AC Circuits
CETT 1405 - 63400
Spring Semester
January 20th – May 12th

Professor: Tom Green
Email: tgg6570@dcccd.edu
Office Phone Number: 214-860-8660
Office Number: W227
Office Hours:
   Monday and Wednesday, 7:00-8:00
   Tuesday and Thursday, 7:00-8:00, 10:45-11:00
Meeting Days & Time: INET
Room Number: INET
Credit Hours: 4
Certification Date: February 2nd
Withdrawal Date: April 14th

Division: BCMT        Office Hours: 8:00 AM – 5:00 PM
Office Phone: 214-860-8619
Office Location: W210

Course Description:
A study of the fundamentals of direct current including Ohm's law, Kirchhoff's laws and circuit analysis techniques.

Course Pre-requisites: DC Circuits

WCEM Statement:
This is a WCEM course.

Course Materials/Supplies Needed:
Textbook - *Electronics Fundamentals - Circuits, Devices and Applications*, Floyd, (7th Ed. or later), ISBN: 9780132197090, Prentice Hall. You can purchase the book through the MVC bookstore or you can buy it online at:

http://shop.efollett.com/htmlroot/textbooks/SelectByCourse_02.jsp

If you have a problem obtaining the textbook please let the professor know as soon as possible.
Student Learning Outcomes:

After successful completion of this course the student should be able to:

1. Convert between RMS, Peak and Peak-to-Peak voltage and current values.
2. Given time, calculate frequency, or given frequency, calculate time.
3. Given a RC time constant circuit, predict instantaneous voltage and current values and voltage and current values after the capacitor has charged and discharged.
4. Identify every control on a typical dual trace oscilloscope and predict the effect of changing any control on an observed waveform.
5. Plot phasor diagrams for resistive and capacitive; resistive and inductive; resistive, capacitive and inductive; and series and parallel resonant circuits.

Evaluation Procedures:

1. Final Grade: 50% Major online Test, 5% Online Quizzes, 45% Labs.

2. All test and quiz questions will come from textbook.

3. One major online test will be given. You must complete the major online test on or before the last day of class. If you want to take the test before the scheduled date, please send the professor an email and it will be setup for you.
   A. The major online test will be multiple choice and given over the Internet.
   B. You can take the major online test TWO times. If you successfully complete the test the first time, you do not need permission to take the test the second time. If you take the test for the second time, the higher of your two scores will be the recorded score. Your major online test score will be displayed upon completion of the test.
   C. If for some reason the testing system goes down while you are taking the major online test you must send the instructional manager an email so your test can be reset. Do not put off taking the final online test to the last class day. If for some reason the testing system fails there may not be enough time to reset your test. The instructor will not reset the final online test after 9:00 PM on the last scheduled day for the final online test.
   D. The major online test is timed. If you go over the set time limit the Blackboard testing system will force a completion. The score you have at the cutoff time will be your score for the test. For example, if the time limit is set at 90 minutes and you have completed only 50 questions out of 100 (and you have answered all 50 questions correctly) you final grade for the test will be 50%. If you have a reading disability such as dyslexia, you may get a written excuse from a Mountain View counselor to waive the time limits.
   E. Quizzes are not timed and you can take them as many times as you like. The last time you take a quiz will be the recorded score. It is highly recommended that you take the quizzes as many times as you can. Many of the quiz questions will be on the final online test.
   F. You can use your textbooks and notes to take tests and quizzes.
   G. Because of security reasons, tests and quizzes will not be reviewed. Please do not ask the instructor to review test or quiz questions, he will not respond.
4. The major online test will be curved according to class average. If the class average for a particular test is below 75%, points will be added to everyone's grade to make the class average 75%. Since some students put off taking the test to the end semester, the class test average will not be calculated until all students have completed the major online test.

5. Quizzes work like tests except they are not timed and you can take them as many times as you like. You should receive a quiz score immediately after submission. You can check your quiz scores on Blackboard. You should take the quizzes as many times as you can. The better you do on the quizzes the better you will do on the final online test. Do not put off taking quizzes to the very end of the semester.

6. Labs and lab instructions are listed on the Blackboard Labs link. You can view your lab, quizzes, and final online test score by clicking on the Blackboard Grade Link.

7. The major online test must be completed on or before the last scheduled day of class. Quizzes and labs must be completed on or before last scheduled day of class.

**Instructor Attendance Policy:**

Students must begin attendance in all classes of enrollment. No exceptions. Financial Aid will not be granted to students who have been certified as not attending by the certification date.

**Grading Scale:**

If your final average is:

- 90-100=A
- 80-89=B
- 70-79=C
- 60-69=D
- Below 60=F

Calculating your final grade:

To calculate your final grade multiply the weight by the average grade for each area and add the results. Let's say your final grades and their weights are:

- Final Online Test Average = 80 x .5(50%) = 40
- Quiz Average = 85 x .05(5%) = 4.25
- Lab Average = 90 x .45(45%) = 40.5

Final Grade = 40 + 4.25 + 40.5 = 84.75
Certification Procedures:

To meet the certification requirements for the course you must take the Orientation Quiz on or before the certification date, 2/2/2016.

The withdraw date for this class is 4/14/2016.

Academic Dishonesty:

Students that caught plagiarizing an assignment will be subject to an “F” in the course and possible expulsion from the college.

Academic honesty is expected, and integrity is valued in the Dallas County Community Colleges. Scholastic dishonesty is a violation of the Code of Student Conduct. Scholastic dishonesty includes, but is not limited to, cheating on a test, plagiarism, and collusion. As a college student, you are considered a responsible adult. Your enrollment indicates acceptance of the DCCCD Code of Student Conduct published in the DCCCC Catalog. More information is available at https://www1.dcccd.edu/catalog/ss/code.cfm.

Institution Policies: Please visit http://www.mountainviewcollege.edu/Academics/Documents/Institutional%20Policies.pdf for a complete list of institutional policies (Stop Before You Drop; Withdrawal Policy; Repeating a Course; Financial Aid; Academic Dishonesty; Americans with Disabilities Act Statement; Religious Holidays; and Campus Emergency Operation Plan and Contingency Plan).

Course Calendar

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<tr>
<th>Chapter</th>
<th>Topic</th>
<th>Dates</th>
<th>Quiz #</th>
<th>Lab #</th>
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<tr>
<td>8</td>
<td>Introduction to Alternating Current and Voltage</td>
<td>Week 1-2</td>
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<tr>
<td>9</td>
<td>Capacitors</td>
<td>Week 3-4</td>
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<td>10</td>
<td>RC Circuits</td>
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<td>RL Circuits</td>
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<tr>
<td>13</td>
<td>RLC Circuits and Resonance</td>
<td>Week 11-12</td>
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<td>14</td>
<td>Transformers</td>
<td>Week 13-14</td>
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<td>No Lab</td>
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<td>15</td>
<td>Time Response and Reactive Circuits</td>
<td>Week 15-16</td>
<td>No Quiz</td>
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