It is recommended that the remainder of the seven (7) credits be selected from any of the technical electives below:

BIOS-1010	General Biology (and lab)	4
BIOS-2250	Human Anatomy & Physiology I (and lab)	4
BIOS-2260	Human Anatomy & Physiology II (and lab)	4
BIOS-2120	Genetics (and lab)	4
BIOS-2460	Microbiology (and lab)	4
CHEM-1090	General Chemistry I (and lab)	4
CHEM-1100	General Chemistry II (and lab)	4
ENGR-1070	Graphics for Engineers	3
ENGR-2010	Intro to Circuits and Electronics	3
INFO-1200	Introduction to Computer Science	3
MATH-2170	Applied Statistics	3
MATH-2210	Applied Differential Equations	3

Recommended Plan of Study

1st Semester		**Credits**
ENGL-1010	English Composition I	3
MATH-1600	Analytic Geometry and Calculus I	5
PHYS-1070	Astronomy	4
PRDV-1010	Achieving College Success	3
	Total Credits	**15**
2nd Semester		**Credits**
ENGL-1020	English Composition II	3
ENGR-1020	Programming and Problem Solving	3
MATH-2150	Calculus II	5
	Technical elective	3-4
	Humanities GE elective	3
	Total Credits	**17-18**
3rd Semester		**Credits**
MATH-2200	Calculus III	5
PHYS-2400	Physics I with Calculus	5
	Oral Communications GE elective	3
	Elective	3
	Total Credits	**16**
4th Semester		**Credits**
ENGR-2020	Statics	3
PHYS-2450	Physics II with Calculus	5
	Technical elective	3-4
	Social Sciences GE elective	3
	Total Credits	**14-15**
	Total AS Credits	**62-64**

Powerline Construction & Maintenance Technology

Associate of Occupational Studies
Diploma
Certificate
Alliance

This program provides students with the training to apply technical knowledge and skills to install, operate, maintain, and repair distribution, transmission, and rural electric power lines and cables. The student also learns to construct power lines according to Rural Utility Standards (RUS). Upon completion of this program, students have the skills required of an apprentice power line technician for utility providers.

All electives used to fulfill graduation requirements for this degree require pre-approval of the faculty advisor. The final plan for each student must be approved by his or her faculty advisor and the interim chair of the Applied Technology Division.

Objectives

- Promote and help students develop proficiency in climbing skills.
- Provide a basis for students understanding of basic electrical principles.
- Provide students with skills in overhead/underground line construction according to RUS standards.
- Provide students with the skills necessary to develop safe work habits and an understanding of power line safety guidelines and principles in accordance with the American Public Power Association.
- Promote and assist the understanding of students regarding Occupational Safety and Health (OSHA) rules and regulations for power line workers.

Technical Standards

- Apply information and instruction delivered in a classroom setting to the successful performance of lab tasks to simulate actual workplace settings
- Demonstrate a functional working knowledge of electrical theory and concepts as a baseline for efficient and safe work environment conditions
- Follow safety procedures described in the American Public Power Association Safety Handbook
- Identify, select, and utilize the appropriate tools, materials, and equipment for the installation, maintenance, and repair of Rural Utilities Service (RUS) lines, following specifications and drawings for construction units

- Identify, select and utilize the appropriate tools, materials, and equipment for the installation, maintenance, and repair of a variety of electrical equipment such as transformers, reclosers, grounds, disconnect switches, fused cutouts, and other industry-standard devices
- Inspect equipment and machinery to ensure safe operational condition per established guidelines
- Operate hand tools, equipment, and machinery common to the power line trade in a safe manner
- Utilize a hand line to hoist equipment and materials as necessary to elevated positions
- Operate equipment such as bucket trucks and digger derrick trucks from elevated platforms
- Read a load lifting chart and safely load, secure, and unload a variety of equipment and materials using a bucket truck and/or digger derrick truck
- Climb wooden and steel poles to heights of up to 45 feet to perform construction, repair, or coworker rescue maneuvers
- Perceive and respond to communication cues from pole-top heights and/or in loud environments
- Work cooperatively with groups of individuals to accomplish physical tasks in outdoor settings

Associate of Occupational Studies (AOS)

AOS.4603 (63.5-66.5 Credits)

Notes

- Interested students should contact the Alliance campus for current program requirements.
- The following are required for acceptance into the Powerline Construction & Maintenance Technology program: a physical exam; health insurance; valid driver's license; and additional costs associated with purchasing climbing tools and equipment. For specifics regarding these items, prospective students should contact the Alliance campus.
- The student must successfully pass all climbing skill evaluations at the Pole Lab to advance from UTIL-1000 to UTIL-1300 and UTIL-1400.
- The student must successfully pass all climbing skill evaluations at the Pole Lab to advance from UTIL-1300

Recommended Plan of Study

1st Semester		**Credit**
HLTH-1090	CPR-Healthcare Provider	0.5
	or	
HLTH-1100	First Aid	
TRAN-1100	Commercial Driver's License (CDL Class B)	2
UTIL-1000	Introduction to Power Line Basics, Safety, and Climbing	9
	Total Credits	**11.5**

2nd Semester		**Credit**
ENGL-0500	Workplace Writing (or higher)	3
UTIL-1300	Electrical Theory/Concepts for the Power Line Industry	9
UTIL-1400	Overhead Power Line Construction	9
	Total Credits	**21**

3rd Semester		**Credit**
MATH-1020	Technical Math (or higher)	3-4
UTIL-2300	Underground Power Line Construction & Transformer Connections	9
UTIL-2400	Electric Utility Operations	9
UTIL-2500	UTIL Internship (optional)*	1-3
	Total Credits	**22-25**

*College approval required

4th Semester		**Credit**
	Information Technologies elective	3
	Oral Communication GE elective	3
	Social Science elective	3
	Total Credits	**9**
	Total AAS Credits	**63.5 – 66.5**

Diploma

D2.4603 (54.5-56.5 Credits)

This diploma is designed to fulfill 54.5-56.6 credit credits of the Powerline Construction & Maintenance Technology AOS degree.

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**.

Recommended Plan of Study

1st Semester (summer)		Credits
HLTH-1090	CPR-Healthcare Provider	0.5
	or	
HLTH-1100	First Aid	
TRAN-1100	Commercial Driver's License (CDL Class B)	2
UTIL-1000	Introduction to Power Line Basics, Safety, and Climbing	9
	Total Credits	**11.5**

2nd Semester		Credits
ENGL-0500	Workplace Writing (or higher)	3
UTIL-1300	Electrical Theory/Concepts for the Power Line Industry	9
UTIL-1400	Overhead Power Line Construction	9
	Total Credits	**21**

3rd Semester		Credits
MATH-1020	Technical Math (or higher)	3-4
UTIL-2300	Underground Power Line Construction & Transformer Connections	9
UTIL-2400	Electric Utility Operations	9
UTIL-2500	UTIL Internship (optional)*	1-3
	Total Credits	**22-25**
	Total Diploma Credits 55.5 – 56.5	

**College approval required*

Certificate

C2.4603 (47.5-53.5 Credits)

This certificate is designed to fulfill 47.5-53.5 credit credits of the Powerline Construction & Maintenance Technology 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.

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**.

1st Semester (summer)		Credits
HLTH-1090	CPR-Healthcare Provider	0.5
	or	
HLTH-1100	First Aid	
TRAN-1100	Commercial Driver's License (CDL Class B)	2
UTIL-1000	Introduction to Power Line Basics, Safety, and Climbing	9
	Total Credits	**11.5**

2nd Semester		Credits
ENGL-0500	Workplace Writing (or higher)**	0-3
UTIL-1300	Electrical Theory/Concepts for the Power Line Industry	9 9
UTIL-1400	Overhead Power Line Construction	9
	Total Credits	**18-21**

3rd Semester		Credits
MATH-1020	Technical Math (or higher)**	0-3
UTIL-2300	Underground Power Line Construction & Transformer Connections	9
UTIL-2400	Electric Utility Operations	9
UTIL-2500	UTIL Internship (optional)*	1-3
	Total Credits	**18-21**
	Total Certificate Credits 47.5-53.5	

**College Approval Required.*

***Dependent on writing and math proficiency. No general education courses are required if competency is shown on placement exam or industry certification test.*

Psychology

AA.4201 (60 Credits)
Associate of Arts (AA)
Alliance • Scottsbluff • Sidney

The Associate of Arts program in psychology will provide students with the core curriculum and the foundational work for an eventual bachelor's degree in psychology. The course of study offers the student the opportunity to study a wide variety of topics within this multifaceted discipline. This field of study is appropriate for students who would like to become counselors, social workers, case managers, career counselors, rehabilitation specialists, and psychiatric technicians. The understanding of human behavior and communications also make psychology majors good candidates for positions in top- and mid-level management and administration, sales, labor-relations, personnel and training, real estate, business services and insurance, or marketing.

Objectives

- Fulfill the graduation requirements for the Associate of Arts degree.
- Facilitate the student's entry into a baccalaureate program in psychology at a college or university.