

Sierra College CTE Programs (Skills Certificates)

A skills certificate is designed to provide career technical skills, it is not equivalent to an associate degree.

The following programs can be completed while in high school (must register through the Academic Enrichment Program) with completion of 4 or fewer college classes and earn a Skills Certificate from Sierra College.

[Additional CTE Certificates](#) available that require more than 4 classes. [Similar programs available through Los Rios.](#)

Students must check the [Sierra College Class Schedule](#) to confirm class availability, some classes may be offered online.

In some cases classes may be taken in any order, check prerequisites in course description. [Workshops](#)

Skills Certificate	Description	Course 1	Course 2	Course 3	Course 4	Units
Advanced Manufacturing						
Drafting Essentials	Basic drafting support knowledge and skills for entry level work in the fields of architecture and CAD.	ADVM 1 - Technical Drafting I (3 units)	ADVM 2 - Technical Drafting II (3 units)	BI 10 - Architectural Drawing I (3 units)	BI 11 - Architectural Drawing II (3 units)	12
Foundations of Modern Machining	Modern manufacturing skills, knowledge, and abilities to enter the workforce.	ADVM 62 - Introduction to Computer Aided Design and Manufacturing (CAD/CAM) (2.5 units)	ADVM 66 - CNC Machining Level 1 (3 units)	ADVM 67 - CNC Machining Level 2 (3 units)	N/A	8.5
Applied Art and Design						
Digital Illustration	Gain proficiency in illustration. Valuable for those preparing for careers in illustration, animation and gaming.	AAD 44 - Sketching for Design or ART 4A - Drawing I (3 units)	AAD 55 or ART 55 - Illustration (3 units)	AAD 62 - Graphic Computer Illustration (3 units)	AAD 71 or ART 71 - Introduction to Digital Painting (3 units)	12
Graphic Design	Gain proficiency in design concepts, software and image manipulation related to creating print and publication design. Valuable for those preparing for a career as a graphic designer.	AAD 70 - Introduction to Digital Design (3 units)	AAD 60 - Graphic Design: Principles and Process (3 units)	AAD 52 - Publication Design I (3 units)	AAD 75 or PHOT 75 - Introduction to Digital Imaging (3 units)	12
Visual Arts Media	Gain proficiency in techniques for conceptualizing and creating visual images. Valuable for those preparing for a career in the visual arts and media,	AAD 12 or COMM 12 - Visual Communication	AAD 44 - Sketching for Design or ART 4A	AAD 70 - Introduction to Digital Design	PHOT 60A - Elementary Photography	12

	providing knowledge and technical skills applicable to digital art and design, communication studies, business and marketing.	(3 units)	- Drawing I (3 units)	(3 units)	(3 units)	
<u>Web Design</u>	Gain proficiency in software and technologies for creating webpage design. Valuable for those preparing for a career as a web designer.	<u>AAD 85</u> - Introduction to Web Design (3 units)	<u>AAD 86</u> - Intermediate Web Design (3 units)	<u>AAD 87</u> - Content Management Systems for Designers (3 units)	<u>AAD 90</u> - Interaction Design (3 units)	12

Building Industries

<u>Architectural Drafting Specialist</u>	Drafting support knowledge and abilities to enter workforce at the specialist level. Skills relative to specialized architectural documentation used in architectural and civil construction trades.	<u>BI 10</u> - Architectural Drawing I (3 units)	<u>BI 11</u> - Architectural Drawing II (3 units)	<u>BI 12</u> - Architectural Drawing III-BIM (Building Information Modeling) (3 units)	<u>BI 8</u> - Civil Applications of Computer-Aided Design (3 units)	12
<u>Construction Basics</u>	Prepares students to work safely for small to large home builders in a labor role. Provides foundation to help employers directly build residential homes.	<u>BI 1</u> - OSHA Construction Safety Training (1 unit)	<u>BI 3</u> - Introduction to Construction and CNC Woodworking (3 units)	<u>BI 5</u> - Introduction to the Built Environment (3 units)	N/A	7

Business

<u>Interdisciplinary Business Entrepreneurship</u>	Provides foundational business skills for entrepreneurs in any discipline and is fully customizable to fit students' goals. Classroom learning mixed with apprenticeships and internships to help them launch new ventures.	<u>BUS 241</u> - Entrepreneurship-Starting a Small Business or <u>BUS 243</u> - Social Entrepreneurship (3 units)	<u>BUS 242</u> - Entrepreneurship-Small Business Management (3 units)	<u>BUS 28</u> - Independent Study (or other 28 or 95 course) or <u>BUS 95</u> - Internship in Business (3 units)	N/A	9
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Human Development and Family

<u>Associate Teacher</u>	Allows work as a fully qualified teacher in a private early care and education (Title 22) program, serving infants/toddlers, preschool-age children, and school-age children in before and after school programs.	<u>HDEV 2</u> - Principles and Practices of Teaching Young Children (3 units)	<u>HDEV 4</u> - Child, Family, and Community (3 units)	<u>HDEV 9</u> - Child Growth and Development (3 units)	<u>HDEV 5</u> - Introduction to Curriculum (3 units)	12
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Information Technology						
<u>Data Specialist</u>	Provides specific knowledge and skills for entry-level data analyst positions. Will allow student to help businesses understand data better.	<u>BUS 252</u> - Excel for Business Applications (3 units)	<u>IT 15</u> - Business Information Systems (3 units)	<u>IT 55</u> - Database Management (3 units)	<u>IT 65</u> - Data Analytics/Visualization Using Tableau (3 units)	12
<u>IT Technician</u>	Provides specific knowledge and skills for entry-level desktop support positions.	<u>IT 100</u> - Information and Communication Technology Essentials (4 units)	<u>IT 105</u> - Computer Network Fundamentals (3 units)	<u>IT 115</u> - Server System Administration (3 units)	N/A	10
Photography						
<u>Alternative Processes in Photography</u>	To broaden expressive abilities beyond traditional photography. Prepares for creative image making for advertising and portrait photography markets.	<u>PHOT 60A</u> - Elementary Photography (*prerequisite only) (*3 units)	<u>PHOT 60B</u> - Intermediate Black and White Photography (3 units)	<u>PHOT 92</u> - Alternative Processes (3 units)	<u>PHOT 93</u> - Advanced Alternative Processes (3 units)	9*
<u>Color Photography</u>	Create visually stimulating images utilizing the power of color. Focuses on the aesthetic use of color, as well as technical mastery of color balancing, accuracy and manipulation. Necessary for lab technicians and photographers.	<u>PHOT 60A</u> - Elementary Photography (*prerequisite only) (*3 units)	<u>PHOT 75</u> or <u>AAD 75</u> - Introduction to Digital Imaging (3 units)	<u>PHOT 78</u> - Digital Photography (3 units)	<u>PHOT 80</u> - Color Photography (3 units) + 1 unit Field Workshop (PHOT <u>90I</u> , <u>90L</u> , <u>90N</u> , or <u>90T</u>)	10*
<u>Landscape Photography</u>	Trains in the techniques used in creating expressive images of the environment. Prepares for work capturing stock photography for magazines, web sites and other visual media.	<u>PHOT 60A</u> - Elementary Photography (*prerequisite only) (*3 units)	<u>PHOT 78</u> - Digital Photography (3 units)	<u>PHOT 80</u> - Color Photography (3 units)	2 Field Workshops (PHOT <u>90L</u> , <u>90N</u> , or <u>90T</u>) (1 unit each/2 units total)	8*
Welding Technology						
<u>Gas Metal Arc Welding</u>	Prepares for a broad understanding of the wire feed processes of GMAW using solid wires on Carbon Steel and Aluminum with multiple types of metal transfer modes. Not equivalent to the Welding Certificate and does not replace Welder Certification.	<u>WELD 1A</u> - Introductory Welding for Metalworking (2 units) (usually 5 weeks)	<u>WELD 2A</u> - Wire Feed Welding Processes-Career Path (2 units) (usually 5 weeks)	<u>WELD 3A</u> - Introduction to Gas Welding-Preparing for GTAW (2 units) (usually 5 weeks)	<u>WELD 5A</u> - Introduction to Shielded Metal Arc Welding (SMAW)-Career Path (2 units) (usually 5 weeks)	8

<u>Gas Tungsten Arc Welding</u>	Prepares students for using complex emerging technological aspects of this welding process. Provides exposure to welding a broad range of metals, with concentration on sheet thickness, and knowledge for the industry and artistic application of GTAW. Not equivalent to the Welding Certificate and does not replace Welder Certification.	<u>WELD 1A</u> - Introductory Welding for Metalworking (2 units) (usually 5 weeks)	<u>WELD 3A</u> - Introduction to Gas Welding-Preparin g for GTAW (2 units) (usually 5 weeks)	<u>WELD 3B</u> - Gas Tungsten Arc Welding (TIG)-Career Path (2 units) (usually 5 weeks)	<u>WELD 5A</u> - Introduction to Shielded Metal Arc Welding (SMAW)-Career Path (2 units) (usually 5 weeks)	8
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