



BROWARD COMMUNITY COLLEGE COURSE OUTLINE

LAST REVIEW: 2007-2008

(i.e. 2003-2004)

NEXT REVIEW: 2012-2013

(i.e. 2008-2009)

STATUS: A

(A, I, D)

COURSE TITLE: Cleaning & Corrosion Control

COMMON COURSE NUMBER: AMT 1060

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 1060

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.



Common Course Number: AMT 1060

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.