

Cape Cod Community College AMTS

Curriculum Subject Guide for AMT 119 General Curriculum, Subject Item 30

Part 147, Appendix B, Subject J – Basic Physics

Subject: Basic Physics

Item 30. Use and understand the principles of simple machines; sound fluid and heat dynamics, basic aerodynamics, aircraft structure, and theory of flight. (Level 2)

T – 6.25 Hrs / L – 3.0 Hrs

Classroom time: 6.25 hours

Lab or shop time: 3 hours

Test time: 0.75 hours

Total Time: 10 hours

Teaching Level 2

Project 1
Item 30 – 1 Hrs

Project 3
Item 30 – 1 Hrs

Practical Test 1
0.5 Hrs

Project 2
Item 30 – 1 Hrs

Theory Test 1
0.25 Hrs

Prerequisite(s)

(1) None

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.

Item 30:

Student Performance Goal(s)

(1) Given: 14 CFR Federal Aviation Regulations for Aviation Maintenance Technicians, Aviation Maintenance Technician Handbook – General, Volume 1 (FAA-H-8083-30), Chapter 3, NIDA Corp Course(s) 7121-114-250, 7121-114-370, 7121-122-730, 7121-122-130, 7121-122-160, 7121-122-190

Performance: Complete the Computer Assisted Instruction using FAA-8083-30 as reference, then explain the following concepts:

- Relationship of temperature and heat
- Relationships between pressure, temperature and volume of an air mass
- Factors affecting air pressure on an airfoil
- Factors affecting engine power output
- Relationship between pressure area and force
- The inclined plane, the lever and pulley

Standard: Complete the Computer Assisted training test to 100% accuracy and explain concepts as listed in Reference document FAA-8083-30 CH 3

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