

New course will be offered at...	Course Description from SCED Version 12 -	Will this class be offered at all other MS's/HS's? Why or why not?	Does this course replace an existing class? If so, what course?	What graduation requirement does this fulfill?	What pathway of study does this fit and what is the course sequence?	RATIONALE: PROGRAM/PATHWAY Does this course complement or expand a previously existing program or pathway within a school? If yes, please explain.	Course Level requested	Grading scale	Course Title...	Does this course have a prerequisite?	Length of course in weeks?	Is there a work-based learning code?
AHS, MoHS, WAHS	Students will build on their knowledge of mechatronic systems in this second-year course. Mechatronic systems, comprised of mechanical, electrical, and software systems, form the foundation of robotics, automation, and advanced manufacturing (such as three-dimensional [3D] printing). Students will explore mechanical, electrical, and pneumatic/hydraulic systems related to mechatronics, as well as relevant computer technologies. Upon successful completion, students may qualify for industry certification. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations.	Yes	no	CTE sequential	STEM	yes its part of the Solve/Blueprint pathway	Dual Enrollment	Standard	PVCC ELE239 Programmable Controllers	No	36	No
AHS, MoHS, WAHS	Renewable energy sources are steadily becoming more important in the global economy as nations strive to replace fossil fuels with eco-friendly power. In this course, students will explore select renewable energy technologies and gain hands-on experience in their design and function. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations.	yes	no	CTE sequential	STEM	Solve and Blueprint	Dual Enrollment	Standard		No	36	no
AHS, MoHS, WAHS	The demand for precision machinists is growing along with the resurgence of the U.S. manufacturing industry. Machinists are highly skilled, creative, problem solvers who are task-oriented and self-directed individuals. In this course, students are taught safety awareness and the foundations of machining, including how to accurately apply measurements, use engineering drawings and sketches, and apply metalworking theory to efficiently plan, manage, and perform general machine maintenance and machining jobs. This program is the first step to achieving the skills and experiences to prepare for work in the precision machining industry as well as industry-recognized credentials. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations.	yes	no	CTE sequential	STEM	Solve and Blueprint	Dual Enrollment	Standard	PVCC IND250 Intro to Basic Computer Integrated Manufacturing	No	36	no
AHS, MoHS, WAHS	The demand for precision machinists is growing along with the resurgence of the U.S. manufacturing industry. Machinists are highly skilled, creative problem solvers who are task-oriented and self-directed individuals. This course emphasizes advanced manual machining processes. Students increase their skills in applying precise measurements, using engineering drawings and sketches, and applying metalworking theory to safely and efficiently plan, manage, and perform general machine maintenance and machining jobs. This program is the first step to achieving the skills and experiences to prepare for work in the precision machining industry as well as industry-recognized credentials. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations.	yes	no	CTE sequential	STEM	Solve and Blueprint	Dual Enrollment	Standard	PVCC IND251 Automated Manufacturing Systems I	No	36	no

AHS, MoHS, WAHS	Students will build on their knowledge of mechatronic systems in this advanced course. Mechatronic systems are comprised of mechanical, electrical, and software systems, and form the foundation of robotics, automation, and advanced manufacturing (such as three-dimensional [3D] printing). Students will apply principles related to pneumatic, electro-pneumatic, and hydraulic control circuits as well as basic digital logic and programmable logic controllers (PLCs) in a complex mechatronic system. Students will troubleshoot and resolve malfunctioning pneumatic and hydraulic components and circuits. Upon successful completion, students may qualify for industry certification. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations.	yes	no	CTE sequential	STEM	Solve and blueprint	Dual Enrollment	Standard	PVCC MEC161 Basic Fluid Mechanics - Hydraulics/Pneumatics	No	36	no
AHS, MoHS, WAHS	Our ability to function and progress in the modern age is dependent on electronics and robotics technologies. This course provides a depth and breadth of the basic skills required in today's automated manufacturing environment. Students will explore careers, build circuits, and use principles of physics to analyze basic electronic and robotic components. Students will also earn the general industry Occupational Safety and Health Administration (OSHA) 10 card. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations.	yes	no	CTE sequential	STEM	Solve and Blueprint	Dual Enrollment	Standard	PVCC ETR286 Principles and Applications of Robotics	No	36	no