



# 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: Cleaning & Corrosion Control**

**COMMON COURSE NUMBER: AMT 0060**

**CREDIT HOURS: 1**

**CONTACT HOUR BREAKDOWN**

*(per 16 week term)*

**CLOCK HOURS: 26.25**

*(Voc. Course ONLY)*

**Lecture: 12**

**Lab: 14.25**

**Clinic:**

**Other:**

**PREREQUISITE(S): None**

**COREQUISITE(S): None**

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

**COURSE DESCRIPTION** *(750 characters, maximum):* Provides experience in detecting, identifying, removal, and treatment of the various types of corrosion found on ferrous and non-ferrous metals. The course deals with the types of cleaners and methods of cleaning aircraft and aircraft 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. Cleaning Materials
2. Aircraft Cleaning and Corrosion Control



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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 detect, identify, remove, and treat various types of corrosion found on ferrous and non-ferrous metals.

\*\*\* 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. Write clearly and coherently	
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



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Common Course Number: AMT 0060

## UNITS

### Unit 1 Cleaning Materials

#### General Outcome:

- 1.0 The student shall:** The students should be able to identify and select cleaning materials.

#### Specific Measurable Learning Outcomes:

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

- 1.1 Explain the effect of caustic cleaning products on aluminum structures.
- 1.2 List the characteristics and use of chemical cleaners.
- 1.3 Clean aluminum and steel engine parts.
- 1.4 Describe the type cleaner for user on high-strength metals.
- 1.5 Describe the methods for cleaning turbine engine compressor blades.



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## COURSE OUTLINE

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### Unit 2 Aircraft Cleaning and Corrosion Control

#### General Outcome:

- 2.0 The student shall:** The students should be able to perform aircraft cleaning and corrosion control.

#### Specific Measurable Learning Outcomes:

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

- 2.1 Protect tires and other rubber products from the deteriorating effects of cleaning materials.
- 2.2 Explain the cause and corrective procedures for fretting corrosion.
- 2.3 Identify and control intergranular corrosion of heat-treated aluminum alloy.
- 2.4 Protect structure against dissimilar metal corrosion.
- 2.5 Prevent and remove rust.
- 2.6 Describe the effect of oily, dirty surfaces on the operation of high-performance aircraft.
- 2.7 Protect interior surfaces of closed steel and aluminum tubing against corrosion.
- 2.8 List the methods of protecting aluminum alloy parts against corrosion.
- 2.9 Clean and protect battery compartments and adjacent areas.
- 2.10 Remove corrosion products such as metal flakes, scale powder, and salt deposits from aluminum.
- 2.11 Clean corrosion-resistant parts by blast cleaning methods.
- 2.12 Use paints and similar organic coatings for corrosion protection purposes.