Cape Cod Community College AMTS

Curriculum Subject Guide for AMT 101 General Curriculum, Subject Items 1 - 6

Part 147, Appendix B, Subject A – Basic Electricity

Subject: Basic Electricity

Item 1. Calculate and measure capacitance and inductance (Level 2) T - 2.0 Hrs/L - 2.0 HrsItem 2. Calculate and measure electrical power (Level 2) T - 1.0 Hrs/L - 1.5 HrsItem 3. Measure voltage, current, resistance and continuity (Level 3) T - 5.0 Hrs/L - 3.5 Hrs Item 4. Determine the relationship of voltage, current and resistance in electrical circuits (Level 3) T - 13 Hrs/L - 12.5 HrsItem 5. Read and interpret aircraft electrical circuit diagrams, including solid state devices and logic functions (Level 3) T - 3 Hrs/L - 3.5 Hrs Item 6. Inspect and service batteries (Level 3)

T - 5.0 Hrs / L - 4.5 Hrs

Classroom	time:	29	hours

Lab or shop time:	27.5 hours
-------------------	------------

Test time:	3.5 hours
------------	-----------

Total Time:	60 hours
-------------	----------

Teaching Level 2 and 3

Project 1A & 1B	Project 4	Practical Test 2
Item 1 – 2 Hrs	Item 6 – 4.5 Hrs	1.5 Hrs
Item 2 – 1.5 Hrs	Theory Test 1	Practical Test 3
Project 2	0.25 Hrs	0.5 Hrs
Item 3 – 3.5 Hrs	Theory Test 2	Practical Test 4
Item 4 – 12.5 Hrs	0.25 Hrs	0.5 Hrs
Project 3	Practical Test 1	
Item 5 – 3.5 Hrs	0.5 Hrs	

Prerequisite(s)

 (1) AMT 115 Mathematics Module
Course Interruptions: All interruptions or changes in course sequence will be in accordance with the Order of Instruction policy, located in Cape Cod Community College's Operations Manual, page 17.

Items 1-5:

Student Performance Goal(s)

<u>Given</u>: 14 CFR Federal Aviation Regulations for Aviation Maintenance Technicians, Aviation Maintenance Technician Handbook – Airframe, Volume 1 (FAA-H-8083-30) Chapter 10. College computer work station with NIDA Corporation Model 130E Trainer

Performance: Complete the following courses in sequence with instructor guidance.

- 1. BE3011T DC Circuits (Core)
- 2. BE3011E DC Circuits
- 3. BE3021 AC Circuits

<u>Standard</u>: The student will identify and understand the Basic Electricity lesson and score a passing grade on course quiz.

Item 6:

Student Performance Goal(s)

<u>Given</u>: 14 CFR Federal Aviation Regulations for Aviation Maintenance Technicians, Aviation Maintenance Technician Handbook – Airframe, Volume 1 (FAA-H-8083-30) Chapter 10. College computer work station with NIDA Corporation Model 130E Trainer

Performance: Complete the following courses in sequence with instructor guidance

1. AM1003 Aircraft Electrical

<u>Standard</u>: The student will identify and understand the Basic Electricity lesson and score a passing grade on course quiz.

<u>Given</u>: 14 CFR Federal Aviation Regulations for Aviation Maintenance Technicians, Aviation Maintenance Technician Handbook – Airframe, Volume 1 (FAA-H-8083-30) Chapter 10. Avotek Battery and Component Legend Illustration, Nickel Cadmium 24-volt

Battery (PN 2376-5), Lead Acid 24-volt battery G-35, CAT 40A Battery Charger model CBC40EW and Black and Decker 15A Battery Charger Model BC15BD, Standard Voltmeter and GILL TCT-1000 12V/24V CAPACITY TESTER.

Performance: Perform the following service procedures on both batteries

1. Perform case inspection, check state of charge, check electrolyte level and replenish, prepare and connect batteries for charging. Perform high rate discharge test on lead acid battery and describe how to prepare a dry-charged lead acid battery for service.

Standard: Perform all procedures without error in accordance with14 CFR Federal Aviation

Regulations for Aviation Maintenance Technicians, Aviation Maintenance Technician Handbook – Airframe, Volume 1 (FAA-H-8083-30) Chapter Ch10. The student will identify and understand the Basic Electricity lesson and score a passing grade on course quiz

Given: Cessna Model 402C Aircraft and service manual D2527-10-13 Chapter 24.

<u>Performance</u>: Remove aircraft battery and spilled electrolyte, treat adjacent areas, inspect and clean terminal connections then reinstall battery.

<u>Standard</u>: Accomplished in accordance with manual procedures and return to service standard. The student will identify and understand the Basic Electricity lesson and score a passing grade on course quiz.

This workforce product was funded by a grant awarded by the U.S. Department of Labor's Employment and Training Administration. The product was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The U.S. Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership.

This work is licensed under a Creative Commons Attribution 4.0 International License.

