

## 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**

**C 60 20 0 A Airframe Maintenance – Certificate**

**C 60 20 0 P Powerplant Maintenance – Certificate**

**(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. Complete Aircraft Inspections demonstrating the ability to use a standard cycle of problem solving skills to identify any issues related to aircraft systems and subsystems, gather and analyze evidence, and create and test solutions.
4. Satisfactorily complete all program models and requirements that will prepare them to take the FAA General, Airframe, and Powerplant examinations.

**Partnership:** College of The Albemarle has a bilateral agreement with Elizabeth City State (ECSU). Graduates of COA's A.A.S. degree in Aviation Systems Technology may transfer into Elizabeth City State University's B.A.S. degree Aviation Science - Aviation Management and B.A.S. degree Aviation Science - Professional Aeronautics.

Level III Instructional Service Agreement Between College of The Albemarle and Beaufort County Community College.

\*This program offers a [Career and College Promise pathway \(CCP\) C60200H](#). Courses within the pathway are highlighted in yellow.

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

(Offered only at COA - Currituck)

First Year Fall Semester Course Number and Title	Pre-Requisites and Co-Requisites	Class Hours	Lab Hours	Clinical Hours	Total Contact Hours	Total Credit Hours
AVI 110 Aviation Maintenance-General		10	15		25	15
ENG 111 Writing and Inquiry	Pre-Requisites: ENG 025	3			3	3
<b>TOTAL SEMESTER HOURS</b>		<b>13</b>	<b>15</b>		<b>28</b>	<b>18</b>
First Year Spring Semester Course Number and Title	Pre-Requisites and Co-Requisites	Class Hours	Lab Hours	Clinical Hours	Total Contact Hours	Total Credit Hours
AVI 120 Airframe Maintenance I	Pre-Requisites: AVI 110	6	18		24	12
Select one of the following: MAT 110 Math Measurement OR MAT 143 Quantitative Lit	Pre-Requisites: MAT 110: None MAT 143: ENG 025 and MAT 025	2	2		4	3
<b>TOTAL SEMESTER HOURS</b>		<b>8</b>	<b>20</b>		<b>28</b>	<b>15</b>
First Year Summer Semester Course Number and Title	Pre-Requisites and Co-Requisites	Class Hours	Lab Hours	Clinical Hours	Total Contact Hours	Total Credit 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 Fall Semester Course Number and Title	Pre-Requisites and Co-Requisites	Class Hours	Lab Hours	Clinical Hours	Total Contact Hours	Total Credit 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 OR PHI 240 Introduction to Ethics	Pre-Requisites for HUM 115: ENG 025 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>

<b>Second Year Spring Semester Course Number and Title</b>	<b>Pre-Requisites and Co-Requisites</b>	<b>Class Hours</b>	<b>Lab Hours</b>	<b>Clinical Hours</b>	<b>Total Contact Hours</b>	<b>Total Credit Hours</b>
AVI 250 Powerplant Maintenance II	Pre-Requisites: AVI 110	10	15		25	15
WBL 110 World of Work OR WBL 111 Work-Based Learning I		1		0-10	1-10	1
<b>TOTAL SEMESTER HOURS</b>		<b>11</b>	<b>15</b>	<b>0-10</b>	<b>26-35</b>	<b>16</b>
<b>Second Year Summer Semester Course Number and Title</b>	<b>Pre-Requisites and Co-Requisites</b>	<b>Class Hours</b>	<b>Lab Hours</b>	<b>Clinical Hours</b>	<b>Total Contact Hours</b>	<b>Total Credit Hours</b>
AVI 260 Powerplant Maintenance III	Pre-Requisites: AVI 110	5	12		17	9
PSY 150 General Psychology	Pre-Requisites: ENG 025	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>89</b>

## D 60 20 0 AM Airframe Maintenance - Diploma

(Offered only at COA - Currituck)

First Year Fall Semester Course Number and Title	Pre-Requisites and Co-Requisites	Class Hours	Lab Hours	Clinical Hours	Total Contact Hours	Total Credit Hours
AVI 110 Aviation Maintenance - General		10	15		25	15
ENG 111 Writing and Inquiry	Pre-Requisites: ENG 025 Co-Requisites: None	3			3	3
<b>TOTAL SEMESTER HOURS</b>		<b>13</b>			<b>28</b>	<b>18</b>
First Year Spring Semester Course Number and Title	Pre-Requisites and Co-Requisites	Class Hours	Lab Hours	Clinical Hours	Total Contact Hours	Total Credit Hours
AVI 120 Airframe Maintenance I	Pre-Requisites: AVI 110	6	18		24	12
MAT 110 Math Measurement & Literacy OR MAT 143 Quantitative Literacy (Recommended for College Transfer)	Pre-Requisites: None OR Pre-Requisites: ENG 025 and MAT 025 Co-Requisites: None	2	2		4	3
<b>TOTAL SEMESTER HOURS</b>		<b>8</b>	<b>20</b>		<b>28</b>	<b>15</b>
First Year Summer Semester Course Number and Title	Pre-Requisites and Co-Requisites	Class Hours	Lab Hours	Clinical Hours	Total Contact Hours	Total Credit Hours
AVI 130 Airframe Maintenance II	Pre-Requisites: AVI 110	6	9		15	9
<b>TOTAL SEMESTER HOURS</b>		<b>6</b>	<b>9</b>		<b>15</b>	<b>9</b>
Second Year Fall Semester Course Number and Title	Pre-Requisites and Co-Requisites	Class Hours	Lab Hours	Clinical Hours	Total Contact Hours	Total Credit Hours
AVI 230 Airframe Maintenance III	Pre-Requisites: AVI 110	4	9		13	7
<b>TOTAL SEMESTER HOURS</b>		<b>4</b>	<b>9</b>		<b>13</b>	<b>7</b>
<b>TOTAL SEMESTER HOURS REQUIRED FOR DIPLOMA</b>						<b>49</b>

## D 60 20 0 PP Powerplant Maintenance - Diploma

(Offered only at COA - Currituck)

First Year Fall Semester Course Number and Title	Pre-Requisites and Co-Requisites	Class Hours	Lab Hours	Clinical Hours	Total Contact Hours	Total Credit Hours
AVI 110 Aviation Maintenance - General		10	15		25	15
ENG 111 Writing and Inquiry	Pre-Requisites: ENG 025 Co-Requisites: None	3			3	3
<b>TOTAL SEMESTER HOURS</b>		<b>13</b>			<b>28</b>	<b>18</b>
Second Year Fall Semester Course Number and Title	Pre-Requisites and Co-Requisites	Class Hours	Lab Hours	Clinical Hours	Total Contact Hours	Total Credit Hours
AVI 240 Powerplant Maintenance I	Pre-Requisites: AVI 110	3	9		12	6
<b>TOTAL SEMESTER HOURS</b>		<b>3</b>	<b>9</b>		<b>12</b>	<b>6</b>
Spring Semester Course Number and Title	Pre-Requisites and Co-Requisites	Class Hours	Lab Hours	Clinical Hours	Total Contact Hours	Total Credit Hours
AVI 250 Powerplant Maintenance II	Pre-Requisites: AVI 110	10	15		25	15
MAT 110 Math Measurement and Literacy OR MAT 143 Quantitative Literacy (Recommended for College Transfer)	Pre-Requisites: None OR Pre-Requisites: ENG 025 and MAT 025 Co-Requisites: None	2	2		4	3
<b>TOTAL SEMESTER HOURS</b>		<b>12</b>	<b>17</b>		<b>29</b>	<b>18</b>
Second Year Fall Semester Course Number and Title	Pre-Requisites and Co-Requisites	Class Hours	Lab Hours	Clinical Hours	Total Contact Hours	Total Credit Hours
AVI 260 Powerplant Maintenance III	Pre-Requisites: AVI 110	5	12		17	9
<b>TOTAL SEMESTER HOURS</b>		<b>5</b>	<b>12</b>		<b>17</b>	<b>9</b>
<b>TOTAL SEMESTER HOURS REQUIRED FOR DIPLOMA</b>						<b>51</b>

## C 60 20 0 A Airframe Maintenance - Certificate

(Offered only at COA - Currituck)

Certificate Course Number and Title	Pre-Requisites and Co-Requisites	Class Hours	Lab Hours	Clinical Hours	Total Contact Hours	Total Credit Hours
AVI 110 Aviation Maintenance - General	Pre-Requisites: None Co-Requisites: None	10	15		25	15
AVI 120 Airframe Maintenance I	Pre-Requisites: AVI 110 Co-Requisites: None	6	18		24	12
AVI 130 Airframe Maintenance II	Pre-Requisites: AVI 110 Co-Requisites: None	6	9		15	9
AVI 230 Airframe Maintenance III	Pre-Requisites: AVI 110 Co-Requisites: None	4	9		13	7
<b>TOTAL SEMESTER HOURS</b>		<b>26</b>	<b>51</b>		<b>77</b>	<b>43</b>
<b>TOTAL SEMESTER HOURS REQUIRED FOR CERTIFICATE</b>						<b>43</b>

## C 60 20 0 P Powerplant Maintenance - Certificate

(Offered only at COA - Currituck)

Certificate Course Number and Title	Pre-Requisites and Co-Requisites	Class Hours	Lab Hours	Clinical Hours	Total Contact Hours	Total Credit Hours
AVI 110 Aviation Maintenance - General	Pre-Requisites: None Co-Requisites: None	10	15		25	15
AVI 240 PowerPlant Maintenance I	Pre-Requisites: AVI 110 Co-Requisites: None	3	9		12	6
AVI 250 PowerPlant Maintenance II	Pre-Requisites: AVI 110 Co-Requisites: None	10	15		25	15
AVI 230 Airframe Maintenance III	Pre-Requisites: AVI 110 Co-Requisites: None	5	12		17	9
<b>TOTAL SEMESTER HOURS</b>		<b>28</b>	<b>51</b>		<b>79</b>	<b>45</b>
<b>TOTAL SEMESTER HOURS REQUIRED FOR CERTIFICATE</b>						<b>45</b>