

CTE - CIP Course Details Catalog

Cluster: Architecture and Construction

CIP: 46.0302 - Electrician. (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
20101A001	Energy Utilization Technology	1.00	2011	
13052A001	Production Technology	1.00	2011	
11002A001	Communication Technology	1.00	2011	
21052A002	Introduction to Technology and Engineering (Industrial)	1.00	2011	
17102A005	Beginning Electricity	1.00	2012	
21052A001	Foundations of Technology	1.00	2014	
20001A001	Transportation Technology	1.00	2018	

Group 2

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

State Course ID	State Course Title	Max Carnegie Units	Start SY	End SY
17102A003	Electrical Trades I	3.00	2011	
17102A004	Electrical Trades 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	

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Course Descriptions

CIP: 46.0302 - Electrician.

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: 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: 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: 17102A005 **Course Title:** **Beginning Electricity**

Beginning Electricity—course provides a survey of the theory, terminology, equipment, and practical experience in the skills needed for careers in the electrical field. This courses typically include AC and DC circuitry, safety, and the National Electrical Code and may cover such skills as those involved in building circuits; wiring residential, installing lighting, power circuits, and cables.

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.

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Course Descriptions

CIP: 46.0302 - Electrician.

State Course ID: 17102A003 **Course Title:** Electrical Trades I

This course is designed to provide students with instruction and training in areas that prepare them to enter the electrical trades. Areas of instruction include electrical theory, circuit design and operation, the national electrical code, blue print reading, construction blue print interpretation, and test equipment usage. Students plan and organize wiring tasks, and gain practical experience by wiring mock-ups and trainers. Students become familiar with tools, materials, and methods used in residential wiring. Students troubleshoot circuits for faulty operation and make repairs. Specific studies include AC and DC theory, series and parallel circuits, motor and generator theory, motor controls, lighting and appliance wiring, low voltage wiring, and testing and repair.

State Course ID: 17102A004 **Course Title:** Electrical Trades II

This course is a continuation of Electrical Trades I, advancing the basics learned in the first course. The study centers around advancing basic theory, multi-phase electricity, transmission and delivery systems, electronic and advanced motor controls, alarm and sensory systems, light commercial and industrial wiring, and advanced circuit design. Students continue to gain practical skill by working on trainers, mock-ups, and on-the-job projects.

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.