



Computer Science at Sacramento New Technology High School - Jerry J. Huang

PATHWAY: Software and Systems Development, SECTOR: Information and Communication Technologies (ICT)

Mission: Sacramento New Technology High School's vision is to support the unique needs of every student in an environment where they can feel safe and experience academic success.

Vision: The school community (students, parents, staff, and administration) believes that it must focus on four areas in order to realize this vision: Challenge, Engage, Learn and Achieve.

Pathway Student Outcomes

Updated: 12.20.2019

SCOE/DISTRICT Course Code and Infinite Campus Course Title	Full Name of Course Title NOTE: The portion of the course name in parenthesis, (), are not official course title names, but more part of our "theming" and "flavoring" in the application of the course content. Click title view Course of Study Document	State CBED Code	Recommended Grade Level
<p>Introduction I. CKC111/CKC112 (old: CTK111/CTK112)</p> <p>Exploring Computer Science</p>	<p><u>CS1: Exploring Computer Science and Robotics Programming</u> Exploring Computer Science develops around a framework of both computer science content and computational practice. Assignments and instruction are contextualized to be socially relevant and meaningful for diverse students. Units utilize a variety of tools/platforms, and culminate with final projects around the following topics of Human Computer Interaction, Problem Solving, Web Design, Programming, Data Analysis, and Robotics. State program website: exploringcs.org</p> <p>Prerequisite: Integrated Math I Articulation Status: Active Sacramento City College: CISC 310: Introduction to Computer Information Science</p>	4634	9,10
<p>Concentrator II.CKC221/CKC222</p> <p>Media Design and Programming</p>	<p><u>CS2: Video Game Media Design and Programming</u> Video Game Design and Programming provides instruction to students on how to design, code, and test interactive media. Students will implement graphics programming techniques for object movement that mimic the laws of physics and modeled with higher order algebraic equations. This course also emphasizes the understanding and the interdisciplinary nature of media-related computer programming. The course utilizes industry standard programming languages and tools and student who have a strong background in digital media and design can fully apply their knowledge to media design projects. Students will also develop critical thinking, problem solving, effective communication, and collaboration skills.</p> <p>Prerequisite: Integrated Math I and CS1 (Mark of A or B or teacher approval) Articulation Status: Active Sacramento City College: GAME 301 (formerly GCOM 420): Video Game Design</p>	4607	10,11,12
<p>Capstone III. CKC331/CKC332</p> <p>Advanced Computer Science: Algorithm</p>	<p><u>CS3: App Design and Programming</u> App Design integrates core algorithm design concepts in computer science with mobile device application developed and design. Students integrate mobile device application concepts with college</p>	4619	11,12

<p>Design and Implementation</p>	<p>level computer science concepts. This course is a capstone course in a sequence of ICT Sector Pathway.</p> <p>Prerequisite: Integrated Math II and CS2 Articulation Status: Active Sacramento City College: CISP 301: Algorithm Design and Implementation</p>		
<p>Next Step College Course</p> <p>CISP360: Introduction to Structured Programming</p> <p>(Currently only at the Colleges)</p>	<p><u>Introduction to Structured Programming</u></p> <p>This course is an introduction to the "C" programming language. We will be learning C in a Linux environment. You will learn how to edit, compile, link, use makefiles and libraries on a Linux machine. Topics include program design, use of variables, control flow, constants, use of libraries, functions, arguments, external variables and input/output. Knowledge of "C" is essential for computer programmers and analysts working in or with governmental agencies or educational institutions. The C programming language emphasizes the concepts of structured programming - you divide big jobs into smaller tasks to make them easier to solve. You will design, write, test, and run many C programs. These assignments will help you understand the use of procedures, functions, control structures, data structures and files. We will also learn some C++ this semester.</p> <p>Prerequisite: CISP301 (Mark of A or B) Articulation Status: N/A Sacramento City College: CISP 360 Introduction to Structured Programming</p>	<p>N/A</p>	<p>12</p>

Articulation Notes:

- Course just has to be listed (not necessarily taught that semester)
- A new course section is created for the FOLLOWING semester/summer
- Grades A or B and Profession Approval of portfolio/exam/etc.



