

## Technical and Vocational Programs

### **A 60 20 0      Aviation Systems Technology – Associate in Applied Science**

### **D 60 20 0 AM Airframe Maintenance – Diploma**

### **D 60 20 0 PP    Powerplant Maintenance – Diploma**

**(Offered only at COA - Currituck)**

#### **CONCENTRATION OVERVIEW**

The Aviation Systems Technology provides individuals with the knowledge and skills to qualify for an aircraft mechanic's certificate with airframe and/or power plant ratings. The curriculum is approved by the Federal Aviation Administration (FAA) under 14 CFR Part 147, which governs aviation maintenance schools. Course work includes aviation mathematics, FAA regulations, basic electricity, aircraft drawings; aircraft structures, systems, and components; aircraft engines, theory, systems, and components; and engine inspections and maintenance.



Upon completion of this concentration, graduates will be able to find employment opportunities as entry-level mechanics with air carriers, manufacturers, repair stations, fixed base operators, flight schools, and government aviation operations.

#### **Student Learning Outcomes – Upon completion of the program, students will:**

1. Identify, explain, and troubleshoot Airframe rules, regulations, and required skills listed in the 14 CFR 39, 43, 65, 91, and 147 to determine if an airframe and airframe systems are airworthy or non-airworthy and make repairs to a variety of aircraft and aircraft systems.
2. Identify, explain, and troubleshoot PowerPlant rules, regulations, and required skills listed in the 14 CFR 39, 43, 65, 91, and 147 to determine if an engine, engine systems and propeller is airworthy or non-airworthy and make repairs to a variety of engines, engine systems, and propellers.
3. Satisfactorily complete all program models and requirements that will prepare them to take the FAA General, Airframe, and PowerPlant examinations.

**Partnership:** N/A

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## A 60 20 0 Aviation Systems Technology – A.A.S.

(Offered only at COA - Currituck)

| First Year<br>Fall Semester<br>Course Number and Title  | Pre-Requisites and Co-Requisites  | Class<br>Hours | Lab<br>Hours | Clinical<br>Hours | Total<br>Contact<br>Hours | Total<br>Credit<br>Hours |
|---|---|----------------|--------------|-------------------|---------------------------|--------------------------|
| AVI 110 Aviation Maintenance-General  |   | 10             | 15           |                   | 25                        | 15                       |
| ENG 111 Writing and Inquiry   | Pre-Requisites: ENG 002 Tier 1<br>Co-Requisites: ENG 011  | 3              |              |                   | 3                         | 3                        |
| <b>TOTAL SEMESTER HOURS</b>   |   | <b>13</b>      | <b>15</b>    |                   | <b>28</b>                 | <b>18</b>                |
| First Year<br>Spring Semester<br>Course Number and Title  | Pre-Requisites and Co-Requisites  | Class<br>Hours | Lab<br>Hours | Clinical<br>Hours | Total<br>Contact<br>Hours | Total<br>Credit<br>Hours |
| AVI 120 Airframe Maintenance I  | Pre-Requisites: AVI 110   | 6              | 18           |                   | 24                        | 12                       |
| CIS 111 Basic PC Literacy   |   | 1              | 2            |                   | 3                         | 2                        |
| MAT 110 Math Measurement & Literacy<br>OR<br>MAT 143 Quantitative Literacy (Recommended for College Transfer) | Pre-Requisites: MAT 003 Tier 1<br><br>OR<br>Pre-Requisites: MAT 003 Tier 1 and ENG 002 Tier1 Co-Requisites: MAT 043 | 2              | 2            |                   | 4                         | 3                        |
| <b>TOTAL SEMESTER HOURS</b>   |   | <b>9</b>       | <b>22</b>    |                   | <b>31</b>                 | <b>17</b>                |
| First Year<br>Summer Semester<br>Course Number and Title  | Pre-Requisites and Co-Requisites  | Class<br>Hours | Lab<br>Hours | Clinical<br>Hours | Total<br>Contact<br>Hours | Total<br>Credit<br>Hours |
| AVI 130 Airframe Maintenance II   | Pre-Requisites: AVI 110   | 6              | 9            |                   | 15                        | 9                        |
| ENG 112 Writing/Research in the Disciplines   | Pre-Requisites: ENG 111   | 3              |              |                   | 3                         | 3                        |
| <b>TOTAL SEMESTER HOURS</b>   |   | <b>9</b>       | <b>9</b>     |                   | <b>18</b>                 | <b>12</b>                |
| Second Year<br>Fall Semester<br>Course Number and Title   | Pre-Requisites and Co-Requisites  | Class<br>Hours | Lab<br>Hours | Clinical<br>Hours | Total<br>Contact<br>Hours | Total<br>Credit<br>Hours |
| AVI 230 Airframe Maintenance III  | Pre-Requisites: AVI 110   | 4              | 9            |                   | 13                        | 7                        |
| AVI 240 Powerplant Maintenance I  | Pre-Requisites: AVI 110   | 3              | 9            |                   | 12                        | 6                        |
| HUM 115 Critical Thinking<br>OR<br>PHI 240 Introduction to Ethics   | Pre-Requisites for HUM 115: ENG 002 Tier 1<br><br>Pre-Requisites for PHI 240: ENG 111                               | 3              |              |                   | 3                         | 3                        |
| <b>TOTAL SEMESTER HOURS</b>   |   | <b>10</b>      | <b>18</b>    |                   | <b>28</b>                 | <b>16</b>                |

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COLLEGE OF THE ALBEMARLE

| Second Year<br>Spring Semester<br>Course Number and Title       | Pre-Requisites and Co-Requisites | Class<br>Hours | Lab<br>Hours | Clinical<br>Hours | Total<br>Contact<br>Hours | Total<br>Credit<br>Hours |
|---|----------------------------------|----------------|--------------|-------------------|---------------------------|--------------------------|
| AVI 250 Powerplant<br>Maintenance II                            | Pre-Requisites: AVI 110          | 10             | 15           |                   | 25                        | 15                       |
| WBL 110 World of Work<br>OR<br>WBL 111 Work-Based<br>Learning I |                                  | 1              |              | 0-10              | 1-10                      | 1                        |
| <b>TOTAL SEMESTER HOURS</b>                                     |                                  | <b>11</b>      | <b>15</b>    | 0-10              | <b>26-35</b>              | <b>16</b>                |
| Second Year<br>Summer Semester<br>Course Number and Title       | Pre-Requisites and Co-Requisites | Class<br>Hours | Lab<br>Hours | Clinical<br>Hours | Total<br>Contact<br>Hours | Total<br>Credit<br>Hours |
| AVI 260 Powerplant<br>Maintenance III                           | Pre-Requisites: AVI 110          | 5              | 12           |                   | 17                        | 9                        |
| PSY 150 General Psychology                                      | Pre-Requisites: ENG 002 Tier 1   | 3              |              |                   | 3                         | 3                        |
| <b>TOTAL SEMESTER HOURS</b>                                     |                                  | <b>8</b>       | <b>12</b>    |                   | <b>20</b>                 | <b>12</b>                |
| <b>TOTAL SEMESTER HOURS REQUIRED FOR ASSOCIATE DEGREE</b>       |                                  |                |              |                   |                           | <b>91</b>                |

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