

Multi-State Advanced Manufacturing Consortium

US DOL SPONSORED TAACCCT GRANT: TC23767
PRIMARY DEVELOPER: Jim Blair – Henry Ford College

 RELEASE DATE
 2/22/2016

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Basic Electricity – Unit 11: Capacitance

Study Guide

In order to successfully complete this unit, complete the following tasks.

1. Review the course structure.

2. Watch https://www.youtube.com/watch?v=TRi5WTntirY

Title: Capacitor Training by Packard

Author: PackardIncorporated

3. Read the text *Series and Parallel Capacitors* found at: http://www.allaboutcircuits.com/textbook/direct-current/chpt-13/series-and-parallel-capacitors

4. Watch https://www.youtube.com/watch?v=wkghgjEF7TE

Title: Combination Capacitors: Parallel and Series Capacitors

Author: Brian Swarthout

5. Read the text *Electric Fields and Capacitance* found at: http://www.allaboutcircuits.com/textbook/direct-current/chpt-13/electric-fields-capacitance

6. Watch https://www.youtube.com/watch?v=NInt1Ss3vQ4

Title: Capacitors, DC and AC Current **Author**: AllAmericanFiveRadio

7. Read "What does the Voltage Rating on a Capacitor Mean?" found at: http://www.learningaboutelectronics.com/Articles/What-does-the-voltage-rating-on-a-capacitor-mean

8. Watch https://www.youtube.com/watch?v=Noy4YAjoJE4

Title: What does my Capacitor Voltage Rating Mean? 370 vs 440 VAC

Author: North America HVAC

9. Read "Capacitor Characteristics/Specifications- Explained" found at: http://www.learningaboutelectronics.com/Articles/Capacitor-characterisitics-and-specifications.php







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10. Watch https://www.youtube.com/watch?v=X20dM6Ge8vQ

Title: MIT Physics Demos: Exploding Wire & Ohm's Law

Author: MITK12Videos

- 11. Complete Homework Assignment #1 on Capacitor Circuits (PDF) and submit to the lab instructor/course instructor.
- 12. Complete Lab #1 DC RC Circuit Lab (PDF) and submit to the lab instructor/course instructor
- 13. Complete Lab #2 RC Filter Lab (PDF and submit to the lab instructor/course instructor
- 14. Complete the Capacitor Test (PDF) and submit to the course instructor.
- 15. Complete the RC Test (PDF) and submit to the course instructor.







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