

- Research shop manuals and Internet sites for correct repair procedures or specifications and write a descriptive work order upon completion of repairs.
- Identify, select, and utilize correct tools, workshop techniques, and equipment to accomplish complete projects commonly found in the automotive industry.
- Apply individual and clustered skill sets listed in the competency task lists relating to various aspects of automotive industry maintenance and repair.
- The overall performance standards for the automotive technology program link to an extensive set of subject-area criteria which cover not only knowledge levels but skills demonstrations verified through the required completion of specified tasks established by the National Association of Automotive Technicians Education Foundation (NATEF) in accordance with expectations from the National Institute for Automotive Service Excellence (ASE).

### Objectives

- Develop in each student safe, clean work habits, attitudes, and skills.
- Provide information concerning the vocational opportunities offered in this area of technological development.
- Provide the student the opportunity to learn by doing under high quality conditions similar to those found in advanced automotive industry settings.
- Assist the student to learn to work effectively with others.
- Develop in each student, knowledge of correct lab techniques and equipment usage, resulting in an intelligent and effective application of these skills in the performance of assigned duties.
- Develop in each student the technical and academic knowledge necessary to expand on lifelong learning as the automotive industry continually updates.

**Gainful Employment (GE)** – For more information about WNCC graduation rates, the median debt of students who completed this program, and other important information, please visit our website at [wncc.edu/equity](http://wncc.edu/equity).

### Note:

**The curriculums for the certificate and AAS degree in automotive technology, as well as a new diploma program, are under review and revision. Please contact the lead faculty for automotive technology at 308.635.6087 for specific information about the programs.**

# Aviation Maintenance

## Associate of Occupational Studies

### Certificate

#### Sidney

The Aviation Maintenance Technician program at WNCC is approved by the Federal Aviation Administration (FAA). The program prepares students for entry-level aviation maintenance technician positions.

The Aviation Maintenance program is broken into three phases—general phase, airframe maintenance phase, and power plant phase—for a minimum total of 1900 clock credits. Upon successful completion, the student is eligible to take the FAA examinations for the airframe and power plant license.

### Technical Standards

Technical standards for the aviation maintenance program at Western Nebraska Community College are promulgated upon an extensive set of subject-area criteria which cover not only knowledge levels but skills demonstration established by the FAA in in Subpart D of Part 65 of the Federal Aviation Regulations (FAR's), part of Title 14 of the *Code of Federal Regulations*. The criteria can be found at [rgl.faa.gov/Regulatory\\_and\\_Guidance\\_Library](http://rgl.faa.gov/Regulatory_and_Guidance_Library) and should be carefully reviewed by prospective students in order to best understand the scope and demands of training. The curriculum for the program is specified in Part 147 – Aviation Maintenance Technician Schools.

### Objectives

- Develop in each student safe, clean work habits, attitudes, and skills.
- Develop a thorough knowledge of Federal Aviation Regulations.
- Develop knowledge and skills of all phases of aviation repair.
- Allow students to acquire, develop, and apply both academic knowledge and practical skills.
- Provide students the opportunity to explore aviation technology careers.
- Allow students to individualize their plan of study, (within parameters and with the help of their assigned faculty advisor).
- Allow students to incorporate business and industry courses into their individual plan of study.
- Prepare students for the FAA Exams.

### Notes

- Course availability may differ from semester to semester. See advisor prior to registration.

- Credit for previous courses and military training can be applied toward the program requirements.

## Associate of Occupational Studies

### AOS.4901 (88-90 Credits)

The AOS degree is designed to increase student opportunities in the field of aviation maintenance. Students must successfully complete a minimum of 15 credits of general education as well. Coursework for the AOS must be pre-approved by the assigned faculty advisor and the chair of Applied Technology must approve each student's final plan. It is highly recommended that students complete an internship as part of the AOS program.

### Recommended Plan of Study

1st Semester		Credits
AVIA-1060	General Phase I	6
AVIA-1070	General Phase II	6
AVIA-1080	General Phase III	6
ENGL-0500	Workplace Writing (or higher)*	3
<b>Total Credits</b>		<b>21</b>
2nd Semester		Credits
AVIA-1110	Airframe I	6
AVIA-1120	Airframe II	6
AVIA-1130	Airframe III	6
MATH-1020	Technical Math (or higher)*	3
<b>Total Credits</b>		<b>21</b>
3rd Semester		Credits
AVIA-1140	Airframe IV	3
AVIA-1150	Airframe V	3
AVIA-1160	Airframe VI	3
AVIA-1210	Power Plant Phase I	3
AVIA-1220	Power Plant Phase II	3
AVIA-1230	Power Plant Phase III	3
<b>Total Credits</b>		<b>18</b>
4th Semester		Credits
AVIA-1240	Power Plant Phase IV	6
AVIA-1250	Power Plant Phase V	6
AVIA-1260	Power Plant Phase VI	6
<b>Total Credits</b>		<b>18</b>
5th Semester		Credits
AVIA-2500	AVIA Aviation Internship	1-3
SPCH-1200	Human Communications	3
	General Education elective	3

Social Science elective	3
<b>Total Credits</b>	<b>10-12</b>
<b>Total AOS Credits</b>	<b>88-90</b>

\*English and math course selections are dependent on writing and math proficiency based on assessment. Students should consult with their academic advisor about specific general education courses required.

## Certificate

### C2.4901 (72-78 Credits)

The certificate in aviation maintenance is designed to fulfill at least 72 credits of the AOS Degree. Students must complete three (3) credits of English and three (3) credits of math or show competency in writing and mathematics by assessment. An industry certification will waive the writing and mathematics requirement.

**NOTE:** The credit hours for a certificate in Aviation exceed the college's definition due to industry requirements.

**Gainful Employment (GE)** – For more information about WNCC graduation rates, the median debt of students who completed this program, and other important information, please visit our website at [wncc.edu/equity](http://wncc.edu/equity).

### Recommended Plan of Study

1st Semester		Credits
AVIA-1060	General Phase I	6
AVIA-1070	General Phase II	6
AVIA-1080	General Phase III	6
ENGL-0500	Workplace Writing (or higher)*	3
<b>Total Credits</b>		<b>18-21</b>
2nd Semester		Credits
AVIA-1110	Airframe I	6
AVIA-1120	Airframe II	6
AVIA-1130	Airframe III	6
MATH-1020	Technical Math (or higher)*	3
<b>Total Credits</b>		<b>18-21</b>
3rd Semester		Credits
AVIA-1140	Airframe IV	3
AVIA-1150	Airframe V	3
AVIA-1160	Airframe VI	3
AVIA-1210	Power Plant Phase I	3
AVIA-1220	Power Plant Phase II	3
AVIA-1230	Power Plant Phase III	3
<b>Total Credits</b>		<b>18</b>
4th Semester		Credits
AVIA-1240	Power Plant Phase IV	6

AVIA-1250	Power Plant Phase V	6
AVIA-1260	Power Plant Phase VI	6
<b>Total Credits</b>		<b>18</b>
<b>Total Certificate Credits</b>		<b>72-78</b>

\*English and math course selections are dependent on writing and math proficiency based on assessment. Students should consult with their academic advisor about specific general education courses required.

## Biology/Ecology

### AS.2601A (61 Credits)

#### Associate of Science

#### Scottsbluff

This emphasis area provides the student with comprehensive coverage of the natural world. This course of study is designed to meet the needs of students wishing to gain technical knowledge for entry into other related areas within the field of biology as well as those seeking a general acquaintance with the field.

#### Objectives

- Provide a basic understanding of the life processes while affording the opportunity to become better acquainted with the natural world.
- Stimulate interest in the biological sciences as a possible career goal.
- Provide the necessary knowledge, understanding, and techniques to better manage better and conserve the environment.
- Instill a sense of appreciation for the often-unseen beauty in the living world.
- Teach the fundamental techniques necessary to employ the scientific method in researching the biological sciences.
- Make the student aware of the importance of a career dealing with the care and management of our renewable resources.
- Provide an educational experience that allows the student to complete the transition to a four-year college or university with relative ease.

#### Notes

- Students who plan to transfer to a four-year college or university should consult their faculty advisor and transfer advisor early in their WNCC career to determine a curriculum best suited to their transfer goals.
- In addition to the general education requirements for the AS degree, 23 credits of core courses and 19

credits of electives are required for the degree in biology/ecology.

- Depending on the choice of electives, it is possible that the total credits earned for the AS degree will exceed 60 credit credits.
- Students should understand that the courses included in the lists of core requirements and recommended electives will be required by receiving institutions at some point in their journey to the bachelor's degree.

### Core Requirements (23 credits)

- A minimum of 15-16 credits of combined science and math credits are required for the AS degree. This must include a minimum of three (3) credits of math and four (4) credits of science from BIOS, CHEM or PHYS options.

Class		Credits
BIOS-1010	General Biology (and lab)	4
BIOS-1380	General Zoology (and lab)	4
CHEM-1090	General Chemistry I (and lab)	4
CHEM-1100	General Chemistry II (and lab)	4
MATH-1150	College Algebra	4
MATH-1210	Trigonometry	3

### Recommended electives or courses required for transfer (19 credits selected from below):

Class		Credits
BIOS-1300	General Botany (and lab)	4
BIOS-2120	Genetics (and lab)	4
BIOS-2460	Microbiology (and lab)	4
CHEM-2510	Organic Chemistry I (and lab)	4
CHEM-2520	Organic Chemistry II (and lab)	4

### Recommended Plan of Study

1st Semester		Credits
BIOS-1010	General Biology (and lab)	4
CHEM-1090	General Chemistry I (and lab)	4
ENGL-1010	English Composition I	3
MATH-1150	College Algebra	4
PRDV-1010	Achieving College Success	3
<b>Total Credits</b>		<b>18</b>

2nd Semester		Credits
BIOS-1300	General Botany (and lab) or	4
BIOS-1380	General Zoology (and lab)	
CHEM-1100	General Chemistry II (and lab)	4
ENGL-1020	English Composition II	3