

July 2004

**Florida Department of Education
Division of Community Colleges
CURRICULUM FRAMEWORK**

Program Title: AVIATION OPERATIONS/ADMINISTRATION

Occupational Area: Industrial Education PSAV

CIP Number: 0649.010400 – A. A. S. Degree 1649.010400 – A. S. Degree

Grade Level: AAS/AS Degree

College Credits: – 64 hours

I. MAJOR CONCEPTS/CONTENT: The purpose of this program is to prepare students for initial employment as communication, transportation, utility management (15023004), air station managers (184.167-082) or provide supplemental training for persons previously or currently employed in these occupations. The content should include, but not be limited to, communication skills, leadership skills, human relations and workforce/workplace readiness skills, safe and efficient work practices, technical writing, records management, security, Federal Aviation Administration regulations, data processing, and air cargo transportation. This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the Aviation industry; planning, management, finance, technical and product skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

II. LABORATORY ACTIVITIES: Laboratory activities are an integral part of this program and provide instruction in the development and reinforcement of skills in human relations, facility management and air cargo and passenger management. Consideration should be given to offering a hands-on cooperative work experience during summer term for 5 credits. Operating knowledge with the following tools and equipment should be offered: Engineering/architecture scale, friction measurement equipment, compass, weather equipment, UNICOM/radio equipment, fuel equipment (mobile and fixed), fire extinguishing equipment, firearms, aircraft tug, personal protective equipment, aeronautical charts and adverse weather gear.

TOOLS AND EQUIPMENT

1. Goggles
2. Masks
3. Helmets
4. Hearing protectors
5. Air respirators
6. Protective clothing
7. Handheld Radios
8. Aeronautical Charts

III. SPECIAL NOTES:

1. SkillsUSA is the appropriate Career and Technical Student Organization (CTSO) for providing leadership training and for reinforcing specific career and technical skills. Career and Technical Student Organizations, when provided, shall be an integral part of the vocational instructional program, and the activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.064, FAC.

2. The American Association of Airport Executives, National Air Transportation Association (NATA), National Association of State Aviation Officials (NASAO), and Florida Department of Transportation –Aviation Office (FDOT) are additional organizations for providing leadership training and for reinforcing specific skills. Organizations for students such as those mentioned, when provided shall be an integral part of the vocational instructional program, and the activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.064, FAC.

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Adult students with disabilities must self-identify and request such services. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

3. SCANS Competencies: To accomplish the Secretary's Commission on Achieving Necessary Skills (SCANS) competencies, instructional strategies for this cluster must include methods that require students to identify, organize, and use resources appropriately; to work with each other cooperatively and productively; to acquire and use information; to understand social, organizational, and technological systems; and to work with a variety of tools and equipment. Instructional strategies must also incorporate methods to improve students' personal qualities and higher-order thinking skills.

4. The cooperative method of instruction may be utilized for this program. Whenever the cooperative method is offered, the following is required for each student: a training plan, signed by the student, teacher and employer which includes instructional objectives and a list of on-the-job and in-school learning experiences; a work station which reflects equipment, skills and tasks relevant to the occupation the student has chosen as a career goal. The student must receive compensation for work performed. To be transferable statewide between institutions, this program/course must have been reviewed, and a “transfer value” assigned the curriculum content by the appropriate Statewide Course Numbering System discipline committee. This does not preclude institutions from developing specific program or course articulation agreements with each other. The typical length of this program for the average achieving student is an Associate Degree (64 credits).

IV. INSTRUCTOR QUALIFICATIONS Specialty Instructor Qualifications:

Instructors teaching subjects that have certifications in the subject areas should be so certified and have at least three years of industry experience in the subject area. Instructors should have related industry experience (subject matter expertise) applicable to discipline being taught. For community colleges, the minimum should be in accordance with regional accreditation boards plus at least three years of industry experience in the discipline. All instructors should meet appropriate experience levels required for industry certification where such certifications exist (or knowledge levels should be reviewed by a school advisory board consisting of industry representatives, if available).

Academic Instructor Qualifications: A Masters Degree in the subject area is preferred. A Bachelor Degree with eighteen hours of course work in the subject area is a minimum.

AVIATION OPERATIONS/ADMINISTRATION

OCCUPATIONAL COMPLETION POINT DATA CODE A RAMP AGENT (144 hours) (9 credits)

OCCUPATIONAL COMPLETION POINT DATA CODE B CARGO AGENT (288 hours) (18 credits)

OCCUPATIONAL COMPLETION POINT DATA CODE C PASSENGER SERVICE AGENT (384 hours) (24 credits)

OCCUPATIONAL COMPLETION POINT DATA CODE D AVIATION OPERATIONS COORDINATOR (1024 hours) (64 credits)

V. INTENDED OUTCOMES: After successfully completing the program, the student will be able to:

OCCUPATIONAL COMPLETION POINT – DATA CODE - A

- 01.0 Demonstrate understanding of safe and efficient work practices.
- 02.0 Demonstrate understanding of federal and state security procedures.

OCCUPATIONAL COMPLETION POINT – DATA CODE - B

- 03.0 Demonstrate appropriate math skills.
- 04.0 Demonstrate understanding of Federal Aviation Administration, state and other governmental laws, rules and policies.
- 05.0 Demonstrate understanding of business law and management pertaining to aeronautics.

OCCUPATIONAL COMPLETION POINT – DATA CODE - C

- 06.0 Demonstrate understanding of personnel management.
- 07.0 Demonstrate understanding of aviation safety and accident prevention and investigation.
- 08.0 Demonstrate appropriate communication skills.

OCCUPATIONAL COMPLETION POINT – DATA CODE - D

- 09.0 Prepare, analyze and evaluate technical reports and data.
- 10.0 Maintain personnel records and budgets.
- 11.0 Evaluate facility maintenance problems and prescribe corrective action.
- 12.0 Demonstrate appropriate understanding of basic science.
- 13.0 Demonstrate workforce/workplace readiness skills.
- 14.0 Demonstrate an understanding of entrepreneurship.

VI. STUDENT PERFORMANCE STANDARDS

OCCUPATIONAL COMPLETION POINT – DATA CODE – A

01.0 DEMONSTRATE AN UNDERSTANDING OF SAFE AND EFFICIENT WORK PRACTICES—The student will be able to:

- 01.01 Demonstrate an awareness and understanding of health and safety hazards, prevention and correction of ecological problems and know the solutions unique to the industry.
- 01.02 Demonstrate an awareness and understanding of fueling hazards.
- 01.03 Demonstrate an awareness and understanding of physical hazards.
- 01.04 Demonstrate an awareness and understanding of fire hazards.
- 01.05 Demonstrate an awareness of and the ability to control and extinguish fires.
- 01.06 Demonstrate an awareness and understanding of the need for safety devices, controls, guards and equipment.
- 01.07 Demonstrate awareness, understanding and use of personal safety devices such as goggles, masks, helmets, hearing protectors, air respirators and protective clothing.

02.0 DEMONSTRATE UNDERSTANDING OF FEDERAL AND STATE SECURITY PROCEDURES—The student will be able to:

- 02.01 Describe passenger security systems in use.
- 02.02 Describe and define federal security laws.
- 02.03 Identify local law enforcement agencies.
- 02.04 List known security risk features.
- 02.05 Describe cargo theft precautions in use at facility.
- 02.06 Describe the International Air Transport Association.
- 02.07 List the more common labels found in the Restricted Articles Regulations: as published in bulletins by IATA.

OCCUPATIONAL COMPLETION POINT – DATA CODE – B

03.0 DEMONSTRATE APPROPRIATE MATH SKILLS—The student will be able to:

- 03.01 Solve problems for volume, weight, area, circumference and perimeter measurements for rectangles, squares, and cylinders.
- 03.02 Measure tolerance(s) on horizontal and vertical surfaces using millimeters, centimeters, feet and inches.
- 03.03 Add, subtract, multiply and divide using fractions, decimals, and whole numbers.

- 03.04 Determine the correct purchase price, to include sales tax for a materials list containing a minimum of six items.
- 03.05 Demonstrate an understanding of federal, state and local taxes and their computation.

04.0 DEMONSTRATE UNDERSTANDING OF FEDERAL AVIATION ADMINISTRATION, STATE AND OTHER GOVERNMENTAL LAWS, RULES AND POLICIES—The student will be able to:

- 04.01 Describe the economic, social and political importance of commercial aviation, general aviation and aircraft manufacturing in the United States.
- 04.02 Describe the function, basic organization and responsibility of the National Transportation Safety Board.
- 04.03 Explain major portions of FAR Parts 1, 61, 67, 77, 91, 830 and FAR Parts 108 and 139 of the Federal Aviation Regulations.
- 04.04 List and describe the federal statutes pertaining to the economic regulation of the airline industry.
- 04.05 List and describe the major federal statutes pertaining to the regulation of aviation safety.
- 04.06 Describe the historical and current relationship between the U.S. Post Office and the aviation industry.
- 04.07 List and describe six categories of general aviation.
- 04.08 Describe the development of aviation laws and their analogy to the Law of the Sea.
- 04.09 Explain the Department of Transportation, State of Florida, and its structure as relates to the aircraft industry.

05.0 DEMONSTRATE UNDERSTANDING OF BUSINESS LAW AND MANAGEMENT PERTAINING TO AERONAUTICS—The student will be able to:

- 05.01 Describe and identify in what manner and under what conditions an airport may be exposed to a lawsuit.
- 05.02 Discuss the fundamental aspects of several categories of law that may affect the company because of its activities.
- 05.03 State the fundamental principles of torts, contracts, bailment's, labor agency negligence, product liability, partnerships, and corporations.
- 05.04 Explain how an employee's action or inaction may subject the aviation company or airport to a lawsuit involving one or more of the several categories of law.

OCCUPATIONAL COMPLETION POINT – DATA CODE – C

06.0 DEMONSTRATE UNDERSTANDING OF PERSONNEL MANAGEMENT—

The student will be able to:

- 06.01 Name and describe the basic guides in personnel management.
- 06.02 Discuss governmental relations in personnel management.
- 06.03 Explain the general nature of personnel problems, and approaches to problem solving.
- 06.04 State the general nature of job and personnel requirements; also technical and managerial employee requirements.

- 06.05 Demonstrate knowledge of the importance and scope of education; also the role of communication and the fundamental rules of communication.
- 06.06 Discuss the significance of remuneration and its problems, both economic and non-economic.
- 06.07 Describe training and education aspects of company programs.
- 06.08 State the role and purpose of interviewing and counseling.
- 06.09 Name and describe the rules/regulations associated with Americans with Disabilities Act.

07.0 DEMONSTRATE UNDERSTANDING OF AVIATION SAFETY, ACCIDENT PREVENTION AND INVESTIGATION –The student will be able to:

- 07.01 Describe and explain the complete regulation that is currently exercised by the Federal government in the field of safety and investigation.
- 07.02 State and discuss the portion of the Federal Aviation Act of 1958 as amended, which is generally described as Title VI, Safety Regulations of Civil Aeronautics.
- 07.03 Demonstrate knowledge of the minimum standards governing design, materials workmanship, performance of aircraft, inspection, servicing, overhaul of aircraft, and parts and appliances, equipment and facilities, as required by section 601(a) of Federal Aviation Act of 1958 Section 601(a).
- 07.04 Discuss the maximum hours of service for airmen and other employees, and other practices, methods, and procedures as required by Section 601(a) of the Federal Aviation Act of 1958.05.01 Explain the Federal Aviation Regulations (FAR's) promulgated by the Administrator to implement the authority granted by the Federal Aviation Act of 1958, in the area of safety, and to prevent accidents.

08.0 DEMONSTRATE APPROPRIATE COMMUNICATION SKILLS—The student will be able to:

- 08.01 Write logical and understandable statements, or phrases, to complete with accuracy the forms/invoices commonly used in business and industry.
- 08.02 Read and understand graphs, charts, diagrams, and tables commonly used in this industry/occupation area.
- 08.03 Read and follow written and oral instructions.
- 08.04 Answer and ask questions coherently and concisely.
- 08.05 Read critically by recognizing assumptions and implications and by evaluating ideas.
- 08.06 Demonstrate appropriate telephone/communication skills.

OCCUPATIONAL COMPLETION POINT – DATA CODE – D

09.0 PREPARE, ANALYZE AND EVALUATE TECHNICAL REPORTS AND DATA— The student will be able to:

- 09.01 State the five basic guidelines for preparation of technical reports.
- 09.02 Compare the difference between technical and literary description.
- 09.03 Describe the techniques used in technical report writing.
- 09.04 Discuss the arrangement of the technical written report – such as cause and effect, inductive and deductive, enumeration and classification, problems and solution.

- 09.05 Explain the preparatory work or stages in the process, such as the writing, the drafts, use of the library, and polishing style.
- 09.06 List types of reports, and describe use of illustrations.
- 09.07 Discuss the steps in developing an oral presentation.

10.0 MAINTAIN PERSONNEL RECORDS AND BUDGETS—The student will be able to:

- 10.01 State the scope of section procedures.
- 10.02 Describe the nature of the information gather about candidates.
- 10.03 Explain the process of interpreting the findings and making of decisions.
- 10.04 Understand the need for keeping accurate reports and records for candidates rejected, and candidates accepted.
- 10.05 State the objectives of the personnel program as related to the overall objectives of the company, whether the company provides a service or a product.
- 10.06 Discuss the specific statistical goals sought and tasks to be undertaken by the personnel department, such as the number of people to be hired, types of personnel, grievance or bargaining sessions, anticipated worker accidents or illnesses.
- 10.07 Calculate the staff necessary to attain goals; and equipment and resources they will require.
- 10.08 Explain how the requirements to attain the stated company goals will necessitate the allocation of the stated budget in order to implement the requisite program.

11.0 EVALUATE FACILITY MAINTENANCE PROBLEMS AND PRESCRIBE CORRECTIVE ACTION—The student will be able to:

- 11.01 Describe and explain the complete regulation that is currently exercised by the Federal government in the field of safety, and maintenance.
- 11.02 Demonstrate knowledge of the minimum standard for work practices including methods and procedures as required by Section 601(a) of the Federal Aviation Act of 1958.
- 11.03 Explain the Federal Aviation Regulations (FAR's) promulgated by the Administrator to implement the authority granted by the Federal Aviation Act of 1958.
- 11.04 State the procedures and a practice in conformity with the FAR's when FAA inspectors review the company practices.

12.0 DEMONSTRATE APPROPRIATE UNDERSTANDING OF BASIC SCIENCE—The student will be able to:

- 12.01 Understand molecular action as a result of temperature extremes, chemical reaction, and moisture content.
- 12.02 Draw conclusions or make inferences from data.
- 12.03 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.
- 12.04 Understand pressure measurement in terms of P.S.I. (pounds per square inch), and kPa (kilopascal).

13.0 DEMONSTRATE WORKFORCE/WORKPLACE READINESS SKILLS —

The student will be able to:

- 13.01 Identify reasons people work.
- 13.02 Describe connections between jobs, careers, family life, etc.
- 13.03 Conduct an individual inventory of personal work experience skills.
- 13.04 Develop a career plan.
- 13.05 Understand the information and ability required for different careers.
- 13.06 Compare occupation requirements and benefits associated with employment.
- 13.07 Locate, select, and process classified newspaper and magazine advertisements.
- 13.08 Identify and locate government and private employment agencies and/or computer-assisted job search programs.
- 13.09 Identify and locate personal resource materials (birth certificates, diplomas, training certificates, driver's license, and social security card).
- 13.10 Understand the importance of personal/professional job search information.
- 13.11 Develop a job card file (for specific job leads, requirements, employer names, interview information, and personal notes).
- 13.12 Use appropriate communication skills when using the telephone or email to talk with an employer.
- 13.13 Describe and give examples of job interview situations, including prepared questions to ask the job interviewer.
- 13.14 Identifies proper behavior/attitudes for job interviews.
- 13.15 Demonstrates skillful methods in job interviews (grooming, dress, and verbal/nonverbal communication techniques).
- 13.16 Develop a personal fact sheet that includes personal references, work history, educational information, and other related information.
- 13.17 Read, interpret, and complete a job application and attach a well composed resume' with cover letter.
- 13.18 Write a follow-up letter after the interview with appropriate comments.
- 13.19 Interpret wages, deductions, benefits, and taxes.
- 13.20 Interpret timekeeping forms, timecards, and timesheets, as applicable.
- 13.21 Interpret pay schedules and fringe benefits, medical insurance, and retirement plans.
- 13.22 Understand the importance of contracts and union agreements.
- 13.23 Show knowledge of employee handbooks, personnel policies, and workers compensation.
- 13.24 Identify safety signs found in places of employment and safe work procedures.
- 13.25 Understand the importance of reporting health and safety questions to the appropriate person.
- 13.26 Understand safe work clothes and good health rules/appropriate dress habits.
- 13.27 Understand relations to job training, performance, retention, promotion and changes by describing career job goals.
- 13.28 Identify feelings and opportunities that affect success for job advancement and retention.
- 13.29 Demonstrate the ability to apply or transfer skills learned in one job situation to another.

- 13.30 Identify computer skills that affect job retention and advancement.
- 13.31 Interpret and write work related correspondence (notes, memos, and letters).
- 13.32 Know how to react to constructive criticism and when to make personal changes or resign from a job.
- 13.33 Analyze and solve workforce problems.
- 13.34 Demonstrate appropriate use of the phone or cell phone in a workplace setting.
- 13.35 Demonstrate the ability to work with others and communication skills while addressing customers and clients.
- 13.36 Demonstrate the process of taking action to meet the needs and solve the problems of customers.
- 13.37 Demonstrate effective body language and its influence on the observer.
- 13.38 Identify sexual harassment issues in the workplace.
- 13.39 Identify and use different approaches when working within multicultural workforce groups.
- 13.40 Identify techniques for handling stress and time management problems on the job.
- 13.41 Understand the advantages and disadvantages of a computer, possible uses of a computer system, and proper procedures to maintain computer/network security.
- 13.42 Demonstrate knowledge of "Florida Right-To-Know Law" as recorded in Florida statues Chapter 442.

14.0 **DEMONSTRATE AN UNDERSTANDING OF ENTREPRENEURSHIP**—The student will be able to:

- 14.01 Define entrepreneurship.
- 14.02 Describe the importance of entrepreneurship to the American economy.
- 14.03 List the advantages and disadvantages of business ownership.
- 14.04 Identify the risks involved in ownership of a business.
- 14.05 Identify the necessary personal characteristics of a successful entrepreneur.
- 14.06 Identify the business skills needed to operate a small business efficiently and effectively.

WEBSITE AND DISTANCE LEARNING INFORMATION

AVIATION OPERATIONS/ADMINISTRATION: The purpose of this section is to provide a sample of the currently available distance learning products and websites, which can be used to enhance the Aviation Operations/Administration program. It is not intended to recommend any specific vendor or online program.

Web Sites

www.faa.gov

www.corp-visions.com/mgtcourses.html

www.adt.com

www.amtech.com

www.flightsafetyonline.com

www.derekconsulting.com

<http://www.derekconsulting.com/index.php3?p=projects/airports>

www.sverdrup.com

<http://aviation.hntb.com/>

<http://www.louisberger.com/index1.php?id=sectors>

<http://todaysmilitary.com>

http://www.careersinthemilitary.com/index.cfm?fuseaction=search.detail&mc_id=67

www.cam.org/~icao

www.airportnet.org

www.aci-na.org

www.air-transport.org

www.raa.org

[Airport Consultants Council](#)

[Airports Council International](#)

[Airnav](#)

[American Society for Testing Materials](#)

<http://www.derekconsulting.com/index.php3?p=projects/airports>

[Boeing Company](#)

[Bureau of Transportation Statistics](#)

[Department of Transportation](#)

[Econet](#)

[Environmental Protection Agency](#)

Institutions with related Distance Learning programs

*Embry Riddle Aeronautical Univ: <http://www.db.erau.edu>

*Miami-Dade Community College: <http://www.mdc.edu>

*Florida Institute of Technology: <http://www.fit.edu>

*Utah Valley State College: <http://www.uvsc.edu/disted/>

Aerolearn: <http://www.aerolearn.com/>

* = These programs are offered at a cost.