CTE - CIP Course Details Catalog

Cluster: Architecture and Construction

CIP: 46.0000 - Construction Trades, General.

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**	
11002A001	**Communication Technology**	**1.00**	**2011**	
20001A001	**Transportation Technology**	**1.00**	**2011**	
21052A002	**Introduction to Technology and Engineering (Industrial)**	**1.00**	**2011**	
17001A001	**Beginning Construction**	**1.00**	**2012**	
17102A005	**Beginning Electricity**	**1.00**	**2014**	
21052A001	**Foundations of Technology**	**1.00**	**2014**	
21102A002	**Beginning Drafting**	**1.00**	**2017**	
20101A001	**Energy Utilization 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
17002A001	**Construction Trades I**	**3.00**	**2011**	
17002A002	**Construction Trades II**	**3.00**	**2011**	
17003A001	**Carpentry I**	**3.00**	**2011**	
17003A002	**Carpentry II**	**3.00**	**2011**	
17005A001	**Drywall Installation I**	**3.00**	**2011**	
17005A002	**Drywall Installation II**	**3.00**	**2011**	
17008A001	**Masonry I**	**3.00**	**2011**	
17008A002	**Masonry II**	**3.00**	**2011**	
17011A001	**Wall Finishing I**	**3.00**	**2011**	
17011A002	**Wall Finishing 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: 46.0000 - Construction Trades, General.

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: 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.

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: 17001A001 **Course Title:** **Beginning Construction**
Beginning Construction course expose students to the opportunities available in construction-related trades, such as carpentry, masonry, air conditioning/refrigeration, plumbing, and so on. Students learn about the processes involved in construction projects and may engage in a variety of small projects.

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: 21102A002 **Course Title:** **Beginning Drafting**
Beginning Drafting is an introductory level drafting course. During this course students will learn the basic fundamentals of drafting and/or computer aided drafting (CAD). The instruction will include the care and use of drafting equipment, freehand sketching, orthographic projection, lettering techniques, dimensioning standards, pictorial drawings, drawing reproduction, and an introduction to CAD.

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CIP: 46.0000 - Construction Trades, General.

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.

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Course Descriptions

CIP: 46.0000 - Construction Trades, General.

State Course ID: 17002A001 **Course Title:** **Construction Trades I**

This course provides experiences related to the erection, installation, and maintenance of residential buildings and related fixtures. Planned learning activities allow students to understand fundamental principles and methods, and develop technical skills related to masonry, carpentry, and finish work. Instruction includes safety principles and practices, recognition of standard lumber sizes, foundation layout methods, building concepts and procedures, local, state, and national codes, cost estimating, and blueprint reading.

State Course ID: 17002A002 **Course Title:** **Construction Trades II**

This course provides learning experiences related to the erection, installation, maintenance, and repair of building structures and related utilities . Student technical skill experiences include instruction and activities in safety principles and practices, performing maintenance control functions, joining pipes, building water distribution lines and drains, installing and maintaining plumbing fixtures and systems, installing switch and outlet boxes, light fixtures, service entrances, roughing in and trimming out electrical devices and appliances, preparing foundations and footings, constructing residential chimneys and fireplaces, laying, jointing and pointing brick, and advanced building and construction methods and codes. All learning experiences are designed to allow the student to acquire job-entry skills and knowledge.

State Course ID: 17003A001 **Course Title:** **Carpentry I**

This course is designed to introduce students to the Carpentry/Carpenter occupation. Students are instructed in areas of safety, including hand tool, power tool, ladder, scaffolding and the use of safety harnesses. Students are introduced to the theoretical knowledge needed to lay out rafter, stairs, and basic framing techniques. Students demonstrate knowledge of blueprint reading, including foundations, concrete, floor plans, specification schedules, and electrical, plumbing and mechanical symbols. Students demonstrate entry-level skills in all facets of residential construction. Technology-related mathematics, reading, writing, vocabulary, blueprint reading, and science are integrated throughout the curriculum.

State Course ID: 17003A002 **Course Title:** **Carpentry II**

This course provides learning experiences related to the erection, installation, maintenance and repair of building structures and related utilities . Students are instructed in areas of safety, including hand tool, power tool, ladder, scaffolding and the use of safety harnesses. Students demonstrate knowledge of exterior trim and finishes, energy conservation in residential construction, and design of stairs and rafter building. Students gain knowledge of planning and zoning regulations and building codes. Students are introduced to estimating both materials and construction costs, and demonstrate basic knowledge in applying drywall materials, stair-building skills, designing and erecting wall partitions, applying roofing materials, and installing common siding and interior finish. Technology-related mathematics, reading, writing, vocabulary, blueprint reading, and science are integrated throughout the curriculum.

State Course ID: 17005A001 **Course Title:** **Drywall Installation I**

This course provides experiences related to the fastening of drywall panels to the inside framework of residential, commercial, and other buildings, and preparing these panels for painting by taping and finishing joints and imperfections. Planned learning activities allow students to become knowledgeable in fundamental principles and methods. Students develop technical skills related to drywall handling, drywall fastening, drywall taping, and drywall sanding. Instruction includes safety principles and practices, recognition of standard lumber sizes, estimating materials, building concepts and procedures, local state, and national building codes, and blueprint reading.

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Course Descriptions

CIP: 46.0000 - Construction Trades, General.

State Course ID: 17005A002 **Course Title:** **Drywall Installation II**

This course provides experiences related to the fastening of drywall, Drivit panels and stucco to the interior and exterior framework of residential, commercial, and other buildings, and preparing these panels for painting by taping and finishing joints and imperfections. Planned learning activities allow students to attain knowledge in fundamental principles and methods. Students develop advanced technical skills related to drywall handling, drywall fastening, drywall taping, and drywall sanding. Students are also introduced to the use of Drivit panels and the application of stucco finishes. Instruction includes safety principles and practices, recognition of standard lumber and drywall sizes, estimating materials, building concepts and procedures, local, state, and national building codes, and blueprint reading. All learning experiences are designed to allow students to acquire entry-level job skills and knowledge.

State Course ID: 17008A001 **Course Title:** **Masonry I**

This course introduces students to the development and manufacture of brick and concrete block. Instruction concentrates on learning how to handle the trowel and lay brick to the line accurately. Skills involving the use of additional tools are also introduced at this level, so that students have a working knowledge of a mason's basic tools. In addition, students are introduced to the skills needed for installing ceramic, stone, vinyl and composite flooring as well as ceramic, glass, and stone wall tile.

State Course ID: 17008A002 **Course Title:** **Masonry II**

This course is designed to build upon the intermediate skills learned in Masonry I. More time on skill development is provided to acquaint students with a wide range of experiences within the trade. Along with the skills already introduced, students continue to improve their speed and efficiency in laying brick and block to the line . Because of the needs of the building industry, greater emphasis is placed on tuck-pointing, cement finishing, and installing glass block windows.

State Course ID: 17011A001 **Course Title:** **Wall Finishing I**

This course provides students with experiences related to the painting and wall covering industry. Introductory experiences consist of finishing both exterior and interior surfaces, mixing, blending, and the proper techniques in applying paints, lacquers, enamels, and varnishes. Students learn to use hand tools in removing old surfaces and preparing new surfaces. Safety and care in handling materials are emphasized in this course. Skills introduced include safety, preparation of surfaces for painting, wall-coverings, concrete finishing, plaster finishing, finishing surfaces, filling holes and cracks, applying primer, and sealing wood surfaces.

State Course ID: 17011A002 **Course Title:** **Wall Finishing II**

This course includes planned learning activities that emphasize the development of more advanced knowledge and skills than those provided in Wall Finishings I . Students are instructed in areas of safety that includes hand tool, power tool, ladder, scaffolding and the use of safety harnesses. Students are introduced to skills in areas such as estimating labor materials, selecting and using spraying equipment, finishing surfaces with wall-coverings, maintaining and repairing of structures, inventory of supplies and equipment, determining basic maintenance procedures for tools and equipment, mixing primer, staining wood, and varnishing wood.

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.