



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: Aircraft Instrument Systems

COMMON COURSE NUMBER: AMT 0230

CREDIT HOURS: 1

CONTACT HOUR BREAKDOWN

(per 16 week term)

CLOCK HOURS: 25

(Voc. Course ONLY)

Lecture: 10

Lab: 15

Clinic:

Other:

PREREQUISITE(S): None

COREQUISITE(S): None

PRE/COREQUISITE(S): None

COURSE DESCRIPTION *(750 characters, maximum):* Students will have knowledge of operation, installation, marking and interpretation of airframe instruments powered by or actuated by non-electrical means. They will be able to install, adjust, and calibrate these instruments in accordance with federal aviation agency and manufacturers' recommendations. This course will provide experience in inspection, checking, servicing, troubleshooting, and repair of aircraft instrument systems that are electrical in nature. 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. Heading, Speed, Attitude, Time, Temperature, Pressure, and Position Indication Systems
2. Instruments Installation



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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 install, inspect, check, service, troubleshoot, and repair electrical and non-electrical instruments.

**** 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



BROWARD COMMUNITY COLLEGE COURSE OUTLINE

Common Course Number: AMT 0230

UNITS

Unit 1 Heading, Speed, Attitude, Time, Temperature, Pressure and Position Indicating Systems

General Outcome:

- 1.0 The student shall:** The students should be able to inspect, check, service, troubleshoot and repair heading, speed, altitude, time, attitude, temperature, pressure and position indicating systems.

Specific Measurable Learning Outcomes:

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

- 1.1** Explain the procedure for "swinging" an aircraft magnetic compass.
- 1.2** Describe the methods used to test a static air system for leakage.
- 1.3** Explain the significance of various types of marks on the face of an instrument.
- 1.4** Describe the operating principles of a thermo-couple temperature-indicating circuit.
- 1.5** Explain the service requirements of instrument system filters.
- 1.6** Describe the effect of a ruptured or disconnected static pressure line located inside a pressurized cabin.



Common Course Number: AMT 0230

Unit 2 Instruments Installation

General Outcome:

2.0 The student shall: The students should be able to install instruments.

Specific Measurable Learning Outcomes:

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

- 2.1** Explain the installation and connection of shock-mounted vacuum instruments to their power system.
- 2.2** List the types of hardware used to install instruments.
- 2.3** Describe the application of operation markings to the glass face of an aircraft instrument.
- 2.4** Explain the protection of instruments during handling.
- 2.5** Describe the installation practices necessary to prevent damaging an instrument.
- 2.6** Describe the installation practices used in making hose or tubing connections to the instruments.