BROWARD COMMUNITY COLLEGE
COURSE OUTLINE

LAST REVIEW: 2008-2009 *(i.e. 2003-2004)*
NEXT REVIEW: 2013-2014 *(i.e. 2008-2009)*
STATUS: A *(A, I, D)*

COURSE TITLE: Engine Fuel Systems

COMMON COURSE NUMBER: AMT 2450

CREDIT HOURS: 1

CLOCK HOURS: 21 *(Voc. Course ONLY)*

CONTACT HOUR BREAKDOWN *(per 16 week term)*

Lecture: **8.5** Lab: **12.5**

Clinic: Other:

PREREQISITE(S): None

COREQUISITE(S): None

PRE/COREQUISITE(S): None

COURSE DESCRIPTION *(750 characters, maximum)*: The student is provided with the knowledge and skills needed to maintain fuel system components. The student will be able to inspect, check, maintain, and repair engine fuel system components. Student fee charged.

General Education Requirements – Associate of Arts Degree (AA), meets Area(s): Area
General Education Requirements – Associate in Science Degree (AS), meets Area(s): Area
General Education Requirements – Associate in Applied Science Degree (AAS), meets Area(s): Area

UNIT TITLES

1. Components
2. Fuel Systems

ASSESSMENT:

Please provide a brief description (250 characters maximum) that details how students will be assessed on the course outcomes.

1. **Quizzes, Test, and/or Final Exam (cumulative/comprehensive);**
2. **Selected faculty may assess homework, projects, class participation/attendance, and/or extra credit projects.**

Upon successful completion of this course, the students should be able to inspect, check, maintain and repair engine fuel system components.

****** Complete the following only if course is seeking general education status ******

GENERAL EDUCATION Competencies and Skills *:

Please highlight in green font all Competencies/Skills from the list below that apply to this course. In the box to the right of the Competency/Skill, enter all specific learning outcome numbers (i.e. 1.1, 2.7, 5.12) that apply.

1. Read with critical comprehension	
2. Speak and listen effectively	
3. Speak and listen effectively	
4. Think creatively, logically, critically, and reflectively (analyze, synthesize, apply, and evaluate)	
5. **Demonstrate and apply literacy in its various forms:** *(highlight in green ALL that apply)* (1. technological, 2. informational, 3. mathematical, 4. scientific, 5. cultural, 6. historical, 7. aesthetic and/or 8. environmental)	
6. Apply problem solving techniques to real-world experiences	
7. Apply methods of scientific inquiry	
8. Demonstrate an understanding of the physical and biological environment and how it is impacted by human beings	
9. Demonstrate an understanding of and appreciation for human diversities and commonalities	
10. Collaborate with others to achieve common goals.	
11. Research, synthesize and produce original work	
12. Practice ethical behavior	
13. Demonstrate self-direction and self motivation	
14. Assume responsibility for and understand the impact of personal behaviors on self and society	
15. Contribute to the welfare of the community	

* *General Education Competencies and Skills endorsed by '05-'06 General Education Task Force*

Common Course Number: AMT 2450

UNITS

Unit 1 Components

General Outcome:

1.0 The student shall: The students should be able to repair engine fuel system components.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

1.1 Explain the types of engine-driven fuel pumps generally used with large reciprocating engines.

1.2 Explain the purpose and operation of a fuel pump bypass valve.

1.3 Explain the purpose and operation of fuel boost pumps.

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Unit 2 Fuel Systems

General Outcome:

2.0 The student shall: The students should be able to inspect, check, service, troubleshoot and repair engine fuel systems.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

2.1 Define the causes of fuel pressure fluctuation.

2.2 Discuss the characteristics of centrifugal-type fuel boost pumps.

2.3 Explain the fuel system requirements for aircraft certificated in the "standard" classification.

2.4 Discuss the usual types of aircraft fuel system contamination.

2.5 Explain the purpose and requirements for strainers in fuel tank outlets.

2.6 Inspect aircraft fuel tank sumps and fuel strainers.

2.7 Adjust engine-driven fuel pump output pressure.

2.8 Discuss the location and operation of main fuel strainers.

2.9 Explain the causes and effects of fuel system vapor lock.

2.10 Explain the location and operation of fuel valves.