



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: Fluid Lines & Fittings

COMMON COURSE NUMBER: AMT 0030

CREDIT HOURS: 1

CONTACT HOUR BREAKDOWN

(per 16 week term)

CLOCK HOURS: 26.25

Lecture: 10

Lab: 16.25

(Voc. Course ONLY)

Clinic:

Other:

PREREQUISITE(S): None

COREQUISITE(S): None

PRE/COREQUISITE(S): None

COURSE DESCRIPTION *(750 characters, maximum):* Prepares the student to fabricate and install rigid and flexible lines and fittings with regard to bends, tools, and lubricants. Provides training in the area of identification of materials, fittings, and routing of fluid lines; 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. Rigid and Flexible Fluid Lines and Fittings



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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 fabricate and install rigid and flexible lines and fittings with regard to bends, tools, and lubricants.

*** 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



BROWARD COMMUNITY COLLEGE

COURSE OUTLINE

Common Course Number: AMT 0030

UNITS

Unit 1 Rigid and Flexible Fluid Lines and Fittings

General Outcome:

- 1.0 The student shall:** The students should be able to fabricate and install rigid and flexible fluid lines and fittings.

Specific Measurable Learning Outcomes:

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

- 1.1 Fabricate single and double flare tubing.
- 1.2 Install Military Standard (MS) flareless fittings.
- 1.3 Explain the significance of the identification stripes that appear on aircraft hose.
- 1.4 Fabricate and install beaded tubing.
- 1.5 Use lubricants and sealants in the assemble of lines and fittings.
- 1.6 Identify flexible hydraulic lines.
- 1.7 Install hose clamps.
- 1.8 Determine the bend radii for rigid tubing.
- 1.9 Fabricate aluminum tubing using standard AN flared tube fittings.
- 1.10 Route fluid lines in entryways and passenger, crew, or baggage compartments.
- 1.11 Repair metal tube lines.
- 1.12 Route fluid lines adjacent to electrical power cables.
- 1.13 Install rigid tubing.
- 1.14 Select tube-flaring tools.
- 1.15 Identify AN fitting materials from color designators.
- 1.16 Explain the maximum reduction in original outside diameter allowed when bending aluminum alloy hydraulic lines.



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- 1.17 Discuss the procedure to follow if scratches are detected on an aluminum alloy tube.
- 1.18 List the storage requirements for hydraulic hose.
- 1.19 Install flexible hydraulic hose.
- 1.20 Describe the lubricant used when assembling oxygen fittings.