

Review of Performance: (VEE 235 Digital 2, Fall 2015, 16 students)

Submitted by: Nelchor Permitez Ed. D.

**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 electronic tools and test equipment competently.

PLO3: Interpret schematic diagrams and waveforms.

PLO4: Build electronic projects to a given specification.

PLO5: Practice a career in the Telecomm Industry.

PLO6: Troubleshoot microwave, fiber optics and telephone system.

SLO#	Program SLO#	I, D, M	ILO	Reflection/Comment				
1. Describe the basic operating principles of registers and memory circuits.	Interpret schematics diagrams and waveforms.	D	2,3,4	<p>The SLO was assess using hands-on troubleshooting and written quiz and examination.</p> <p>Students need more time in hands-on and other practical procedure to reach mastery level performance.</p> <table border="1" data-bbox="1039 1274 2016 1339"> <tr> <td>Letter Grade</td> <td>Number of student</td> </tr> <tr> <td>A</td> <td>2</td> </tr> </table>	Letter Grade	Number of student	A	2
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A	2							

				<table border="1"> <tr> <td>B</td> <td>10</td> </tr> <tr> <td>C</td> <td>4</td> </tr> </table>	B	10	C	4				
B	10											
C	4											
2. Identify the purpose and probe the input and output of a 4 bit storage register.	Interpret schematics diagrams and waveforms.	D	2,3,4	<p>The SLO was assess using hands-on troubleshooting and written quiz and examination.</p> <p>Students need more time in hands-on and other practical procedure to reach mastery level performance.</p> <table border="1"> <thead> <tr> <th>Letter Grade</th> <th>Number of student</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>2</td> </tr> <tr> <td>B</td> <td>11</td> </tr> <tr> <td>C</td> <td>3</td> </tr> </tbody> </table>	Letter Grade	Number of student	A	2	B	11	C	3
Letter Grade	Number of student											
A	2											
B	11											
C	3											
3. Identify and describe the function and probe the input and output of a 4 bit shift register.	Interpret schematics diagrams and waveforms.	M	2,3,4	<p>The SLO was assess using hands-on troubleshooting and written quiz and examination.</p> <p>Students need more time in hands-on and other practical procedure to reach mastery level performance.</p> <table border="1"> <thead> <tr> <th>Letter Grade</th> <th>Number of student</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>3</td> </tr> <tr> <td>B</td> <td>9</td> </tr> <tr> <td>C</td> <td>4</td> </tr> </tbody> </table>	Letter Grade	Number of student	A	3	B	9	C	4
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<p>4: Identify and describe the function and probe the input and output of an 8 bit shift register.</p>	<p>Interpret schematics diagrams and waveforms.</p>	<p>M</p>	<p>2,3,4</p>	<p>The SLO was assess using hands-on troubleshooting and written quiz and examination.</p> <p>Students need more time in hands-on and other practical procedure to reach mastery level performance.</p> <table border="1" data-bbox="1039 532 2024 686"> <thead> <tr> <th>Letter Grade</th> <th>Number of student</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>2</td> </tr> <tr> <td>B</td> <td>10</td> </tr> <tr> <td>C</td> <td>4</td> </tr> </tbody> </table>	Letter Grade	Number of student	A	2	B	10	C	4
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<p>5. Describe the normal operation and the characteristics of a 64 bit memory circuit</p>	<p>Interpret schematics diagrams and waveforms.</p>	<p>M</p>	<p>2,3,4</p>	<p>The SLO was assess using hands-on troubleshooting and written quiz and examination.</p> <p>Students need more time in hands-on and other practical procedure to reach mastery level performance.</p> <table border="1" data-bbox="1039 1053 2024 1208"> <thead> <tr> <th>Letter Grade</th> <th>Number of student</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>2</td> </tr> <tr> <td>B</td> <td>10</td> </tr> <tr> <td>C</td> <td>4</td> </tr> </tbody> </table>	Letter Grade	Number of student	A	2	B	10	C	4
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<p>6. Describe how counting circuit perform arithmetic functions.</p>	<p>Interpret schematics diagrams and waveforms.</p>	<p>M</p>	<p>2,3,4</p>	<p>The SLO was assess using hands-on troubleshooting and written quiz and examination.</p>								

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7. Recognize the normal operation of a ripple counter circuit.	Interpret schematics diagrams and waveforms.	M	2,3,4	<p>The SLO was assess using hands-on troubleshooting and written quiz and examination.</p> <p>Students need more time in hands-on and other practical procedure to reach mastery level performance.</p> <table border="1"> <thead> <tr> <th>Letter Grade</th> <th>Number of student</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>2</td> </tr> <tr> <td>B</td> <td>10</td> </tr> <tr> <td>C</td> <td>4</td> </tr> </tbody> </table>	Letter Grade	Number of student	A	2	B	10	C	4
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8. Describe the purpose of an up counter circuit.	Interpret schematics diagrams and waveforms.	M	2,3,4	<p>The SLO was assess using hands-on troubleshooting and written quiz and examination.</p> <p>Students need more time in hands-on and other practical procedure to reach mastery level performance.</p> <table border="1"> <thead> <tr> <th>Letter Grade</th> <th>Number of student</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>3</td> </tr> </tbody> </table>	Letter Grade	Number of student	A	3				
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9. describe the purpose of a down counter circuit.	Interpret schematics diagrams and waveforms.	M	2,3,4	<p>The SLO was assess using hands-on troubleshooting and written quiz and examination.</p> <p>Students need more time in hands-on and other practical procedure to reach mastery level performance.</p> <table border="1"> <thead> <tr> <th>Letter Grade</th> <th>Number of student</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>2</td> </tr> <tr> <td>B</td> <td>10</td> </tr> <tr> <td>C</td> <td>3</td> </tr> <tr> <td>F</td> <td>1</td> </tr> </tbody> </table>	Letter Grade	Number of student	A	2	B	10	C	3	F	1
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10. Describe the function and the operating characteristics of a 4 bit adder.	Interpret schematics diagrams and waveforms.	M	2,3,4	<p>The SLO was assess using hands-on troubleshooting and written quiz and examination.</p> <p>Students need more time in hands-on and other practical procedure to reach mastery level performance.</p> <table border="1"> <thead> <tr> <th>Letter Grade</th> <th>Number of student</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>3</td> </tr> <tr> <td>B</td> <td>9</td> </tr> <tr> <td>C</td> <td>4</td> </tr> </tbody> </table>	Letter Grade	Number of student	A	3	B	9	C	4		
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11. Describe the normal operation of 4 bit subtractor	Interpret schematics diagrams and waveforms.	M	2,3,4	<p>The SLO was assess using hands-on troubleshooting and written quiz and examination.</p> <p>Students need more time in hands-on and other practical procedure to reach mastery level performance.</p> <table border="1"> <thead> <tr> <th>Letter Grade</th> <th>Number of student</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>2</td> </tr> <tr> <td>B</td> <td>9</td> </tr> <tr> <td>C</td> <td>4</td> </tr> <tr> <td>F</td> <td>1</td> </tr> </tbody> </table>	Letter Grade	Number of student	A	2	B	9	C	4	F	1
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12. Explain the basic principles of conversion and data circuits.	Interpret schematics diagrams and waveforms.	M	2,3,4	<p>The SLO was assess using hands-on troubleshooting and written quiz and examination.</p> <p>Students need more time in hands-on and other practical procedure to reach mastery level performance.</p> <table border="1"> <thead> <tr> <th>Letter Grade</th> <th>Number of student</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>2</td> </tr> <tr> <td>B</td> <td>10</td> </tr> <tr> <td>C</td> <td>3</td> </tr> <tr> <td>F</td> <td>1</td> </tr> </tbody> </table>	Letter Grade	Number of student	A	2	B	10	C	3	F	1
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13. Identify the purpose of D/A conversion circuit and its operating characteristic	Interpret schematics diagrams and	M	2,3,4	<p>The SLO was assess using hands-on troubleshooting and written quiz and examination.</p>										

	waveforms.			<p>Students need more time in hands-on and other practical procedure to reach mastery level performance.</p> <table border="1"> <thead> <tr> <th>Letter Grade</th> <th>Number of student</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>2</td> </tr> <tr> <td>B</td> <td>8</td> </tr> <tr> <td>C</td> <td>5</td> </tr> <tr> <td>F</td> <td>1</td> </tr> </tbody> </table>	Letter Grade	Number of student	A	2	B	8	C	5	F	1
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14. Identify the purpose and describe the basic operation of a data selector circuit and measure its output signals.	Interpret schematics diagrams and waveforms.	M	2,3,4	<p>The SLO was assess using hands-on troubleshooting and written quiz and examination.</p> <p>Students need more time in hands-on and other practical procedure to reach mastery level performance.</p> <table border="1"> <thead> <tr> <th>Letter Grade</th> <th>Number of student</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>2</td> </tr> <tr> <td>B</td> <td>8</td> </tr> <tr> <td>C</td> <td>5</td> </tr> <tr> <td>F</td> <td>1</td> </tr> </tbody> </table>	Letter Grade	Number of student	A	2	B	8	C	5	F	1
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15. Describe the function of a data distribution circuit and its operating characteristics and measure its output signals.	Interpret schematics diagrams and waveforms.	M	2,3,4	<p>The SLO was assess using hands-on troubleshooting and written quiz and examination.</p> <p>Students need more time in hands-on and other practical procedure to reach mastery level performance.</p>										

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**Additional observations:** Needs more NIDA cards for digital set to accommodate growing number of students in electronics and telecommunication program..

**Special comments:** 94% got a grade of C or better: 2 students got A, 9 got B, 4 got C and 1 got F for not attending the class after the mid-term exam.

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

Signature: \_\_\_\_\_

Name typed, position

Date: \_\_\_\_\_