CTE PROGRAM OF STUDY: C-STEM Information and Communication Technologies, and Engineering

Industry:ICT, ENG

Software and Systems Development

Levels	Grade	CTE/CS Courses	English Language Arts	Math	Social Science	Science	Other Required Courses or Recommended Electives	Dual and/or Concurrent Enrollment
	TK	Computer Science with Robotics for Transitional Kindergarten	English	Mathematics with Robotics for Transitional Kindergarten		Computer Science with Robotics for Transitional Kindergarten Engineering Design with Robotics for Grades TK-2		
Elementary	K	Computer Science with Robotics for Kindergarten	English	Mathematics with Robotics for Kindergarten		Computer Science with Robotics for Kindergarten Engineering Design with Robotics for Grades TK-2		
	Recommended Activities: RoboBlocky							
	1	Computer Science with Robotics for Grade 1	English	Mathematics with Robotics for Grade 1		Computer Science with Robotics for Grade 1 Engineering Design with Robotics for Grades K-2		
	Recommended Activities: RoboBlocky							
	2	Computer Science with Robotics for Grade 2	English	Mathematics with Robotics for Grade 2		Computer Science with Robotics for Grade 2 Engineering Design with Robotics for Grades K-2		
	Recommended Activities: RoboBlocky							
	3	Computer Science with Robotics for Grade 3	English	Mathematics with Robotics for Grade 3		Computer Science with Robotics for Grade 3 Engineering Design with Robotics for Grades 3-5		
	Recommended Activities: RoboPlay Competition							
	4	Computer Science with Robotics for Grade 4	English	Mathematics with Robotics for Grade 4		Computer Science with Robotics for Grade 4 Engineering Design with Robotics for Grades 3-5		
	Recommended Activities: RoboPlay Competition							
	5	Computer Science with Robotics for Grade 5	English	Mathematics with Robotics for Grade 5		Computer Science with Robotics for Grade 5 Engineering Design with Robotics for Grades 3-5		

	Grade								
		Recommended Activities: RoboPlay Competition							
	6	Introduction to Computer Science with Robotics	English	Mathematics with Robotics for Grade 6		Computer Science with Robotics for Grade 6 Engineering Design with Robotics for Grades 6-8			
		Recommended Activities: RoboPlay Competition							
M i d d l e	**7**	Introduction to Physical Computing with Arduino	English	Grade 7 Mathematics with Computing	World History / Geography	Computer Science with Robotics for Grade 7 Engineering Design with Robotics for Grades 6-8	Physical Education		
		Recommended Activities: RoboPlay Competition, GIRL Camp							
	8	Introduction to Computer Programming (Ch/C/C++)	English	Grade 8 Mathematics with Computing	US History / Geography	Computer Science with Robotics for Grade 8 Engineering Design with Robotics for Grades 6-8	Physical Education		
		Recommended Activities: RoboPlay Competition, GIRL Camp							
S e c o n d a r y - H S N a m e	**9**	Computer Science with Robotics for Grades 9-12	English	Algebra I with Computing and Robotics (Honors) or IM1 with Computing and Robotics (Honors)		Engineering Design with Robotics for Grades 9-12	Math Lab with Computing and Robotics (C-credit)	Physical Education	
		Recommended Activities: RoboPlay Competition							
	10	AP Computer Science Principles with Robotics	English	Geometry with Computing and Robotics (Honors) or IM2 with Computing and Robotics (Honnors)	World History	Biological Science	Physical Education		
		Recommended Activities: RoboPlay Competition,, GIRL+ Camp. Add to digital portfolio.							
	11	Computer Programming for Solving Applied Problems (C Programming)	English	Algebra II with Computing and Robotics. IM3 with Computing and Robotics	US History		Foreign Language I or Visual & Performing Arts ★ (Districts may allow CTE to fulfill this)		
		Recommended activities: RoboPlay Competition, , GIRL+ Camp, Job Shadowing. Add to digital portfolio.							
	12	Robotic Technologies (Arduino, Sensor-Based		AP Statistics or Pre-Calculus	Government(semester)				STAT120: Statistics

12	(Arduino, Sensor-Based Robotics)		(with Computing and Robotics)	Economics (semester)				Statistics ★

Recommended activities: RoboPlay Competition, Job Shadowing, Work Based Learning, Service Based Learning, Enroll at Community College. Add to digital portfolio.

CTE Courses

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13	Advanced Computer Programming in C						
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Comments:
• Prerequisite requirements may vary by school and may alter the sequence of courses above.
• This template is based upon requirements for CSU transfer pattern and assumes that all basic skills (remedial) coursework is completed.
• Where there are course numbers identified, the course number references the CID course. Course content for these courses may be found at www.c-id.net/descriptors. Per Title 5, students may only receive credit for articulated high school work upon completion of a credit by exam mechanism that ensures that the objectives of the community college course have been met. Completion of an articulated course in high school does not guarantee receipt of credit at the community college.

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