

# Assessment: Course Four Column

## Courses (CTE) - Electrical Systems Technology

### ELM 123:Solid State

<i>Course Outcomes</i>	<i>Assessment Measures</i>	<i>Results</i>	<i>Actions</i>
<p><b>Basic Solid State theory</b> - Understand and apply basic Solid State theory. <b>Course Outcome Status:</b> Active <b>Next Assessment:</b> 2023-2024</p>	<p><b>Homework</b> - Students are tested on material that was presented in a lecture format, as well as through their own self-study and reading. <b>Criterion:</b> Successful completion of homework along with a grade of 70% on tests and quizzes.</p>	<p><b>Reporting Period:</b> 2018-2019 <b>Criterion Met:</b> Yes All students were successful in achieving this goal. Some were not successful on their first try, but were given a chance to study the material and retake quizzes or exams for partial credit to bring their grade to a successful level.</p> <p>Results Analysis: Students were overall receptive of the material and put in the time and effort to gain a broad understanding of the required concepts. (09/05/2019)</p>	
<p><b>Silicon and germanium diodes</b> - Recognize the forward bias differences for silicon and germanium diodes. <b>Course Outcome Status:</b> Active <b>Next Assessment:</b> 2023-2024</p>	<p><b>Assignment - Lab</b> - After covering classroom material on this subject, students were given drawn diagrams to recognize forward or reverse bias based upon diode orientation. Students were also required to use meters to differentiate between forward and reverse bias. <b>Criterion:</b> Complete labs and assignments with a grade of 80%</p>	<p><b>Reporting Period:</b> 2018-2019 <b>Criterion Met:</b> Yes Students were able to achieve these goals by using meter experience from past classes in our program. The students also had great success on recognizing the differences on drawn diagrams.</p> <p>Results Analysis: Very satisfied with how students performed on this assessment measure. All students were able to pass the assignments on their first try with little instructor input. (09/05/2019)</p>	
<p><b>Rectifier circuits for power supplies and other AC to DC conversion</b> - Build various rectifier circuits for power supplies and other AC to DC conversion</p>	<p><b>Assignment - Lab</b> - Use lab equipment and computer software to construct and simulate rectifier circuits. <b>Criterion:</b> Complete labs, and test</p>	<p><b>Reporting Period:</b> 2018-2019 <b>Criterion Met:</b> Yes The students were able to use software from previous classes to first simulate the activity, then take their knowledge to the lab and physically construct the circuits</p>	

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<p><b>Course Outcome Status:</b> Active  <b>Next Assessment:</b> 2023-2024</p>	<p>labs for instructor to oversee and critique. Graded on function as well as quality.</p>	<p>with real components, and test.</p> <p>Results Analysis: Satisfactorily completed all labs and simulations with instructor assistance, as needed. (09/05/2019)</p>	
<p><b>Three and four layer semiconductor devices</b> - Identify and explain the use of three and four layer semiconductor devices.  <b>Course Outcome Status:</b> Active  <b>Next Assessment:</b> 2023-2024</p>	<p><b>Homework</b> - Students are tested on material that was presented in a lecture format, as well as through their own self-study and reading.  <b>Criterion:</b> Successful completion of homework along with a grade of 70% on tests and quizzes.</p>	<p><b>Reporting Period:</b> 2018-2019  <b>Criterion Met:</b> Yes  All students were successful in achieving this goal. Some were not successful on their first try, but were given a chance to study the material and retake quizzes or exams for partial credit to bring their grade to a successful level.</p> <p>Results Analysis: Students were overall receptive of the material and put in the time and effort to gain a broad understanding of the required concepts. (09/05/2019)</p>	
<p><b>NPN, and PNP transistors in uses such as: amplification, switching, isolation</b> - Identify NPN, and PNP transistors in uses such as: amplification, switching, isolation.  <b>Course Outcome Status:</b> Active  <b>Next Assessment:</b> 2023-2024</p>	<p><b>Homework</b> - Students are tested on material that was presented in a lecture format, as well as through their own self-study and reading.  <b>Criterion:</b> Successful completion of homework along with a grade of 70% on tests and quizzes.</p>	<p><b>Reporting Period:</b> 2018-2019  <b>Criterion Met:</b> Yes  All students were successful in achieving this goal. Some were not successful on their first try, but were given a chance to study the material and retake quizzes or exams for partial credit to bring their grade to a successful level. Some students struggled more than they should have on this concept.</p> <p>Results Analysis: Students were overall receptive of the material and put in the time and effort to gain a broad understanding of the required concepts. (09/05/2019)</p>	<p><b>Action:</b> Spend more time one on one with struggling students to make sure they understand the required concepts. (09/05/2019)</p>
<p><b>Filter circuits for signal ripple reduction, and noise cancellation</b> - Work with filter circuits for signal ripple reduction, and noise cancellation.  <b>Course Outcome Status:</b> Active  <b>Next Assessment:</b> 2023-2024</p>	<p><b>Homework</b> - Students are tested on material that was presented in a lecture format, as well as through their own self-study and reading.  <b>Criterion:</b> Successful completion of homework along with a grade of 70% on tests and quizzes.</p>	<p><b>Reporting Period:</b> 2018-2019  <b>Criterion Met:</b> Yes  All students were successful in achieving this goal. Some were not successful on their first try, but were given a chance to study the material and retake quizzes or exams for partial credit to bring their grade to a successful level. Some students struggled more than they should have on this concept.</p> <p>Results Analysis: Students were overall receptive of the material and put in the time and effort to gain a broad</p>	<p><b>Action:</b> This class needs to be combined with Digital Concepts to make the flow more seamless. (09/05/2019)</p>

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understanding of the required concepts. (09/05/2019)