



# 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: Ice, Rain & Fire Protection**

**COMMON COURSE NUMBER: AMT 0285**

**CREDIT HOURS: 1**

**CONTACT HOUR BREAKDOWN**

*(per 16 week term)*

**CLOCK HOURS: 30**

*(Voc. Course ONLY)*

**Lecture: 10**

**Lab: 20**

**Clinic:**

**Other:**

**PREREQUISITE(S): None**

**COREQUISITE(S): None**

**PRE/COREQUISITE(S): None**

**COURSE DESCRIPTION** *(750 characters, maximum):* Introduces the student to the basics of ice and rain control as it relates to aircraft surfaces, propellers, windshields, and other components; Methods of ice prevention and ice elimination are taught; it provides the student with the knowledge and skills needed in the operation, inspection, checking, troubleshooting, and repair of airframe fire detecting and extinguishing systems. 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. Airframe Ice and Rain Control Systems
2. Smoke and Carbon Monoxide Detection Systems
3. Fire Detection and Extinguishing Systems



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## 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 manage ice and rain control systems and operate, inspect, check, troubleshoot, and repair airframe fire detecting and extinguishing systems.

**Common Course Number: AMT 0285**

## UNITS

### Unit 1 Airframe Ice and Rain Control Systems

#### General Outcome:

- 1.0 The student shall:** The students should be able to inspect, check, and troubleshoot, service, and repair airframe ice and rain control systems.

#### Specific Measurable Learning Outcomes:

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

- 1.1 Install de-icer boots.
- 1.2 Describe the operating principles of anti-icing systems that utilize heated air in the leading edges of airfoils and intake ducts.
- 1.3 Explain the operating principles of electrically operated anti-icing systems.
- 1.4 Protect de-icer boots from deterioration.



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## Unit 2 Smoke and Carbon Monoxide Detection Systems

### General Outcome:

**2.0 The student shall:** The students should be able to inspect, check, and service smoke and carbon monoxide detection systems.

### Specific Measurable Learning Outcomes:

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

- 2.1** Describe the operating principles of smoke and carbon monoxide detection system.



**Common Course Number: AMT 0285**

**Unit 3 Fire Detection and Extinguishing Systems**

**General Outcome:**

- 3.0 The student shall:** The students should be able to inspect, check, service, troubleshoot, and repair aircraft fire detection and extinguishing systems.

**Specific Measurable Learning Outcomes:**

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

- 3.1** Explain the type of fire-extinguishing agent most suitable for use with electrical fires.
- 3.2** Explain the fire-extinguishing agent normally used with built-in aircraft fire-extinguishing systems.
- 3.3** Check fire extinguisher container pressure.
- 3.4** Check continuity and resistance of the electrical circuit.
- 3.5** Determine the cause for the system failing to function.
- 3.6** Check fire warning sensors or detectors for open or short circuits.