M</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.</td></tr>
</table>

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<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>0</td></tr>
<tr><td>B</td><td>6</td></tr>
<tr><td>C</td><td>7</td></tr>
</table>
</td>
</tr>
<tr>
<td>4: Identify and describe t function

and probe the input and output of an 8 bit shift register.</td>
<td>Interpret schematics diagrams and waveforms.</td>
<td>M</td>
<td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>0</td></tr>
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<td></td>
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<table>
<tr><td>B</td><td>8</td></tr>
<tr><td>C</td><td>5</td></tr>
</table>
</td>
</tr>
<tr>
<td>5. Describe the normal operation and the characteristics

of a 64 bit memory circuit.</td>
<td>Interpret schematics diagrams and waveforms.</td>
<td>M</td>
<td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><td>Letter Grade</td><td>Number of student</td></tr>
<tr><td>A</td><td>0</td></tr>
<tr><td>B</td><td>9</td></tr>
<tr><td>C</td><td>4</td></tr>
</table>
</td>
</tr>
<tr>
<td>6. Describe how

counting circuit perform arithmetic functions.</td>
<td>Interpret schematics diagrams and waveforms.</td>
<td>M</td>
<td>The SLO was assess using hands-on troubleshooting and written quiz and examination.</td>
</tr>
</table>

<table>
<tr>
<td></td>
<td></td>
<td></td>
<td>Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>0</td></tr>
<tr><td>B</td><td>7</td></tr>
<tr><td>C</td><td>6</td></tr>
</table>
</td>
</tr>
<tr>
<td>7. Recognize the normal operation of a ripple counte circuit.</td>
<td>Interpret schematics diagrams and waveforms.</td>
<td>M</td>
<td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>0</td></tr>
</table>
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<table>
<tr><td></td><td></td><td></td><td><table><tr><td>B</td><td>3</td></tr><tr><td>C</td><td>10</td></tr></table></td></tr>
<tr><td>8. Describe the

purpose of an up counter circuit.</td><td>Interpret schematics diagrams and waveforms.</td><td>M</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table><tr><td>Letter Grade</td><td>Number of student</td></tr><tr><td>A</td><td>0</td></tr><tr><td>B</td><td>6</td></tr><tr><td>C</td><td>7</td></tr></table></td></tr>
<tr><td>9. describe the

purpose of a down counter circuit.</td><td>Interpret schematics diagrams and waveforms.</td><td>M</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.</td></tr>
</table>

<table>
<tr>
<td></td>
<td></td>
<td></td>
<td>Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>0</td></tr>
<tr><td>B</td><td>11</td></tr>
<tr><td>C</td><td>2</td></tr>
</table>
</td>
</tr>
<tr>
<td>10. Describe the
function and
the operating characteristics of a 4 bit adder.</td>
<td>Interpret schematics diagrams and waveforms.</td>
<td>M</td>
<td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>0</td></tr>
</table>
</td>
</tr>
</table>

<table>
<tr><td></td><td></td><td></td><td><table><tr><td>B</td><td>9</td></tr><tr><td>C</td><td>4</td></tr></table></td></tr>
<tr><td>11. Describe the normal operation of 4 bit subtractor</td><td>Interpret schematics diagrams and waveforms.</td><td>M</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table><tr><td>Letter Grade</td><td>Number of student</td></tr><tr><td>A</td><td>0</td></tr><tr><td>B</td><td>6</td></tr><tr><td>C</td><td>7</td></tr></table></td></tr>
<tr><td>12. Explain the basic principl of conversion and data circuits.</td><td>Interpret schematics diagrams and waveforms.</td><td>M</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach</td></tr>
</table>

<table>
<tr>
<td></td>
<td></td>
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<td>mastery level performance.

<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>0</td></tr>
<tr><td>B</td><td>8</td></tr>
<tr><td>C</td><td>5</td></tr>
</table>
</td>
</tr>
<tr>
<td>13. Identify the purpose of a D/A conversion circuit and it operating characteristics</td>
<td>Interpret schematics diagrams and waveforms.</td>
<td>M</td>
<td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>0</td></tr>
<tr><td>B</td><td>6</td></tr>
</table>
</td>
</tr>
</table>

<table>
<tr><td></td><td></td><td></td><td><table><tr><td>C</td><td>7</td></tr></table></td></tr>
<tr><td>14. Identify the purpose and describe the basic operation a data selector circuit and measure its output

signals.</td><td>Interpret schematics diagrams and waveforms.</td><td>M</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table><tr><td>Letter Grade</td><td>Number of student</td></tr><tr><td>A</td><td>0</td></tr><tr><td>B</td><td>5</td></tr><tr><td>C</td><td>8</td></tr></table></td></tr>
<tr><td>15. Describe the

function of a data distributi circuit and

its operating characteristics and measure its output

signals.</td><td>Interpret schematics diagrams and waveforms.</td><td>M</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.</td></tr>
</table>

Letter Grade	Number of student
A	0
B	6
C	7

Additional observations: Needs more NIDA cards set to accommodate growing number of students.

Special comments: Most of the students got grades of B and C.

Recommendations: Modify the course outline and increase number of time for hands-on.

Signature:_____ Date:_____

Name typed, position

Review of Performance: (**VEE 240 Signal Processing**, Fall 2010, 12 students)

Submitted by: Nelchor Permitez Ed. D.

<table>
<tr><th>SLO#</th><th>Program

SLO#</th><th>I, D, M</th><th>Reflection/Comment</th></tr>
<tr><td>1. Give general description of analog pulse modulation, pulse amplitude modulation (PAM), pulse width modulation (PWM) and pulse position modulation (PPM)</td><td>Perform Troubleshooting techniques to maintain , diagnose, and repair electronic equipment and devices</td><td>D</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table><tr><th>Letter Grade</th><th>Number of student</th></tr><tr><td>A</td><td>3</td></tr><tr><td>B</td><td>6</td></tr><tr><td>C</td><td>3</td></tr></table></td></tr>
<tr><td>2. Describe Pulse coded modulation (PCM) circuit, operation and troubleshooting</td><td>Perform Troubleshooting techniques to maintain ,</td><td>D</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.</td></tr>
</table>

<table>
<tr>
<td>PCM circuit.</td>
<td>diagnose, and repair electronic equipment and devices</td>
<td></td>
<td>Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>4</td></tr>
<tr><td>B</td><td>6</td></tr>
<tr><td>C</td><td>2</td></tr>
</table>
</td>
</tr>
<tr>
<td>3. Describe Delta modulation (DM)

circuit, operation and

troubleshoot DM circuit.</td>
<td>Perform Troubleshooting techniques to maintain , diagnose, and repair electronic equipment and devices</td>
<td>M</td>
<td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>4</td></tr>
<tr><td>B</td><td>4</td></tr>
<tr><td>C</td><td>4</td></tr>
</table>
</td>
</tr>
</table>

<table>
<tr>
<td>4: Describe FSK
(Frequency shift
keying) circuit,
operation and
troubleshoot
FSK circuit</td>
<td>Perform Troubleshooting techniques to maintain , diagnose, and repair electronic equipment and devices</td>
<td>M</td>
<td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>4</td></tr>
<tr><td>B</td><td>6</td></tr>
<tr><td>C</td><td>2</td></tr>
</table>
</td>
</tr>
<tr>
<td>5. Describe Phase shift Keying (PSK) circuit, operation and
troubleshoot PSK circuit.</td>
<td>Perform Troubleshooting techniques to maintain , diagnose, and repair electronic equipment and devices</td>
<td>M</td>
<td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
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<tr><td></td><td></td><td></td><td><table>
<tr><td>A</td><td>5</td></tr>
<tr><td>B</td><td>5</td></tr>
<tr><td>C</td><td>2</td></tr>
</table></td></tr>
<tr><td>6. Describe Time

division Multiplexing (TDM
circuit, operation and
troubleshoot TDM

circuit.</td><td>Perform Troubleshooting techniques to maintain , diagnose, and repair electronic equipment and devices</td><td>M</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><td>Letter Grade</td><td>Number of student</td></tr>
<tr><td>A</td><td>3</td></tr>
<tr><td>B</td><td>6</td></tr>
<tr><td>C</td><td>3</td></tr>
</table></td></tr>
<tr><td>7. Describe Frequency Division Multiplexing (FDM
circuit, operation and
troubleshoot FDM circuit</td><td>Perform Troubleshooting techniques to maintain , diagnose, and repair electronic equipment and</td><td>M</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.</td></tr>
</table>

	devices		

Letter Grade	Number of student
A	3
B	4
C	5

Additional observations: Need to purchase additional set of NIDA cards to accommodate growing number of students enrolled in the course.

Special comments: There are 4 students got A, 4 students got B and 4students got 4.

Recommendations: Modify the course outline and increase the allotted time for hands-on.

Signature:_____ Date:_____

Name typed, position

Review of Performance: (**VEE 235 Digital 2**, Spring 2011, 29 students)

Submitted by: Nelchor Permitez Ed. D.

<table>
<tr><th>SLO#</th><th>Program

SLO#</th><th>I, D, M</th><th>Reflection/Comment</th></tr>
<tr><td>1. Identify and describe the history and development of digital electronics.</td><td>Use electronic tools and test equipment competently.</td><td>D</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>2</td></tr>
<tr><td>B</td><td>10</td></tr>
<tr><td>C</td><td>17</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td>2. Describe digital electronics hardware.</td><td>Use electronic tools and test equipment competently</td><td>D</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table><tr><th>Letter Grade</th><th>Number of student</th></tr><tr><td>A</td><td>1</td></tr><tr><td>B</td><td>8</td></tr><tr><td>C</td><td>20</td></tr></table></td></tr>
<tr><td>3. Describe the basic operating principles of buffers and inverters.</td><td>Use electronic tools and test equipment competently</td><td>M</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.</td></tr>
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<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>2</td></tr>
<tr><td>B</td><td>14</td></tr>
<tr><td>C</td><td>13</td></tr>
</table>
</td>
</tr>
<tr>
<td>4. Describe various digital test equipment and their operating characteristics.</td>
<td>Use electronic tools and test equipment competently</td>
<td>M</td>
<td>
The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.
<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>2</td></tr>
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<td></td>
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<td></td>
<td>
<table>
<tr><td>B</td><td>8</td></tr>
<tr><td>C</td><td>19</td></tr>
</table>
</td>
</tr>
<tr>
<td>5. Explain the purpose and the operation for the 555 Timer.</td>
<td>Use electronic tools and test equipment competently</td>
<td>M</td>
<td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><td>Letter Grade</td><td>Number of student</td></tr>
<tr><td>A</td><td>5</td></tr>
<tr><td>B</td><td>9</td></tr>
<tr><td>C</td><td>15</td></tr>
</table>
</td>
</tr>
<tr>
<td>6. Describe the purpose, construction, and operation of various integrated circuits.</td>
<td>Use electronic tools and test equipment competently.</td>
<td>M</td>
<td>The SLO was assess using hands-on troubleshooting and written quiz and examination.</td>
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<td></td>
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<td>Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>3</td></tr>
<tr><td>B</td><td>7</td></tr>
<tr><td>C</td><td>19</td></tr>
</table>
</td>
</tr>
<tr>
<td>7. Identify and describe the AND gate operation. Measure input to output waveforms.</td>
<td></td>
<td></td>
<td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>4</td></tr>
<tr><td>B</td><td>15</td></tr>
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<table>
<tr><td></td><td></td><td></td><td><table><tr><td>C</td><td>10</td></tr></table></td></tr>
<tr><td>8. Identify and describe the OR gate operation. Measure input to output waveforms.</td><td></td><td></td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table><tr><td>Letter Grade</td><td>Number of student</td></tr><tr><td>A</td><td>6</td></tr><tr><td>B</td><td>11</td></tr><tr><td>C</td><td>12</td></tr></table></td></tr>
<tr><td>9. Identify and describe the NOT gate operation. Measure input to output waveforms.</td><td></td><td></td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.</td></tr>
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<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>8</td></tr>
<tr><td>B</td><td>16</td></tr>
<tr><td>C</td><td>5</td></tr>
</table>
</td>
</tr>
<tr>
<td>10. Identify and describe the NAND gate operation. Measure input to output waveforms.</td>
<td></td>
<td></td>
<td>
The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.
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<tr><td>B</td><td>17</td></tr>
<tr><td>C</td><td>5</td></tr>
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<tr>
<td>11. Identify and describe the NOR gate operation. Measure input to output waveforms.</td>
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<td>
The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach
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<tr><td>B</td><td>7</td></tr>
<tr><td>C</td><td>16</td></tr>
</table>
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</tr>
<tr>
<td>12. Identify and describe the XOR gate operation. Measure input to output waveforms.</td>
<td></td>
<td></td>
<td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

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<tr><td>C</td><td>19</td></tr>
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<table>
<tr>
<td>13. Describe the purpose and operation of various combinational circuits.</td>
<td></td>
<td></td>
<td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

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<tr><td>C</td><td>17</td></tr>
</table>
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<tr>
<td>14. Describe the different types of logic families and their operating characteristics.</td>
<td></td>
<td></td>
<td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
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<tr><td>B</td><td>7</td></tr>
<tr><td>C</td><td>17</td></tr>
</table>
</td></tr>
<tr><td>15. Describe the number systems used in digital electronics. Perform mathematical calculations and conversions using digital mathematics.</td><td></td><td></td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><td>Letter Grade</td><td>Number of student</td></tr>
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<tr><td>B</td><td>9</td></tr>
<tr><td>C</td><td>15</td></tr>
</table>
</td></tr>
<tr><td>16. Describe how a decimal encoder performs base 10 to binary conversion.</td><td></td><td></td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.</td></tr>
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<tr><td>B</td><td>7</td></tr>
<tr><td>C</td><td>19</td></tr>
</table>
</td></tr>
<tr><td>17. Describe how a binary decoder performs binary to 7 segment conversions.</td><td></td><td></td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

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<tr><td>B</td><td>10</td></tr>
<tr><td>C</td><td>13</td></tr>
</table>
</td></tr>
<tr><td>18. Identify and describe the operation of a 4-bit comparator.</td><td></td><td></td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.</td></tr>
</table>

<table>
<tr>
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<tr><td>C</td><td>16</td></tr>
</table>
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<tr>
<td>19. Explain the basic operating principles of a flip-flop circuit.</td>
<td></td>
<td></td>
<td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

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<tr><td></td><td></td><td></td><td><table><tr><td>C</td><td>15</td></tr></table></td></tr>
<tr><td>20. Identify and describe the purpose and the operation of an RS flip-flop circuit.</td><td></td><td></td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table><tr><td>Letter Grade</td><td>Number of student</td></tr><tr><td>A</td><td>4</td></tr><tr><td>B</td><td>8</td></tr><tr><td>C</td><td>17</td></tr></table></td></tr>
<tr><td>21. Identify and describe the purpose and the operation of a Clocked RS flip-flop circuit.</td><td></td><td></td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.</td></tr>
</table>

<table>
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<tr><td>B</td><td>9</td></tr>
<tr><td>C</td><td>16</td></tr>
</table>
</td></tr>
<tr><td>22. Identify and describe the purpose and the operation of a D-type flip-flop circuit.</td><td></td><td></td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
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<tr><td>B</td><td>7</td></tr>
<tr><td>C</td><td>19</td></tr>
</table>
</td></tr>
<tr><td>23. Identify and describe the purpose and the operation of a JK flip-flop circuit.</td><td></td><td></td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach</td></tr>
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<td>mastery level performance.

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<tr><td>B</td><td>8</td></tr>
<tr><td>C</td><td>16</td></tr>
</table>
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</tr>
<tr>
<td>24. Identify and describe the purpose and the operation of a Master Slave flip-flop circuit.</td>
<td></td>
<td></td>
<td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>6</td></tr>
<tr><td>B</td><td>5</td></tr>
<tr><td>C</td><td>18</td></tr>
</table>
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</table>

Additional observations: Needs more digital NIDA cards set to accommodate growing number of students.

Special comments: Most of the students got grades of B and C.

Recommendations: Modify the course outline and increase number of time for hands-on.

Signature:_____ Date:_____

Name typed, position

Review of Performance: (**VEE 224 Video Product Servicing**, Spring 2011, 13 students)

Submitted by: Nelchor Permitez Ed. D.

<table>
<tr><th>SLO#</th><th>Program

SLO#</th><th>I, D, M</th><th>Reflection/Comment</th></tr>
<tr><td>1. Repair television (TV) and computer monit system.</td><td>Perform troubleshooting techniques to maintain, diagnose, and repair electronic equipment and devices.</td><td>D</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>5</td></tr>
<tr><td>B</td><td>5</td></tr>
<tr><td>C</td><td>3</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td>2. Repair video cassette recorders (VCR).</td><td>Perform troubleshooting techniques to maintain, diagnose, and repair electronic equipment and devices.</td><td>D</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table><tr><th>Letter Grade</th><th>Number of student</th></tr><tr><td>A</td><td>4</td></tr><tr><td>B</td><td>6</td></tr><tr><td>C</td><td>3</td></tr></table></td></tr>
<tr><td>3. Repair compact disc (CD) players.</td><td>Perform troubleshooting techniques to maintain, diagnose, and repair electronic equipment and devices.</td><td>M</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.</td></tr>
</table>

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<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>5</td></tr>
<tr><td>B</td><td>6</td></tr>
<tr><td>C</td><td>2</td></tr>
</table>
</td>
</tr>
<tr>
<td>4. Repair digital video disc (DVD) player.</td>
<td>Perform troubleshooting techniques to maintain, diagnose, and repair electronic equipment and devices.</td>
<td>M</td>
<td>
The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.
<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>6</td></tr>
</table>
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</table>

			B	2
			C	5

Additional observations: Needs more test equipment such as isolation transformers installed in the workshop to avoid electrical shock during servicing, transformer checker and meager tester to accommodate growing number of students.

Special comments: There were 5 students got A, 5 students got B and 3 students got C

Recommendations: Modify the course outline and include liquid crystal display (LCD) video, light emitting diode (LED) video and plasma video technology and increase number of time for hands-on.

Signature:_____ Date:_____

Name typed, position

Review of Performance: (**VEE 225 Business machine servicing**, Spring 2011, 11 students)

Submitted by: Nelchor Permitez Ed. D.

<table>
<tr><th>SLO#</th><th>Program

SLO#</th><th>I, D, M</th><th>Reflection/Comment</th></tr>
<tr><td>1. Service and repair machine.</td><td>Perform troubleshooting techniques to maintain, diagnose, and repair electronic equipment and devices.</td><td>D</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>0</td></tr>
<tr><td>B</td><td>2</td></tr>
<tr><td>C</td><td>9</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td>2. Service and repair computer printers (laser and deskjet).</td><td>Perform troubleshooting techniques to maintain, diagnose, and repair electronic equipment and devices.</td><td>D</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table><tr><th>Letter Grade</th><th>Number of student</th></tr><tr><td>A</td><td>0</td></tr><tr><td>B</td><td>2</td></tr><tr><td>C</td><td>9</td></tr></table></td></tr>
<tr><td>3. Service and repair ca registers.</td><td>Perform troubleshooting techniques to maintain, diagnose, and repair electronic equipment and devices.</td><td>M</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.</td></tr>
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<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>0</td></tr>
<tr><td>B</td><td>3</td></tr>
<tr><td>C</td><td>8</td></tr>
</table>
</td>
</tr>
<tr>
<td>4. Service and repair photocopiers.</td>
<td>Perform troubleshooting techniques to maintain, diagnose, and repair electronic equipment and devices.</td>
<td>M</td>
<td>
The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table>
<tr><th>Letter Grade</th><th>Number of student</th></tr>
<tr><td>A</td><td>0</td></tr>
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<table>
<tr><td></td><td></td><td></td><td><table><tr><td>B</td><td>2</td></tr><tr><td>C</td><td>9</td></tr></table></td></tr>
<tr><td>5. Service and repair microwave ovens.</td><td>Perform troubleshooting techniques to maintain, diagnose, and repair electronic equipment and devices.</td><td>M</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

<table><tr><td>Letter Grade</td><td>Number of student</td></tr><tr><td>A</td><td>0</td></tr><tr><td>B</td><td>3</td></tr><tr><td>C</td><td>8</td></tr></table></td></tr>
</table>

Additional observations: Needs more test equipment such as isolation transformers installed in the workshop to avoid electrical shock during servicing, transformer checker and meager tester to accommodate growing number of students.

Special comments: Most of the students got grades of B and C.

Recommendations: Modify the course outline and increase number of time for hands-on.

Signature:_____ Date:_____

Name typed, position

Review of Performance: (**VEE 230 Radio communication**, Spring 2011, 10 students)

Submitted by: Nelchor Permitez Ed. D.

<table>
<tr><th>SLO#</th><th>Program

SLO#</th><th>I, D, M</th><th>Reflection/Comment</th></tr>
<tr><td>Describe the basic communications syste various

signal processing techniques and the safety precautions to b observed when

dealing with this type c equipment.</td><td>Practice career in telecommunication industry.

Troubleshoot microwave, fiber optic, radio communication and telephone system</td><td>I</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.

Students need more time in hands-on and other practical procedure to reach mastery level performance.

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measure Amplitude Modulated signals.</td><td>Practice career in telecommunication industry.</td><td>D</td><td>The SLO was assess using hands-on troubleshooting and written quiz and examination.</td></tr>
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<td>Describe and

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<td>Identify Single Sideban transmitters and receivers, different types of transmission lines and their characteristics.</td>
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<td>6. Describe Amplitude Modulated circuits.</td>
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<tr><td>6 . Describe basic Amplitude Modulation circuit construction.</td><td>Practice career in telecommunication industry.

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<tr><td>7. Measure signals in a diode modulator and demodulator circuit.</td><td>Practice career in telecommunication industry.

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<td>8. Troubleshoot Amplitude Modulat transmitter and receiver systems.</td>
<td>Practice career in telecommunication industry.

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<td>9. Describe Frequency Modulated circuits.</td>
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<td>10. Describe basic Frequency Modulate Circuit operation.</td>
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<tr><td>12. Observe the operation and measure signals in a integrated circuit transmitter and receiver.</td><td>Practice career in telecommunication industry.

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<td>13. Troubleshoot Frequency Modulated transmitters and receivers.</td>
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Additional observations: Need to purchase additional set of Radio communication FM, AM and SSB NIDA cards to accommodate growing number of students enrolled in the course.

Special comments: There are 4 students got A, 4 students got B and 1 student got C.

Recommendations: Modify the course outline must be increase its credit number and include topics such as include high frequency (HF) radio transceiver, citizens band (CB) transceiver, and transceiver station setup and antenna installation in the topics and increase the allotted time for hands-on. In addition, cellular phone technology and servicing must be included on this course.

Signature:_____ Date:_____

Name typed, position