# Occupation Appendix

**Miami Dade College**
(Sponsor)

In the occupation of:

| Occupation / Trade | NAICS Code | RAPIDS Code | O-Net Code |
|---|---|---|---|
| Aircraft Structure, Surfaces, Rigging, and Systems Assemblers | 811310 | 90142HY | 51-2011.00 |

## OUTREACH JURISDICTIONAL AREA

Miami-Dade, Broward, Palm Beach
(Counties)

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## DEFINITIONS

For the purposes of this appendix. The following definitions apply:

**COMPETENCY-BASED:** An apprenticeship training approach that requires the attainment of manual, mechanical, or technical skills and knowledge, as specified by an occupation standard, and demonstrated by an appropriate written and hands-on proficiency measurement. A minimum of 2,000 hours of on-the-job training is required.

**HYBRID-BASED:** An apprenticeship training approach that measures the individual apprentice's skill acquisition through a combination of a specified range of minimum and maximum number of hours of on-the-job training and the successful demonstration of competency as described in a work process schedule. Hybrid-Based is a combination of both the Time-Based and Competency-Based apprenticeship training approaches. A minimum of 2,000 hours of on-the-job training is required.

**TIME-BASED:** An apprenticeship training approach that measures the attainment of manual, mechanical, or technical skills and knowledge through the individual apprentice's completion of at least 2,000 hours of on-the-job training as described in a work process outline.

## SECTION XVI – TERM OF APPRENTICESHIP AND TRAINING APPROACH – 6A-23.004(2)(b) FAC, 6A-23.004(2)(d) FAC

**On-the-Job-Training:**

The term of the apprenticeship shall be 3100 - 4000 hours, approximately 19 - 24 months of continuous on-the-job employment (including the probationary period). Hours for related instruction are excluded.

**Related Technical Instruction:**

Apprentices employed under these standards shall complete a total of 296 hours of supplemental instruction in technical subjects related to the occupation.

**Training Approach:**

☐ Time-Based ☐ Competency-Based ☒ Hybrid ☐ Career-Lattice

**Related Instruction Delivery Method (select all that apply):**

☒ Classroom
☐ Correspondence / Shop
☐ Web-Based Learning

**Related Instruction Delivery Provider (select all that apply):**

☐ Sponsor / Employer Facility
☒ Community College / Technical School
☐ Vocational School (Technical College / Center)
☐ Other (specify) _____

**Related Instruction hours are provided (mark only one):**

☐ During Work Hours; ☒ During Non-Work Hours; or ☐ During Work & Non-Work Hours

Are Wages Paid to the Apprentice During Related Technical Instruction? ☐ Yes ☒ No

**Location(s) where related instruction will occur:**

| | |
|---|---|
| School Name: | Miami Dade College - MIA |
| Address: | 2460 NW 66th Avenue, Bldg. 701, Miami, FL 33122 |
| Contact: | Jose L. Obregon |
| Phone: | 305-237-5963 |
| E-mail: | jobregon@mdc.edu |

| | |
|---|---|
| School Name: | Miami Dade College - Miami Executive Airport |
| Address: | 14715 SW 128th St., Miami, FL 33186 |
| Contact: | Jose L. Obregon |
| Phone: | 305-237-5963 |
| E-mail: | jobregon@mdc.edu |

| Course(s)/Program(s) Name(s): | Program Number: | CIP Number: |
|---|---|---|
| Aircraft Structure, Surfaces, Rigging, and Systems Assemblers | 59005 | 0847060900 |

## SECTION XVII – PROBATIONARY PERIOD – 6A-23.004(2)(h, s) FAC

Apprentices employed under these standards shall be subject to a probationary period during the first 775 hrs of the apprenticeship program, which cannot exceed twenty-five percent (25%) of the length of the program or one (1) year, whichever is shorter.

## SECTION XVIII – RATIO OF APPRENTICES – 6A-23.004(2)(g) FAC

It shall be the responsibility of the apprenticeship committee/sponsor to ensure that the allowable ratio of apprentices to journeyworkers is consistently maintained in the program as a whole, by each participating employer, and on the job site.

- Programs and participating employers in each apprenticeable occupation, the ratio of apprentices to journeyworkers consistent with proper supervision, training, safety, and continuity of employment is 2 Apprentice(s) to 1 Journeyworker

If the ratio for non-construction related programs is different from the construction related ratio, a variance must be requested by the Apprenticeship Committee or Program Sponsor and approved by the Department.

## SECTION XIX – QUALIFICATIONS AND SELECTION PROCEDURES – 6A-23.004(2)(j) FAC, 29 CFR § 30.5

Applicants for apprenticeship shall meet minimum qualifications as outlined in this Appendix. These qualification standards, and the score required on any standard for admission to the applicant pool must be directly related to job performance, as shown by a statistical relationship between the score required for admission and performance in the apprenticeship program.

**MINIMUM QUALIFICATIONS: Apprentice applicants must be able to meet all employment guidelines and requirements.** All applicants will be considered without attention to race, color, religion, sex, sexual orientation, gender identity, national origin, veteran, or disability status and afforded equal opportunity.

a. **Age (Required)**

The minimum age qualification required by the Apprenticeship Committee, Sponsor, or Participating Employer for persons entering the Apprenticeship Program is: 18 years.

b. ☒ **English Language**

Applicants must be able to comprehend instructions in English for on the job and in related training classes, and to ensure personal and co-worker safety on the job.

c. ☒ **Miami Dade College Admissions Requirements:**

Applicants must provide applicable admissions documentation for enrollment into the Miami Dade College Apprenticeship Program. Documentation must be evidence received (letter/email) from MDC Admissions reflecting acceptance to the College.

**SELECTION PROCEDURES:**

**** No matter which selection process an Apprenticeship Committee or Sponsor adopts, Veterans who have received discharges other than dishonorable discharges and Florida Registered Preapprentice Graduates shall, if qualified, receive the same priorities.**

The Apprenticeship Committee or Sponsor shall select apprentices from qualified applicants using any of the following appropriate selection methods examples:

1. ☒ **Selection from pool of current employees:**

The sponsor may select apprentices from an eligibility pool of the workers already employed or by the sponsor's established promotion policy. The sponsor adopting this method of selecting apprentices shall establish goals for the selection of minority and female apprentices, unless the sponsor concludes, in accordance with the provisions of 29 CFR §§ 30.4(d), (e), and (f) that it does not have deficiencies in terms of underutilization of minorities and/or women (minority and nonminority) in the apprenticeship of journeyworker occupations represented by the program.

2. ☒ **Alternative Selection Method:**

a. ☒ **Intent to Hire:**

i. Applicants for apprenticeship must apply to the Apprenticeship Committee or Sponsor;

ii. The applicant is screened by the Apprenticeship Committee or Sponsor on the basis of selection criteria (applicant minimum qualifications) approved by the Registration Agency;

iii. Applicants who meet the screening requirements, and are accepted by the Apprenticeship Committee or Sponsor as eligible for apprenticeship, are then referred to participating employers who are hiring;

iv. If the employer states in writing to the Apprenticeship Committee or Sponsor, their intent to hire an eligible applicant referred, that applicant is hired by the participating employer and registered by the Apprenticeship Committee or Sponsor.

## SECTION XX – AFFIRMATIVE ACTION WORKFORCE ANALYSIS – 6A-23.004(2)(y) FAC

| **Occupation:** Aircraft Structure, Surfaces, Rigging, and Systems Assemblers |
|---|

| **Underutilization Factors:** | |
|---|---|
| 1. Total number of employers: | 1 |
| 2. Total of employer(s) workforce: | 197 |
| 3. Total journeyworkers employed by the employer(s) in the occupation: | 45 |
| 4. Total female journeyworkers employed by the employer(s) in the occupation: | 2 |
| 5. Total minorities journeyworkers employed by the employer(s) in the occupation: | 45 |
| 6. Total youth journeyworkers age 16-24 employed by the employer(s) in the occupation: | 4 |

| ** 7 thru 11 do not apply to new programs | |
|---|---|
| 7. Total apprentices: | 6 |
| 8. Total female apprentices: | 2 |
| 9. Total minorities apprentices: | 6 |
| 10. Under-utilization of females: | 66% |
| 11. Under-utilization of minorities: | 0% |

| **Goals and Timetables (all future accessions at each interval):** | |
|---|---|
| 1. Percentage of all future accessions and at each interval to be females: | % |
| 2. Percentage of all future accessions and at each interval to be minorities: | % |

## SECTION XXI – WORK PROCESS AND RELATED TECHNICAL INSTRUCTION – 6A-23.004(2)(c, d) FAC

### WORK PROCESS SCHEDULE

**Hybrid Occupation:** Please provide the Work Process Schedule to include the Job Tasks (left column) required to complete the apprenticeship program and the minimum/maximum number of hours range (next column).

***Use for Hybrid-Based Occupations***

| | | | |
|---|---|---|---|
| **OCCUPATION:** | Aircraft Structure, Surfaces, Rigging, and Systems Assemblers | | |
| **O*NET CODE:** | 51-2011.00 | **RAPIDS CODE:** | **90142HY** |

| Work Process Schedule: | Approximate Minimum – Maximum Hours: | Journeyworker Sign-off | Date |
|---|---|---|---|
| **Safe and Effective Work Practices**<br>• Work area rules and regulations.<br>• Awareness and understanding for the need of safety devices, controls, guards and equipment.<br>• Human factors related to safe aircraft operation.<br>• Situational awareness (SA) and its importance in the MRO environment.<br>• Clean-as-you go. Inspect for FOD. (FOD is anything left anywhere that does not belong in the work area.) Follow proper foreign object debris (FOD) procedures.<br>• Perform good housekeeping practices in the aviation environment. | **160 - 200** | | |
| **Use and Maintenance of tools, equipment and appropriate PPE**<br>• Identify proper tools for task performance.<br>• Inspect tools for cleanliness & functionality.<br>• Identify basic and special aviation hand tools.<br>• Process and rationale for logging tools (ingress/egress).<br>• Conduct pre-shift/post-shift tool, materials, equipment, and supplies inventory.<br>• Apply proper use and care of precision measuring tools including micrometers, vernier calipers, squares, etc.<br>• Operate safely shop machine tools.<br>• Operate equipment to properly and safely Ream hole to size.<br>• Operate equipment to properly and safely complete Hole Countersinking.<br>• Operate equipment to properly and safely complete Dimpling — Cold.<br>• Appropriate selection of Personal Protective Equipment (PPE). | **360 - 500** | | |
| **Basic aviation corrosion control and protection**<br>• Using Corrosion Prevention Methods.<br>• Inspect, identify, remove and treat aircraft corrosion and perform aircraft cleaning. | **200 - 300** | | |

| | | | |
|---|---|---|---|
| **Basic knowledge of sheet metal layout, marking, measurements and spacing applying drawing/blueprint.**<br>• Determine metal type for Selection and Preparation.<br>• Prepare Edge Margin (Distance) and Spacing on given metal project.<br>• Produce a layout/template.<br>• Perform repair using basic drawing/blueprint layout. | **850 - 1000** | | |
| **Hardware types and their application**<br>• Use different methods for Fastener Installation and Removal (Threaded Fastener, Blind Fastener, Lock Bolt, and Rivet).<br>• Evaluation Cleco's by size and color for proper application.<br>• Demonstrate a basic knowledge of Drill a Hole to Specification (hole size and depth).<br>• Operate equipment to properly and safely complete Hole Countersinking. | **850 - 1000** | | |
| **Read, comprehend and apply information contained in FAA and manufacturers' aircraft maintenance specifications, data sheets, manuals, publications and Repair Station Manual guidelines.**<br>• Undertake research using appropriate reference manuals for maintenance and repairs.<br>• Interpret technical drawings and schematics. | **280 – 500** | | |
| **Demonstrate an ability to complete a capstone project/task.**<br>• Complete a repair project per drawing and specifications.<br>• Complete a servicing project per appropriate Aviation manuals.<br>• Complete an assembly project per drawing and specifications.<br>• Complete a metal project per drawing and specifications. | **400 – 500** | | |
| **TOTAL HOURS:** | **3100 - 4000** | | |

**RELATED TECHNICAL INSTRUCTION OUTLINE**

**Instructions:**

Please provide the Related Instruction titles or classes (provided in classroom, on-line, in-company, etc.) (left column) and the approximate number of hours required to complete each instruction segment.

| | | | |
|---|---|---|---|
| **OCCUPATION:** | Aircraft Structure, Surfaces, Rigging, and Systems Assemblers | | |
| **O*NET CODE:** | 51-2011.00 | **RAPIDS CODE:** | **90142HY** |

| Related Technical Instruction Outline | Approximate Hours |
|---|---|
| **AMT 0044 - Tools, Materials, and Process I**<br>1. Demonstrate knowledge of aircraft drawings, prints and engineering documents.<br>2. Demonstrate knowledge of materials and process.<br>3. Demonstrate health and safety. | 40 |
| **AMT 0045 Tools, Materials, and Process II**<br>1. Learn the basic types of corrosion recognition.<br>2. Learn treatment and preventative methods. | 40 |
| **AMT 0046 Aircraft Materials, hardware & Processes**<br>1. Demonstrate knowledge of aviation hand tools and safe handling in the field.<br>2. Demonstrate appropriate understanding of aviation science.<br>3. Demonstrate appropriate understanding of basic aviation corrosion control.<br>4. Identify causes of delamination and identify dissimilar materials corrosion. | 68 |
| **AMT 0047 Applying the Design Process**<br>1. Demonstrate knowledge of aircraft drawings, prints and engineering documents.<br>2. Demonstrate knowledge of test equipment, including Non-Destructive Inspection and Testing.<br>3. Demonstrate a knowledge of good practices with respect to Sealants & Epoxies. | 53 |
| **AMT 0269 Aircraft Electrical Systems & Quality Control**<br>1. Learn the principles of basic electricity as it relates to aviation electrical systems.<br>2. Learn to use data, flow charts & spreadsheets.<br>3. Learn to the techniques of installing wiring and fiber optics.<br>4. Learn advanced blueprint reading with respect to performing actual tasks.<br>5. Demonstrate knowledge of the quality control process. | 64 |
| **AMT 0219 Aircraft Hydraulics & Aviation Mathematics** | 19 |

| | |
|---|---|
| 1. Demonstrate knowledge of aircraft hydraulic and pneumatic systems.<br>2. Demonstrate knowledge of advanced aviation mathematics. | |
| **AMT 0509 Composites and Capstone Project**<br>1. Demonstrate knowledge of Composite materials and their safe handling in the field.<br>2. Demonstrate ability to integrate knowledge from the various levels of the Structures Technician course. | 12 |
| **Total Minimum Hours** | 296 |

## SECTION XXII – APPRENTICE WAGE SCHEDULE - 6A-23.004(2)(e) FAC

Apprentices shall be paid a progressively increasing schedule of wages based on a percentage and a dollar amount of the current hourly journeyworker wage rate, which is: $ 25.00 as of 04 / 19 / 2021 .

**Occupation:** Aircraft Structure, Surfaces, Rigging, and Systems Assemblers

| Period of Training Min - Max | Competencies (total) | Percent of Journeyworker's Rate | Apprentice's Hourly Rate |
|---|---|---|---|
| 1 – 2000 hours | [redacted] | 56% | 14.00 |
| –2001 – 3001 hours | | 70% | 17.50 |
| –3002 – 4000 hours | 7 | 76% | 19.00 |

## SECTION XXIII – LISTING OF PARTICIPATING EMPLOYERS – 6A-23.004(2)(w) FAC

Each Employer wishing to participate in this registered apprenticeship program shall sign a Participating Employer's Agreement with the Sponsor, unless otherwise provided for in a collective bargaining agreement and in so doing, will accept the requirements of the program standards. The Program Sponsor shall provide an executed copy of the signed Participating Employer's Agreement to the Registration Agency and the cancellation thereof.

| Participating Employer | Participating Employer |
|---|---|
| Commercial Jet Inc. | |
| | |
| | |
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| | |
| | |

## OFFICIAL ADOPTION OF APPRENTICESHIP STANDARDS APPENDIX

**Miami Dade College Apprenticeship Program**

**(Program Name)**

**hereby adopts this Appendix on this _____day of _____/ 2021.___**

**Signature of Program Chairperson / Secretary**

**Director, Career and Technical Education**

**Title/Affiliation**

**Dr. Alexia Q. Rolle, Ed.D.**

**Printed Name**

REVIEWED BY:

Apprenticeship & Training Representative Date

**REVIEWED** **APPROVED** **REGISTERED**

FLORIDA DEPARTMENT OF EDUCATION
DIVISION OF CAREER AND ADULT EDUCATION - APPRENTICESHIP

Authorized Official - Registration Agency Date