



BROWARD COMMUNITY COLLEGE COURSE OUTLINE

LAST REVIEW: 2004-2005 **NEXT REVIEW:** 2009-2010 **STATUS:** A

COURSE TITLE: Avionics Fundamentals

COMMON COURSE NUMBER: AVS 0090C

CREDIT HOURS: 3.75

CONTACT HOUR BREAKDOWN

(per 16 week term)

CLOCK HOURS: 180

(Voc. Course ONLY)

Lecture: 180

Lab:

Clinic:

Other:

PREREQUISITE(S): Airframe & Powerplant training, Electronics training, previous experience

COREQUISITE(S):

PRE/COREQUISITE(S):

COURSE DESCRIPTION: *(750 characters, maximum)*

The purpose of this program is to prepare students for employment radio mechanics (85514608) and as avionics technicians (823.281-010). The course content includes, but is not limited to, troubleshooting, repair and installation of airborne radio communications, radio navigation and radar equipment systems in accordance with regulatory and industry standards. Also included is instruction in basics of AM and FM transmitters and receivers and avionics equipment. Skills preparation for passing licensing/certification tests required by industry forms an integral part of the curriculum.

UNIT TITLES

1. Avionics Radio Station Regulations and Procedures
2. Communication systems
3. Appropriate Math Skills
4. Appropriate Understanding of Basic Science
5. Employability Skills
6. Understanding of Entrepreneurship



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UNITS

Unit 1 Avionics Radio Station Regulations and Procedures

General Outcome:

1.0 The student shall:

Specific Measurable Learning Outcomes:

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

- 1.1 Define repair station related regulatory and standardization agencies and their purposes.
- 1.2 Define repair station certification requirements.
- 1.3 Define requirements for certification of radio repairmen.
- 1.4 Practice proper station operation procedures.
- 1.5 Prepare repair station reports and documentation.



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Unit 2 Communication systems

General Outcome:

2.0 The student shall:

Specific Measurable Learning Outcomes:

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

- 2.1 Write logical and understandable statements, or phrases, to accurately fill out forms/invoices commonly used in business and industry.
- 2.2 Read and understand graphs, charts, diagrams and tables commonly used in this industry/occupation area.
- 2.3 Read and follow written and oral instructions.
- 2.4 Answer and ask questions coherently and concisely.
- 2.5 Read critically by recognizing assumptions and implications and by evaluating ideas.
- 2.6 Demonstrate appropriate telephone/communication skills.



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Unit 3 Appropriate Math Skills

General Outcome:

3.0 The student shall:

Specific Measurable Learning Outcomes:

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

- 3.1** Solve problems for volume, weight, area, circumference and perimeter measurements for rectangles, squares, and cylinders.
- 3.2** Measure tolerance(s) on horizontal and vertical surfaces using millimeters, centimeters, feet and inches
- 3.3** Add, subtract, multiply and divide using fractions, decimals, and whole numbers.
- 3.4** Determine the correct purchase price, including sales tax for a materials list containing a minimum of six items.
- 3.5** Demonstrate an understanding of federal, state and local taxes and their computation.



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Unit 4 Appropriate Understanding of Basic Science

General Outcome:

4.0 The student shall:

Specific Measurable Learning Outcomes:

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

- 4.1 Understand molecular action as a result of temperature extremes, chemical reaction, and moisture content.
- 4.2 Draw conclusions or make inferences from data.
- 4.3 Identify health-related problems, which may result from exposure to work related chemicals and hazardous materials, and know the proper precautions required for handling such materials.
- 4.4 Understand pressure measurement in terms of P.S.I., inches of mercury, and K.P.A.



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Unit 5 Employability Skills

General Outcome:

5.0 The student shall:

Specific Measurable Learning Outcomes:

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

- 5.1 Conduct a job search.
- 5.2 Identify documents, which may be required when applying for a job interview.
- 5.3 Complete a job application form correctly.
- 5.4 Demonstrate competence in job interview techniques.
- 5.5 Identify or demonstrate appropriate responses to criticism from employer, supervisor or other employees.
- 5.6 Demonstrate knowledge of how to make appropriate job changes.
- 5.7 Demonstrate acceptable employee health habits.
- 5.8 Demonstrate knowledge of the "Right-to-Know Law" as recorded in (29 CFR-1910.1200).



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Unit 6 Understanding of Entrepreneurship

General Outcome:

6.0 The student shall:

Specific Measurable Learning Outcomes:

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

- 6.1 Identify characteristics of the American enterprise system.
- 6.2 Define inflation and deflation.
- 6.3 Illustrate the basic economic questions facing any society.
- 6.4 Determine the results of a change in demand or a change in supply.
- 6.5 List factors, which contribute to economic growth.
- 6.6 Identify characteristics of different types of business ownership.
- 6.7 Choose appropriate action in a situation requiring application of business ethics.