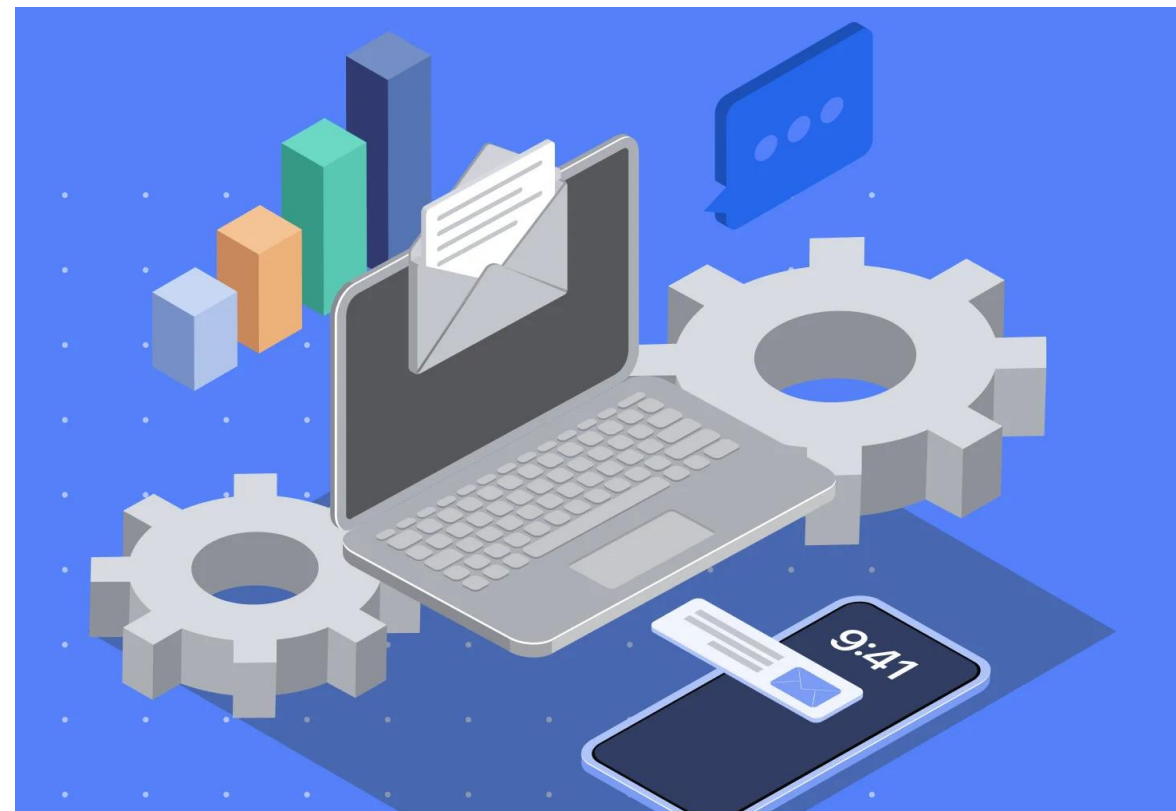


eC2 Academy Curriculum Design

V 2025



高中生必須具備哪些電腦能力

Dr. Eric Chou

IEEE Senior Member, Adjunct Professor, Lewis University

<http://ecode24.com>, [facebook/DrEricChou](https://www.facebook.com/DrEricChou)

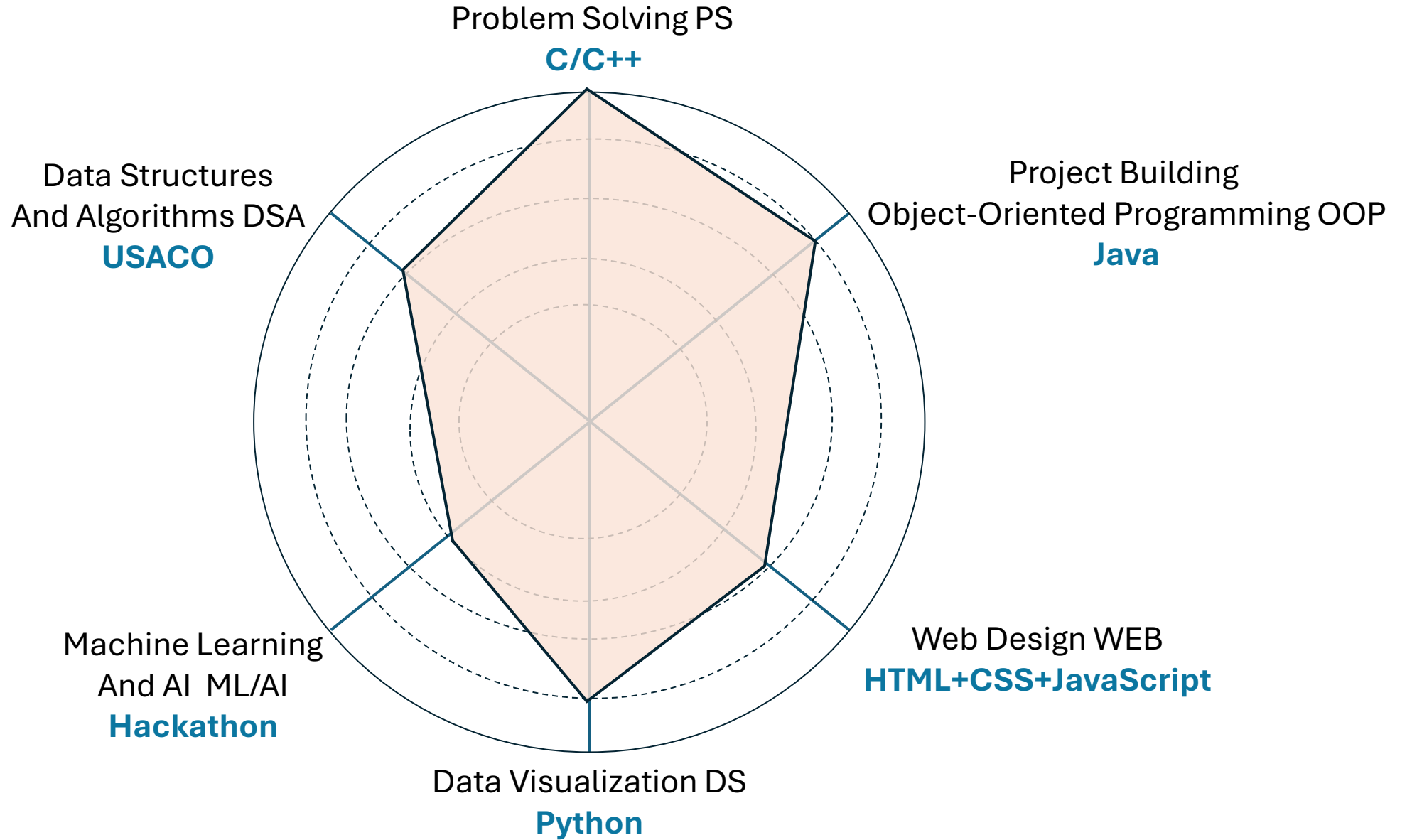


57%

of U.S. high schools now
offer computer science.

**State of
Computer
Science
Education
2023**

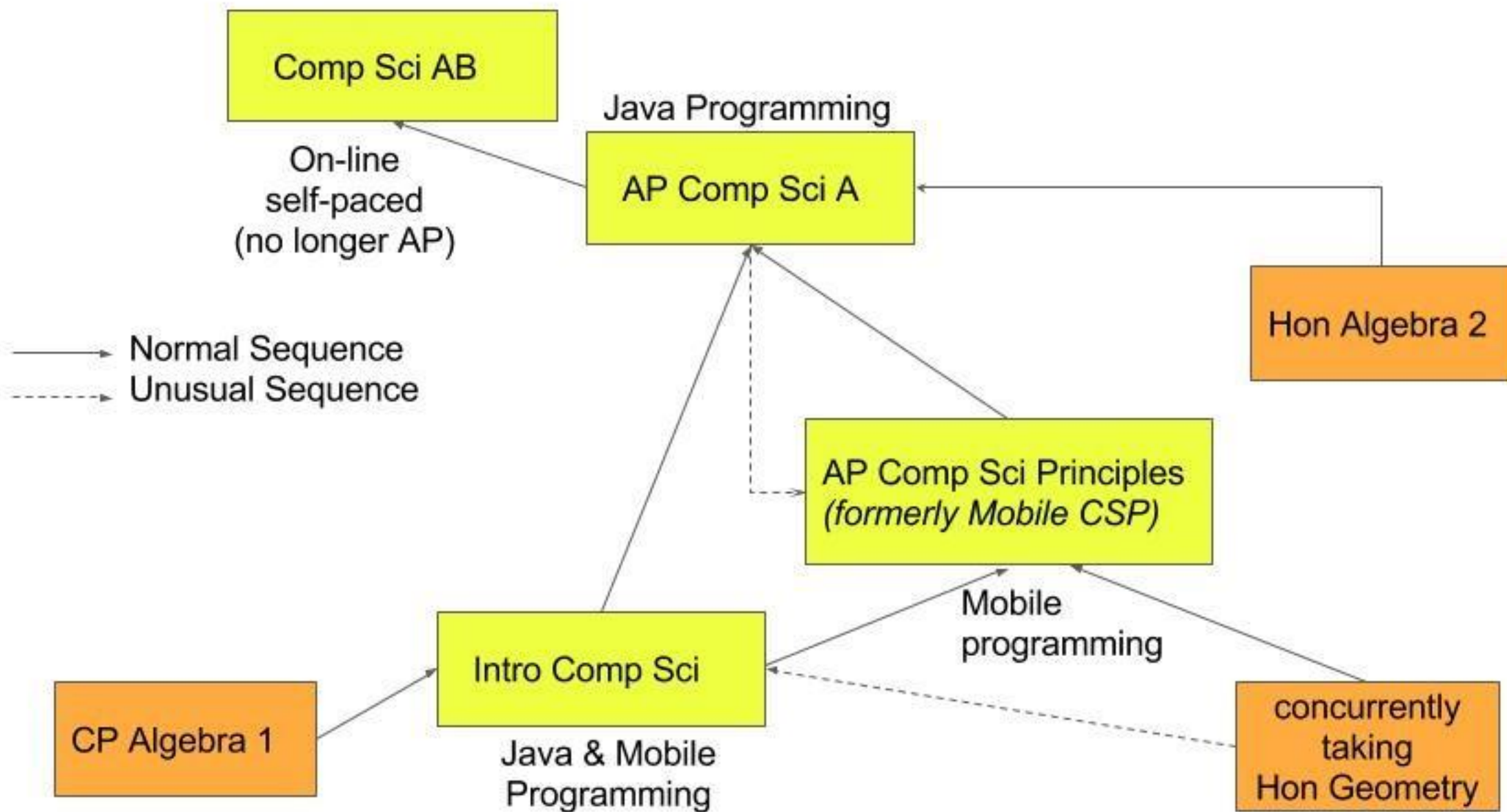
[ADVOCACY.CODE.ORG/STATEOFCS](https://advocacy.code.org/stateofcs)



高中電腦教育目標

- 建立基本編程能力
- 接續大學 CS 專業學科能力
- 培養及訓練同學們參與競技型編程比賽, 社團活動, 社區學院雙修課程, 科學研究及論文創作

Typical Computer Science Course Sequences



AP Computer Science Principles 計算機概論

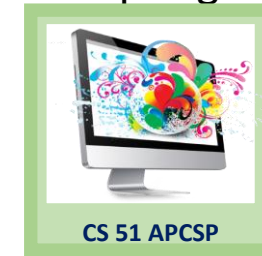
Summer



Fall



Spring



AP Computer Science A 計算機程式設計

Summer



Fall



Spring

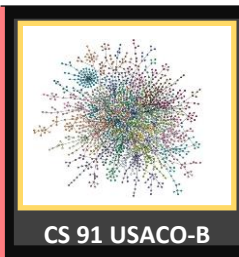


C/C++, USACO 資料結構與演算法

Summer



Fall



Spring



eC Academy Courses

UC Berkeley Lower Division

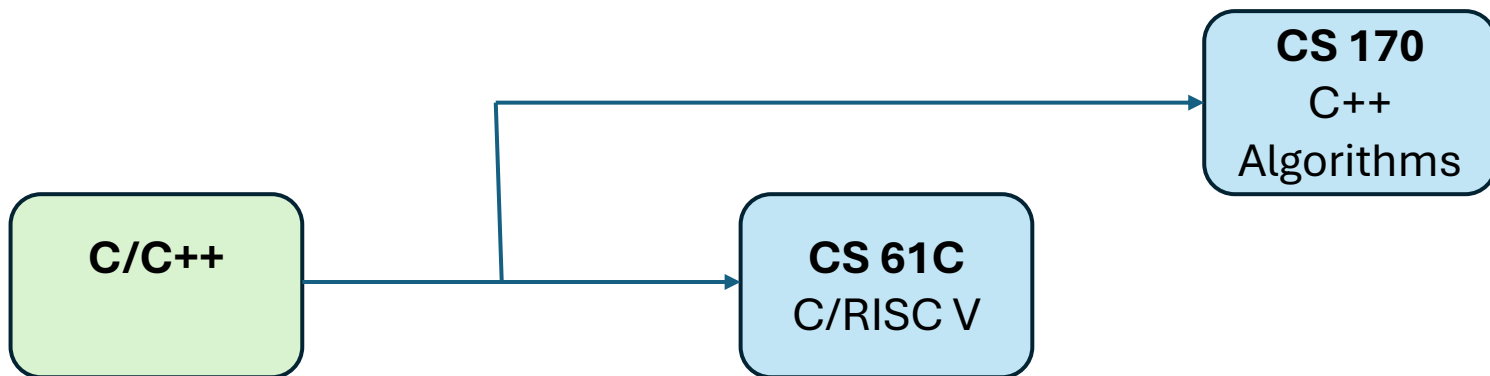
伯克萊初級計算機課程

Introduction to CS



UC Berkeley Lower Division

伯克萊高級計算機課程



Entrepreneurship

LeetCode

Internship Preparation

Presentation
Skills

Innovation

Science Fair Science Bowl

Qualitative
Research

Technical
Writing

Domain
Knowledge

Research

USACO
Competitive Programming

Discrete
Math

Data Structure
Algorithms

Problem Solving

Hackathon Competition

Backend
Design

Database
SQL

Web
Framework
react.js/Node.js

Website Design and Software Development

Data
Science

Machine
Learning

Neural
Network

Data Science

Linear Alg. PCA
MV Calculus

C++ 1/2/3

Java 1/2/3

Web Design
HTML/JavaScript

Python 1/2/3

Basic Computer Science Education: Languages and Computer Science Principles

