CTE - CIP Course Details Catalog

Cluster: Manufacturing

CIP: 48.0508 - Welding Technology/Welder. (Non Traditional - Female)

Status: Open **Start Year:** 2011 **End Year:**

Minimum Carnegie Units: 2.00

Group 1

Minimum Course Selection: School: 1 ACC: 0 Regional: 0

State Course ID	State Course Title	Max Carnegie Units	Start SY	End SY
13052A001	**Production Technology**	**1.00**	**2011**	
20101A001	**Energy Utilization Technology**	**1.00**	**2011**	
11002A001	**Communication Technology**	**1.00**	**2011**	
21052A002	**Introduction to Technology and Engineering (Industrial)**	**1.00**	**2011**	
13207A003	**Beginning Welding**	**1.00**	**2012**	
21052A001	**Foundations of Technology**	**1.00**	**2014**	
20001A001	**Transportation Technology**	**1.00**	**2016**	

Group 2

Minimum Course Selection: School: 0 ACC: 1 Regional: 1

State Course ID	State Course Title	Max Carnegie Units	Start SY	End SY
13207A001	**Welding Technology I**	**3.00**	**2011**	
13207A002	**Welding Technology II**	**3.00**	**2011**	

Group 3

Minimum Course Selection: School: 0 ACC: 0 Regional: 0

State Course ID	State Course Title	Max Carnegie Units	Start SY	End SY
22153A001	**Cooperative Education**	**3.00**	**2011**	

Cluster: Manufacturing

Course Descriptions

CIP: 48.0508 - Welding Technology/Welder.

State Course ID: 13052A001 **Course Title:** **Production Technology**

Production Technology is a course designed to foster an awareness and understanding of manufacturing and construction technology. Through a variety of learning activities, students are exposed to many career opportunities in the production field. Experiences in manufacturing include product design, materials and processes, tools and equipment including computers, safety procedures, corporate structure, management, research and development, production planning, mass production, marketing and servicing. In construction, students are exposed to site preparation, foundations, building structures, installing utilities, and finishing and servicing structures.

State Course ID: 20101A001 **Course Title:** **Energy Utilization Technology**

Energy Utilization Technology is a course designed to foster an awareness and understanding of how we use energy in our industrial technological society. Areas of study include conversion of energy, electrical fundamentals, solar energy resources, alternate energy resources such as wind, water, and geothermal; fossil fuels, nuclear power, energy conservation, and computer uses in energy technology. Students use laboratory experiences to become familiar with current energy technologies.

State Course ID: 11002A001 **Course Title:** **Communication Technology**

Communication Technology is a course designed to foster an awareness and understanding of the technologies used to communicate in our modern society. Students gain experience in the areas of design and drafting, radio and television broadcasting, computers in communication, photography, graphic arts, and telecommunications.

State Course ID: 21052A002 **Course Title:** **Introduction to Technology and Engineering (Industrial)**

Introduction to Technology & Engineering is comprised of the following areas: Production, Transportation, Communication, Energy Utilization and Engineering Design but is not limited to these areas only. This course will cover the resources, technical processes, industrial applications, material sciences, technological impact and occupations encompassed by that system.

State Course ID: 13207A003 **Course Title:** **Beginning Welding**

Beginning Welding course enables students to gain knowledge of the properties, uses, and applications of various metals, skills in various processes used to join and cut metals (such as oxyacetylene, shielded metal, metal inert gas, and tungsten arc processes), and experience in identifying, selecting, and rating appropriate techniques. Welding courses often include instruction in interpreting blueprints or other types of specifications.

State Course ID: 21052A001 **Course Title:** **Foundations of Technology**

The course employs teaching/learning strategies that enable students to build their own understanding of new ideas. It is designed to engage students in exploring and deepening their understanding of “big ideas” regarding technology and apply technological processes to solve real problems and develop knowledge and skills to design, modify, use and apply technology in the following areas: engineering design, manufacturing technologies, construction technologies, energy & power, information & communication technologies and emerging technologies.

State Course ID: 20001A001 **Course Title:** **Transportation Technology**

Transportation Technology is a course designed to foster an awareness and understanding of the various transportation customs that make up our mobile society. Through laboratory activities, students are exposed to the technologies of and career opportunities involved in material handling, atmospheric and space transportation, marine transportation, terrestrial transportation, and computer uses in transportation technology.

Cluster: Manufacturing

Course Descriptions

CIP: 48.0508 - Welding Technology/Welder.

State Course ID: 13207A001 **Course Title:** **Welding Technology I**

This course assists students in gaining the knowledge and developing the basic skills needed to be successful in welding technology. Units of instruction include arc, TIG and MIG welding, metallurgy, cutting metal using arc, plasma, and oxy-gas. In addition, students learn the basics of blueprint reading, precision measuring, layout, and production process planning.

State Course ID: 13207A002 **Course Title:** **Welding Technology II**

This course builds on the skills and concepts introduced in Welding Technology I and provides more in-depth skill development in various types of welding including horizontal, vertical, overhead, and circular techniques. Students also explore the use of robotic and automated production welding.

State Course ID: 22153A001 **Course Title:** **Cooperative Education**

Cooperative Education is a capstone course designed to assist students in the development of effective skills and attitudes through practical, advanced instruction in school and on the job through cooperative education. Students are released from school for their paid cooperative education work experience and participate in 200 minutes per week of related classroom instruction. Classroom instruction focuses on providing students with job survival skills and career exploration skills related to the job and improving students' abilities to interact positively with others. For skills related to the job, refer to the skill development course sequences, the task list or related occupational skill standards of the desired occupational program. The course content includes the following broad areas of emphasis: further career education opportunities, planning for the future, job-seeking skills, personal development, human relationships, legal protection and responsibilities, economics and the job, organizations, and job termination. A qualified career and technical education coordinator is responsible for supervision. Written training agreements and individual student training plans are developed and agreed upon by the employer, student and coordinator. The coordinator, student, and employer assume compliance with federal, state, and local laws and regulations.