

TEACHING COMPUTER SCIENCE

Meeting the Demand in California

Who can teach CS when it's a core academic subject?

When computer science fulfills A-G graduation requirements, a secondary teacher with a credential in math, business, or ITE (Industrial Technology Education) can teach computer science in California. Single Subject Credential holders in other subject areas can also add a supplementary authorization in math or computer science.



Math



Business



Industrial
Technology
Education

Who can teach CS when it's career technical education (CTE)?



Information
Communication
Technology

When a CS course is part of a Career Pathway and is coded with the California Department of Education CTE course code, then only a CTE teacher with an Information Communication Technology or in some cases Digital Media Art and Design credential can teach it, thereby excluding all subject matter credential holders and those with the computer science supplementary authorization.

When courses are coded as CTE, districts are eligible for additional funding from Perkins, Career Pathways, or other CTE incentive grant programs.



Who else can teach CS?

Any non-CTE/ICT teacher with a single or multiple subjects teaching credential can add on the Computer Science Supplementary Authorization by taking additional college level coursework (20 semester units/10 upper division semester units) including

- computational thinking
- computing practice and programming
- computers and communication devices
- impacts of computing (e.g., social, ethical, legal).

There are various CS Supplementary Authorization Programs available across CA, including SF State, UC Riverside, UC San Diego, UC Berkeley, and UCLA. More information can be found in the CSforCA Equity Implementation Guide at csforca.org/resources

Anyone with a multi-subject credential can integrate CS concepts & activities into their instruction in K-8.



Computer Science
Supplementary
Authorization

Professional Development



In addition to ensuring teachers have CS credentials, professional development opportunities are essential to help build the capacity of teachers to teach computer science. This PD should be ongoing, and not limited to just orientation. Learn about PD opportunities at summerofcs.org and csteachers.org/PD.

CS should be both A-G and CTE

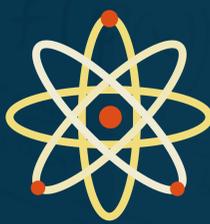
Linked learning is an approach that integrates college and career preparation. High quality computer science prepare students for college, careers and community engagement and should be offered to students regardless of post-graduate pathways.

Currently, a course needs to be coded at the CDE with either a CTE course code or an A-G course code which affects the teacher credential required to teach it.

We believe California should provide dual course codes in Computer Science to increase teacher capacity and expand offerings to all students,



Who else should be able to teach CS?



SCIENCE TEACHERS

As Computer Science gets further integrated in the Next Generation Science Standards Curriculum Frameworks, we need to add teachers who hold various science subject matter credentials to be able to teach computer science too!

Hiring Teachers of Color



Teachers of color can provide unique connections to students who would benefit from seeing themselves represented in a CS classroom. CSforCA supports efforts to recruit, build capacity, retain, and sustain teachers of color in CS education.

The Edtrust-West released a report that provides information on why hiring teachers of color matters and how they can best be supported: <https://west.edtrust.org/resource/seen-heard-reflected-a-look-at-californias-teacher-of-color-shortage/>

Who can make change?



All stakeholders - both local and statewide - need to work together to develop solutions that improve equitable opportunities for teaching and learning computer science education.



CTC, CDE,
LEA, COE,
SBE,
BOARS



EDUCATION
ADVOCATES



TEACHERS,
STUDENTS,
PARENTS



INDUSTRY