



SOUTH ARKANSAS
COMMUNITY COLLEGE



Career and Technical EDUCATION

Career & Technical Education

Automotive Service Technology (TC)
Automotive Maintenance (CP)
Automotive Diagnostics (CP)
Cosmetology (TC)
Hair Care (CP)
Nail and Skin Care (CP)
General Technology (AAS)
Industrial Technology-Mechatronics (AAS)
Industrial Technology-Mechatronics (TC)
Industrial Technology-Mechatronics (CP)
Process Technology (AAS)
Process Technology (TC)
Welding Technology (TC)
SMAW Welding (CP)
MIG Welding (CP)
TIG Welding (CP)
Welding Layout and Pipefitting (CP)
Advanced Pipe Welding (CP)
Weld Inspection (CP)

The Career and Technical Education Division (CTE) is committed to meeting the training needs of industry and students in today's rapidly changing technological society. Education and life-long training have become prerequisites for successful employment. Many who are currently employed need periodic training to upgrade their knowledge and skills. The Career and Technical programs fill these training needs by providing an appropriate mix of academic and technical instruction, laboratory assignments, and hands-on training. The primary objective of the CTE programs is to impart the necessary knowledge and skills required for employment in industry. All programs are offered on a semester-hour basis. Since most programs in the division are designed to prepare the graduate for a specific career field, some students may be expected to purchase supplies or equipment to perform routine class and laboratory assignments.

AUTOMOTIVE SERVICE TECHNOLOGY

Technical Certificate

The technical certificate program is designed to prepare students for entry-level positions in automotive servicing, maintenance, and diagnostics. The National Automotive Technicians Education Foundation (NATEF), a nationally recognized automotive education organization, certifies the automotive program. The automotive program instructors are certified by the National Institute for Automotive Service Excellence (ASE). Graduates may find entry-level positions in automobile dealerships, independent service centers, specialty shops, and related automotive facilities.

FALL SEMESTER		
COURSE #	COURSE NAME	CREDIT HOUR
AUTO 1504	Engine Repair	4
AUTO 1204	Brake Systems	4
AUTO 1604	Engine Performance	4
AUTO 1104	Manual Drivetrain & Axles	4
Semester Credit Hour Total		16

SPRING SEMESTER		
COURSE #	COURSE NAME	CREDIT HOUR
AUTO 1404	Automotive Electronics	4
AUTO 1804	Automatic Transmission	4
AUTO 1304	Steering and Suspension	4
AUTO 1704	Heating and Air Conditioning	4
TECH 1003	Technical Math	3
Semester Credit Hour Total		19
PROGRAM CREDIT HOUR TOTAL		35

Basic Studies Requirements:

Reading - ACT 19 or above (or) ASSET 43 or above (or) COMPASS 83 or above (or) complete BSTD 0613 English II.

Writing - ACT 19 or above (or) ASSET 45 or above (or) COMPASS 80 or above (or) complete BSTD 0613 English II.

Math - ACT 15 or above (or) ASSET Numerical Skills 39 or above (or) COMPASS 36 or above (or) complete BSTD 0413 Elementary Algebra, the prerequisite for Technical Math.

Those students whose basic studies scores are below minimum levels must enroll in basic studies courses and may concurrently enroll in program courses with the instructor's permission. Minimum levels of basic skills must be attained prior to completion of the program.

AUTOMOTIVE MAINTENANCE

Certificate of Proficiency

Students in Automotive Maintenance learn basic automotive knowledge and skills. They earn a Certificate of Proficiency by completing 16 hours of automotive core classes. The National Automotive Technicians Education Foundation (NATEF), a nationally recognized automotive education organization, certifies the automotive program. The automotive program instructors are certified by the National Institute for Automotive Service Excellence (ASE). Graduates will possess the minimum skills required to enter the workforce as entry-level automotive service technicians. Specific course requirements for the Certificate of Proficiency in Maintenance Diagnostics are the following:

FOURTH SEMESTER		
COURSE #	COURSE NAME	CREDIT HOUR
AUTO 1504	Engine Repair	4
AUTO 1104	Manual Drivetrain & Axles	4
AUTO 1404	Automotive Electronics	4
AUTO 1304	Steering and Suspension	4
	Semester Credit Hour Total	16
	PROGRAM CREDIT HOUR TOTAL	16

AUTOMOTIVE DIAGNOSTICS

Certificate of Proficiency

Students in Automotive Diagnostics learn basic automotive knowledge and skills. They earn the certificate of proficiency by completing 16 credit hours of automotive core courses. The National Automotive Technicians Education Foundation (NATEF), a nationally recognized automotive education organization, certifies the automotive program. The automotive program instructors are certified by the National Institute for Automotive Service Excellence (ASE). Graduates will possess at least the minimum skills required to enter the workforce as entry-level automotive service technicians. Specific course requirements for the Certificate of Proficiency in Automotive Diagnostics are the following:

FOURTH SEMESTER		
COURSE #	COURSE NAME	CREDIT HOUR
AUTO 1204	Brake Systems	4
AUTO 1804	Automatic Transmission	4
AUTO 1604	Engine Performance	4
AUTO 1704	Heating and Air Conditioning	4
	Semester Credit Hour Total	16
	PROGRAM CREDIT HOUR TOTAL	16

COSMETOLOGY

Technical Certificate

During training, students will receive instruction in the following state mandated areas: hygiene and sanitation, related science, hairdressing, manicuring, cosmetic therapy, salesmanship, shop management, and salon deportment. This course is intended to prepare students to receive Certificates of Proficiency and Technical Certificates, to pass the Arkansas State Board of Cosmetology licensing examination and to enter the workforce with the skills needed to succeed as a professional.

Certificate of Proficiency: Hair Care

FIRST YEAR		
COURSE #	COURSE NAME	CREDIT HOUR
COSM 1002	Introduction to Cosmetology	2
COSM 1102	Introduction to Chemical Services 1	2
COSM 1003	Introduction to Haircutting/Hairstyling 1	3
COSM 1202	Introduction to Specialty Services 1	2
COSM 1103	Practicum 1	3
Semester Credit Hour Total		12

Certificate of Proficiency: Nail and Skin Care

SECOND YEAR		
COURSE #	COURSE NAME	CREDIT HOUR
COSM 1302	School to Work Transition	2
COSM 1203	Haircutting/Hairstyling 2	3
COSM 1402	Chemical Services 2	2
COSM 1502	Specialty Services 2	2
COSM 1213	Practicum 2	3
Semester Credit Hour Total		12

REQUIRED GENERAL STUDIES COURSES (may be taken any semester)		
COURSE #	COURSE NAME	CREDIT HOUR
TECH 1003	Technical Math or higher level math	3
ENGL 1113	Composition I	3
General Studies Credit Hour Total		6

TECHNICAL CERTIFICATE ADDITIONAL PRACTICUM COURSES		
(May be taken during summer or in combination with other course after completion of Practicum I)		
COURSE #	COURSE NAME	CREDIT HOUR
COSM 2003	Practicum 3	3
COSM 2004	Practicum 4	4
COSM 2102	Practicum 5	2
COSM 2104	Practicum 6	4
COSM 2202	Practicum 7	2
Semester Credit Hour Total		15
PROGRAM CREDIT HOUR TOTAL		45

Note: Practicums 3, 4, and 6 may be offered only in the summer. Please consult your student advising coach for details. The practicums may be repeated, as necessary, in order to meet Arkansas State Board of Cosmetology contact hour licensing requirements.

The Technical Certificate in Cosmetology may be applied to an AAS in General Technology by completing a Minor of 15 hours in Entrepreneurship/Business and completing the required general studies hours as follows:

Complete 15 hours of a technical minor in business technology or entrepreneurship:		
COURSE #	COURSE NAME	CREDIT HOUR
	Business Tech/Entrepreneurship	3
	Business Tech/Entrepreneurship	3
	Business Tech/Entrepreneurship	3
	Business Tech/Entrepreneurship	3
	Business Tech/Entrepreneurship	3

AND

COURSE #	COURSE NAME	CREDIT HOUR
ENGL 1123	Composition II OR	3
ENGL 2043	Technical Writing	
CSCI 1003	Computers and Information Processing or equivalent	3
PSYC 2003	General Psychology OR other Social Science, Sociology, History, or Political Science	3

Basic Studies Requirements:

Reading - ACT 19 or above (or) ASSET 43 or above (or) COMPASS 83 or above (or) complete BSTD 0613 English II.

Writing - ACT 19 or above (or) ASSET 45 or above (or) COMPASS 80 or above (or) complete BSTD 0613 English II.

Math - ACT 19 or above (or) ASSET Intermediate Algebra Skills 43 or above (or) COMPASS 71 or above (or) complete BSTD 0513 Intermediate Algebra.

Those students whose basic studies scores are below minimum levels must enroll in basic studies courses and may concurrently enroll in program courses with the instructor's permission. Minimum levels of basic skills must be attained prior to completion of the program.

GENERAL TECHNOLOGY

Associate of Applied Science

The Associate of Applied Science in General Technology enables students pursuing technical majors to customize a degree to match their academic career goals. To pursue this program of study a student must be enrolled in a technical program without an accompanying Associate degree option. The degree requires a minimum of 60 credit hours to complete to include the following:

- Minimum of 24 credit hours from the technical major curriculum
- Minimum of 15 credit hours from the general education Academic Core
- Minimum of 12 credit hours from a technical minor curriculum
- Minimum of 9 additional credit hours from the technical major curriculum, other technical courses, or general education core curriculum

Students should work closely with a student advising coach to ensure completion of the proposed program of study. Students with significant prior military experience, technical training or work experience in a technical field are encouraged to discuss credit for prior learning with their student advising coach. Up to 30 credit hours in this program of study may be awarded through CLEP tests, departmental tests, portfolios or credit granted for other documented training or licensure that is recognized by ACE.

Mathematics

Three hours from the following:

COURSE #	COURSE NAME
MATH 1023	College Algebra OR
TECH 1003	Technical Math

English

Six hours from the following:

COURSE #	COURSE NAME
ENGL 1113	Composition I
ENGL 1123	Composition II OR
ENGL 2043	Technical Writing

Computer Fundamentals

Three hours from the following:

COURSE #	COURSE NAME
CSCI 1003	Computers and Information Processing

Social Science

Three hours from the following:

COURSE #	COURSE NAME
HIST 1003	History of Civilization to 1700
HIST 1013	History of Civilization since 1700
HIST 2013	History of U.S. to 1876
HIST 2023	History of U.S. since 1876
PSCI 2003	American Government: National

COURSE #	COURSE NAME
PSCI 2013	American Government: State and Local
PSYC 2003	General Psychology
SOCI 2003	Introduction to Sociology
GEOG 2003	Introduction to Geography
ECON 2003	Macroeconomics
GENERAL STUDIES CREDIT HOUR TOTAL = 15	

Technical Major:

Twenty-four to thirty semester credit hours in a major technical discipline. Approved courses for one major area must be the focus of the program. These courses are to be selected from a technical certificate or associate degree program offered by an accredited college.

Technical Minor/Support Courses:

Fifteen to 21 semester credit hours from a second technical specialty area, of which 12 semester credit hours will be from a second technical specialty area listed below:

Automotive Service Technology
Cosmetology
Welding Technology

Note: Students must meet the basic studies requirements for the major/minor fields of study.

Basic Studies Requirements

Reading - ACT 19 or above (or) ASSET 43 or above (or) COMPASS 83 or above (or) complete BSTD 0613 English II.

Writing - ACT 19 or above (or) ASSET 45 or above (or) COMPASS 80 or above (or) complete BSTD 0613 English II.

Math - ACT 15 or above (or) ASSET Numerical Skills 39 or above (or) COMPASS 36 or above (or) complete BSTD 0413 Elementary Algebra.

INDUSTRIAL TECHNOLOGY - MECHATRONICS

Associate of Applied Science

The Industrial Technology program was designed by the advisory committee to meet industry requirements. Successful completion will equip students with the technical skills necessary to maintain, repair, troubleshoot, and manage modern maintenance programs in industrial plants, warehouses, hospitals, schools, and government buildings. Specific topics of coverage will include fluid power and controls, gear and belt-drive systems, electric motors and control systems, programmable logic controls and process control. Classes are designed in lecture and lecture/lab format to give the student a solid foundation in general maintenance skills. Coursework completed is applicable to the Associate of Applied Science degree in General Technology.

FIRST SEMESTER		
COURSE #	COURSE NAME	CREDIT HOUR
TECH 1111	Student to Work Transition	1
IDEQ 1003	Fund of Mechatronics & Industrial Maintenance	3
IDEQ 1404	Fundamentals of Electricity & Electronics	4
CSCI 1003	Computers and Information Processing	3
ENGL 1113	Composition I	3
TECH 1003	Technical Math OR	3
MATH 1023	College Algebra	3
Semester Credit Hour Total		17

SECOND SEMESTER		
COURSE #	COURSE NAME	CREDIT HOUR
IDEQ 1414	Electronics and Electrical Circuits	4
IDEQ 1604	Fluid Power	4
IDEQ 1904	Industrial Motor Controls	4
PTEC 1123	Safety Health and the Environment OR	3
TECH 1203	Industrial Safety	3
Semester Credit Hour Total		15

THIRD SEMESTER		
COURSE #	COURSE NAME	CREDIT HOUR
MECT 1804	Introduction to PLC	4
MECT 1504	Digital Circuit Technology	4
ENGL 1123	Composition II OR	3
ENGL 2043	Technical Writing for Industry	3
IDEQ 1103	Blueprint Reading for Industry	3
Semester Credit Hour Total		14

FOURTH SEMESTER		
COURSE #	COURSE NAME	CREDIT HOUR
MECT 2203	PLC Applications	3
IDEQ 2003	Industrial Mechanics & Mechanical Devices	3
Elective	Social Science (ECON, PSYC, SOC, HIST, PSCI, GEOG)	3
Electives	Choose five or more credit hours from the list below	5+
	Semester Credit Hour Total	14
	PROGRAM CREDIT HOUR TOTAL	60

Choose (You must have at least 60 Credit hours of approved courses to complete this degree):

ELECTIVES		
COURSE #	COURSE NAME	CREDIT HOUR
MECT 2803	Introduction to Robotics	3
MECT 2402	Transducers	2
PHYS 1004	Physical Science/Lab	4
CSCI 1323	Fund of Networking	3
TECH 2614	Internship	4

Other PTEC, MECT, IDEQ, or WELD classes can be substituted as electives with the approval of the division dean.

Basic Studies Requirements:

Reading - ACT 19 or above (or) ASSET 43 or above (or) COMPASS 83 or above (or) complete BSTD 0613 English II.

Writing - ACT 19 or above (or) ASSET 45 or above (or) COMPASS 80 or above (or) complete BSTD 0613 English II.

Math - ACT 19 or above (or) ASSET Intermediate Algebra Skills 43 or above (or) COMPASS 71 or above (or) complete BSTD 0513 Intermediate Algebra.

Those students whose basic studies scores are below minimum levels must enroll in basic studies courses and may concurrently enroll in program courses with the instructor's permission. Minimum levels of basic skills must be attained prior to completion of the program.

INDUSTRIAL TECHNOLOGY - MECHATRONICS

Technical Certificate

The Industrial Technology program was designed by the advisory committee to meet industry requirements. Successful completion will equip students with the technical skills necessary to maintain, repair, troubleshoot, and manage modern maintenance programs in industrial plants, warehouses, hospitals, schools, and government buildings. Specific topics of coverage will include fluid power and controls, gear and belt-drive systems, electric motors and control systems, programmable logic controls and process control. Classes are designed in lecture and lecture/lab format to give the student a solid foundation in general maintenance skills. Coursework completed is applicable to the Associate of Applied Science degree in General Technology.

COURSE #	COURSE NAME	CREDIT HOUR
TECH 1111	Student to Work Transition	1
IDEQ 1003	Fundamentals of Mechatronics & Industrial Maintenance	3
TECH 1203 OR	Industrial Safety OR	3
PTEC 1123	Safety, Health, and the Environment	3
IDEQ 1404	Fundamentals of Electricity & Electronics	4
IDEQ 1414	Electronics & Electrical Circuits	4
IDEQ 1103	Blueprint Reading for Industrial Trades	3
IDEQ 1604	Fluid Power Systems (Hydraulics/Pneumatics)	4
TECH 1003	Technical Math or higher level math	3
IDEQ 2503	Precision Measuring Tools	3
IDEQ 1904	Industrial Motors and Controls	4
IDEQ 2003	Industrial Mechanics and Mech. Devices	3
ENGL 1113	Composition I	3
PROGRAM CREDIT HOUR TOTAL		38

Basic Studies Requirements:

Reading - ACT 19 or above (or) ASSET 43 or above (or) COMPASS 83 or above (or) complete BSTD 0613 English II.

Writing - ACT 19 or above (or) ASSET 45 or above (or) COMPASS 80 or above (or) complete BSTD 0613 English II.

Math - ACT 19 or above (or) ASSET Intermediate Algebra Skills 43 or above (or) COMPASS 71 or above (or) complete BSTD 0513 Intermediate Algebra.

Those students whose basic studies scores are below minimum levels must enroll in basic studies courses and may concurrently enroll in program courses with the instructor's permission. Minimum levels of basic skills must be attained prior to completion of the program.

INDUSTRIAL TECHNOLOGY - MECHATRONICS

Certificate of Proficiency

The Industrial Technology program was designed by the advisory committee to meet industry requirements. Successful completion will equip students with the technical skills necessary to maintain, repair, troubleshoot, and manage modern maintenance programs in industrial plants, warehouses, hospitals, schools, and government buildings. Specific topics of coverage will include fluid power and controls, gear and belt-drive systems, electric motors and control systems, programmable logic controls and process control. Classes are designed in lecture and lecture/lab format to give the student a solid foundation in general maintenance skills. Coursework completed is applicable to the Associate of Applied Science degree in General Technology.

SEMESTER		
COURSE #	COURSE NAME	CREDIT HOUR
TECH 1203 OR	Industrial Safety OR	3
PTEC 1123	Safety, Health, and the Environment	3
IDEQ 1003	Fundamentals of Mechatronics & Industrial Maintenance	3
PTEC 1253	Principles of Quality	3
TECH 1003	Technical Math or higher level math	3
Semester Credit Hour Total		12

Basic Studies Requirements:

Reading - ACT 19 or above (or) ASSET 43 or above (or) COMPASS 83 or above (or) complete BSTD 0613 English II.

Writing - ACT 19 or above (or) ASSET 45 or above (or) COMPASS 80 or above (or) complete BSTD 0613 English II.

Math - ACT 19 or above (or) ASSET Intermediate Algebra Skills 43 or above (or) COMPASS 71 or above (or) complete BSTD 0513 Intermediate Algebra.

Those students whose basic studies scores are below minimum levels must enroll in basic studies courses and may concurrently enroll in program courses with the instructor's permission. Minimum levels of basic skills must be attained prior to completion of the program.

PROCESS TECHNOLOGY

Associate of Applied Science Degree

This degree program is designed to train refinery operators, chemical operators, and process technicians. These operators control and monitor the systems that run industrial plants. Operators gather information using instrumentation and lab equipment to maintain safe work areas and keep plants in compliance with regulatory requirements. Operators work both indoors and outdoors alongside engineers, chemists and other professionals. Operators use knowledge of computers, math, physics and chemistry to keep industrial plants running safely and efficiently.

FIRST SEMESTER		
COURSE #	COURSE NAME	CREDIT HOUR
PTEC 1113	Introduction to Process Technology	3
PTEC 1123	Safety, Health and the Environment	3
PTEC 1133	Process Instrumentation	3
CHEM 1004/L	Fundamentals of Chemistry/Lab OR	4
CHEM 1024/L	Chemistry I for Science/Lab *	4
MATH 1023	College Algebra* OR	3
TECH 1003	Technical Mathematics	3
Semester Credit Hour Total		16

SECOND SEMESTER		
COURSE #	COURSE NAME	CREDIT HOUR
ENGL 1113	Composition I	3
CSCI 1003	Computers and Information Processing**	3
PTEC 1244	Process Technology I – Equipment	4
PTEC 1253	Principles of Quality	3
PHYS 1004/L	Physical Science/Lab	4
Semester Credit Hour Total		17

Note: Semesters 1 and 2 complete degree requirements for Technical Certificate in Process Technology

THIRD SEMESTER		
COURSE #	COURSE NAME	CREDIT HOUR
ENGL 1123	Composition II * OR	3
ENGL 2043	Technical Writing for Industry*	
PTEC 2364	Process Technology II – Systems	4
Elective	Social Science/Economics Elective	3
Elective	PTEC/IDEQ/WELD Restricted Elective OR Internship***	3/4
Semester Credit Hour Total		13/14

FOURTH SEMESTER		
COURSE #	COURSE NAME	CREDIT HOUR
PTEC 2474	Process Technology III – Unit Operations	4
PTEC 2484	Process Trouble Shooting	4
PTEC 2333	Process Instrumentation II	3
Elective	PTEC/IDEQ/WELD Restricted Elective OR Internship***	3/4
	Semester Credit Hour Total	14/15
	PROGRAM CREDIT HOUR TOTAL	60/62

* *College Algebra, Chemistry I for Science, and Composition II are strongly recommended for those planning to continue their education at a four-year college. Tech Math, Fundamentals of Chemistry, and Technical Writing are suggested for those going directly into the workforce, with no plan for pursuing additional degrees.*

***Higher level CSCI courses may be substituted with Dean's approval*

****Electives include up to two industry internships and all 3 or 4 hour IDEQ or WELD courses*

Basic Studies Requirements:

Reading - ACT 19 or above (or) ASSET 43 or above (or) COMPASS 83 or above (or) complete BSTD 0613 English II.

Writing - ACT 19 or above (or) ASSET 45 or above (or) COMPASS 80 or above (or) complete BSTD 0613 English II.

Math - ACT 15 or above (or) ASSET Numerical Skills 39 or above (or) COMPASS 36 or above (or) complete BSTD 0413 Elementary Algebra.

WELDING TECHNOLOGY

Technical Certificate

This technical certificate program prepares students for entry-level placement in the welding industry. Instruction includes metal cutting, arc welding, semi-automatic (MIG) welding, and tungsten inert gas (TIG) welding. The welding program curriculum follows American Welding Society (AWS) education standards for entry-level welders. Students receive instruction in practical applications of welding techniques as well as the operation and maintenance of related tools in the industry. Graduates may find employment in manufacturing, maintenance, independent welding shops, and construction companies.

FALL SEMESTER		
COURSE #	COURSE NAME	CREDIT HOUR
WELD 1214	GMAW I (MIG) Welding	4
WELD 2214	GMAW II (MIG) Welding	4
WELD 1224	GTAW I (TIG) Welding	4
WELD 2224	GTAW II (TIG) Welding	4
TECH 1003	Technical Math or higher level math	3
Semester Credit Hour Total		19

SPRING SEMESTER		
COURSE #	COURSE NAME	CREDIT HOUR
WELD 1114	SMAW I Welding	4
WELD 2114	SMAW II Welding	4
WELD 1244	Layout and Pipefitting I	4
WELD 2244	Layout and Pipefitting II	4
Semester Credit Hour Total		16
PROGRAM CREDIT HOUR TOTAL		35

Basic Studies Requirements:

Reading - ACT 19 or above (or) ASSET 43 or above (or) COMPASS 83 or above (or) complete BSTD 0613 English II.

Writing - ACT 19 or above (or) ASSET 45 or above (or) COMPASS 80 or above (or) complete BSTD 0613 English II.

Math - ACT 15 or above (or) ASSET Numerical Skills 39 or above (or) COMPASS 36 or above (or) complete BSTD 0413 Elementary Algebra.

Those students whose basic studies scores are below minimum levels must enroll in basic studies courses and may concurrently enroll in program courses with the instructor's permission. Minimum levels of basic skills must be attained prior to completion of the program.

SMAW WELDING TECHNOLOGY

Certificate of Proficiency

This Certificate of Proficiency gives students instruction in basic welding skills in oxyacetylene and shielded metal arc welding along with a sound knowledge and understanding of industrial safety practices. The curriculum is based upon the certification criteria of the American Welding Society (AWS). Students may receive employment as entry-level welders at various manufacturing plants and job shops.

COURSE #	COURSE NAME	CREDIT HOUR
WELD 1114	SMAW I Welding	4
WELD 2114	SMAW II Welding	4
Semester Credit Hour Total		8

GMAW (MIG) WELDING

Certificate of Proficiency

This Certificate of Proficiency gives students a basic understanding of the various welding techniques in the welding industry. This certificate requires the completion of 8 semester hours of course work. Graduates may find entry-level employment in manufacturing, maintenance, independent welding shops, and construction companies.

COURSE #	COURSE NAME	CREDIT HOUR
WELD 1214	GMAW I (MIG) Welding/Lab	4
WELD 2214	GMAW II (MIG) Welding/Lab	4
Semester Credit Hour Total		8

GTAW (TIG) WELDING

Certificate of Proficiency

This certificate is designed to help students gain an entry-level position as a “TIG welder.” These courses will help the student understand how to weld both steel plate and pipe with the GMAW process. This certificate will also give a student a beginning knowledge of welding Aluminum and Stainless with the GTAW process. The student will also learn the basics of the Plasma cutting torch.

COURSE #	COURSE NAME	CREDIT HOUR
WELD 1224	GTAW (TIG) I Welding	4
WELD 2224	GTAW (TIG) II Welding	4
Semester Credit Hour Total		8

WELDING LAYOUT AND PIPEFITTING

Certificate of Proficiency

This certificate is designed to help the student gain an entry-level position as a pipe fitter/ layout person in the welding industry. Upon completion the student should have a vast knowledge of how to layout structure and pipe angles and different fits. The student should also have the ability to cut out these fits with any major cutting procedure.

COURSE #	COURSE NAME	CREDIT HOUR
WELD 1244	Layout and Pipefitting I	4
WELD 2244	Layout and Pipefitting II	4
Semester Credit Hour Total		8

ADVANCED PIPE WELDING

Certificate of Proficiency

This certificate is designed to offer the student an opportunity to enhance their knowledge and skills in the area of pipe welding. This certificate requires the completion of 11 semester credit hours of course work. The certificate covers courses that introduce GTAW and SMAW applications related to AWS certification using stainless and carbon steel pipe. In addition, the certificate allows the student to earn proficiency making 1g, 2g, 5g, and 6g welds using SMAW and GTAW. As part of the certificate course work, the student is required to pass at least one AWS 6g weld test.

COURSE #	COURSE NAME	CREDIT HOUR
WELD 1714	Advanced Pipe Welding I	4
WELD 2714	Advanced Pipe Welding II	4
TECH 1003	Technical Math (or higher)	3
Semester Credit Hour Total		11

Note: The courses have been designed to be completed in roughly six weeks (180 clock hours) of intensive training.

WELD INSPECTION*

Certificate of Proficiency

This certificate is designed to help a student further understand the ways their weld will be tested and what they should look for to help them pass a certification test. This certificate will introduce the student to both destructive and non-destructive weld examination including the guided bend, ultrasonic, die penetrate, magnetic particle, and radiographic inspection methods by hands on application. This certificate should also help the student comprehend the properties of metal and what they mean to a welder.

COURSE #	COURSE NAME	CREDIT HOUR
WELD 1404	Welding Evaluation and Testing	4
WELD 1613	Welding Metallurgy	3
Semester Credit Hour Total		7

* These courses are not currently being offered on a routine basis but can be made available if there is sufficient demand. Contact the Dean of Career and Technical Education if you wish to pursue this option.