

## <u>Dual Credit (College in the High School)</u> 2024-25 FCCTC



Course Name	Course ID	Total Credits	Instructor	Course Description
Construction Hand and Power Tools	BCT103	1	Todd Swan	Survey of hand and power tools typically used to perform construction work. Emphasis on the development of skills needed to effectively perform layout, measurement, cutting, fastening, and finishing operations. Study also includes maintenance of tools and equipment, safe use of hand and power tools, and emerging tool technology. 1 Credit (0 Lecture - 3 Lab)
Framing Principles	BCT109	4	Todd Swan	Theory and application of framing techniques in residential and light commercial construction. Emphasis on basic principles and skills used in hand and machine woodworking operations. 4 Credits, Corequisite: BCT103
Intro to Web Page Development	BWM 150	3	Sue Mills	Introductory coverage of the Internet and online Web technologies. Skills learned include how to plan, create, and maintain static web pages. 3 Credits (3 Lecture)
3D Parametric Modeling Using Inventor	CAD 122	3	Megan Baker *on hold	3D Parametric Modeling Using Autodesk Inventor® Study and application of solid and surface modeling using Autodesk Inventor® parametric modeling software. Topics include the generation and editing of mechanical parts and assemblies, analysis of mass properties, rendering and animation, and the development of physical models using rapid prototyping (additive manufacturing) equipment. Also included are basic 3D-to-2D documentation techniques.
Intro to Digital Electronics	EET114	3	Steven Wilmot	Study of basic digital logic devices and systems. Device Symbology, Boolean logic expressions, truth tables and timing diagrams will be examined. Combinational logic circuits and their applications will be analyzed. 3 Credits: 3 Hour Lecture Corequisite(s): EET115 (waiver not available) Enrollment requirement: (C) minimum overall GPA
Digital Circuits Applications	EET115	1	Steven Wilmot	Construction of prototype logic circuits. The measurement of static and dynamic electronic characteristics of devices and systems will be studied. 1 Credit: 3 Hour Lab Corequisite(s): EET114 (waiver not available) Enrollment requirement: (C) minimum overall GPA
Electronic Circuits & Devices I	EET116	5	Steven Wilmot	on basic electronic parameters such as current, voltage, resistance, inductance, and capacitance. Additional topics include series, parallel, and series/parallel circuits as well as discrete solid-state devices, including rectifying diodes, light emitting diodes, photodiodes, zener diodes, bipolar transistors, and thyristors. 5 Credits: 3 Hour Lecture, 6 Hour Lab Enrollment requirement: (C) minimum overall GPA and (C) minimum overall Algebra I final
Engineering, Technology & Society	EET 124	3	Megan Baker *on hold	Engineering, Technology, and Society Introduction to the basic concepts and applications of computer and engineering technologies and the effects on professional and casual users, their employers and employees, and society. Applied skills include the use of current computer technology for data/information collection and organization; visualization, analysis, and interpretation of numeric computations; and the dissemination and presentation of solutions to engineering technology problems. 3 Credits (2 Lecture - 3 Lab).
Networking I	EET145	4	Tim Byers	Fundamental concepts of operation, installation, and configuration of the hardware & operating system software for computer networks. Emphasis on the hands-on, practical experiences needed to service enterprise computing systems used in industry. Network topologies, protocols, cabling systems, & server operating system software installation & service configuration are covered, emphasis on entry-level skills for network professionals. Prereq: Placement by Math Examination
Intro to Ornamental Horticulture	HRT101	1	Dave Perry	Overview of the diverse ornamental horticulture industry, including the worldwide scope and economic impact of the industry in today's marketplace. Emphasis on information access through the Internet, trade journals, trade organizations, the horticulture industry, guest speakers, and visitations to various horticultural businesses. Exploration includes products, services, and information used in the industry; production and marketing (wholesale and retail) of horticultural products and services; and traditional and nontraditional career paths within the industry.

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Ornamental Plants	HRT113	3	Dave Perry	Introduction to the fields of study of horticulture. Outdoor identification of annuals, perennials, woody shrubs and trees, weeds, and wildflowers. The use of these plant materials in the landscape is stressed. 3 Credits (2 Lecture - 3 Lab).
Basics of Medical Terminology	MTR104	3	Marla Moore & Med Asst Instructor *on hold	Foundation for the use of the language of medicine, with emphasis on correct pronunciation and spelling, various word parts, abbreviations and symbols, and terms pertaining to body systems. Etiology, symptomatology, pathology, and diagnostic procedures for identifying various disease processes provide an increased understanding of medically related conditions and procedures. 3 Credits (3 Lecture) As needed.
Mill Applications	MTT128	4	CIM Instructor *on hold	Introduction to the theory and practical applications of basic metalworking. Emphasis on mill applications, industrial shop safety, material selection, job planning, bench-work, quality control, and inspection. Milling machines, hand tools, drill presses, pedestal grinders, band saws, and precision-measuring equipment are used to complete projects. 4 Credits (1 Lecture - 9 Lab)
Lathe Applications	MTT129	4	CIM Instructor *on hold	Introduction to the theory and practical applications used to safely set up and operate a metal turning engine lathe. Operations such as turning, facing, boring, grooving, drilling, turning tapers, single-point threading, and performing cut-off procedures are implemented. Three- and four-jaw chucking techniques and turning between centers are used to complete required projects.
Shielded Metal Arc I	WEL114	2	Caitlin O'Donnell *on hold	Introduction to the principles and practices of basic Shielded Metal Arc Welding (SMAW) using various types of mild steel electrodes in all positions. The fundamentals of AC and DC current and various types of power sources are covered. 2 Credits (1 Lecture - 3 Lab) Corequisite(s): WEL116.
Shielded Metal Arc II	WEL116	2	Caitlin O'Donnell *on hold	Hands-on practice with various electrodes and power sources using AC and DC current in all positions. 2 Credits (0 Lecture - 6 Lab) Corequisite(s); WEL114.
Gas Metal Arc I	WEL120	2	Caitlin O'Donnell *on hold	Principles and applications of Gas Metal Arc Welding (GMAW), applied to ferrous and non- ferrous metals and their alloys. Hands-on work includes performing single and multi-pass welds using a variety of electrode wire types, diameters, and transfer modes. Corequisite(s): WEL124.
Gas Tungsten Arc I	WEL123	2	O'Donnell *on	Introduction to the Gas Tungsten Arc Welding (GTAW) process. Theory is applied to related equipment, electrical concepts, material properties, arc characteristic, puddle control, and appropriate application of filler materials. Welding of ferrous and non-ferrous metals in all positions is covered. Admittance to course by successful completion of prerequisites or permission of instructor. 2 Credits (1 Lecture - 3 Lab) Prerequisite(s): WEL113.  Coreguisite(s): WEL129.
Gas Metal Arc II	WEL124	2	Caitlin O'Donnell *on hold	Continued laboratory practice of Gas Metal Arc Welding (GMAW). Activities include fundamental applications on ferrous and non-ferrous metals in all positions using various modes of metal transfer and wire electrodes. 2 Credits (0 Lecture - 6 Lab) Corequisite(s): WEL120.
Gas Tungsten Arc II	WEL129	2	Caitlin O'Donnell *on hold	Laboratory activities, with emphasis on the welding of ferrous and non-ferrous metals in various joint configurations. All welding is done using all positions. Joining dissimilar metals and metal identification are covered. Admittance to this course by successful completion of prerequisites or permission of instructor. <i>Prerequisite(s): WEL113. Corequisite(s): WEL123.</i>
Flux Cored I	WEL 132	2	Caitlin O'Donnell *on hold	Advanced theory on the advantages and disadvantages of Flux-Cored Arc Welding (FCAW) will be emphasized. The American Welding Society's (AWS) numbering system for FCAW will be explained. Other topics, which will be covered, are technical terms, gases, their mixtures, and the various types of fluxes used. 2 Credits (1 Lecture - 3 Lab) Corequisite(s): WEL136
Flux Cored II	WEL 136	2	O'Donnell *on	Continuation of the hands-on activities introduced in WEL132. Weld with the flux-cored arc welding process using semi-automatic machines in all positions with a variety of electode wires, diameters and gases. 2 Credits (0 Lecture - 6 Lab) Corequiste(s): WEL 132