Washington Office of Superintendent of
PUBLIC INSTRUCTION

Guidance on Computer Science State Course Codes

2025

GUIDANCE ON COMPUTER SCIENCE STATE COURSE CODES

2025

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OVERVIEW

Course codes are critical for reporting and gathering information statewide on student enrollment and teacher certification. The Office of Superintendent of Public Instruction (OSPI) collects student and educator data through the Comprehensive Education Data and Research System (CEDARS). The collected data is mandated by state or federal law or approved by the Data Governance Group at OSPI.

CEDARS maintains a course catalog called Appendix V which outlines all courses offered at public schools in Washington. Each course is associated with a state course code following the School Courses for the Exchange of Data (SCED) system by the National Forum on Education Statistics (NCES). SCED codes are subcategorized by two-digit subject codes corresponding to different subject areas.

Computer science (CS) is unique as a subject area in that most Washington CS courses fall under subject code 10 (Information Technology), but not all courses under subject code 10 are considered CS. Moreover, as of 2024 there is one CS course under subject code 21 (Engineering and Technology) and one CS course under subject code 25 (Integrative Learning). To account for this, Appendix V includes an explicit "Computer Science" column to indicate whether a course is categorized as CS.

Definition of Computer Science

While many states use SCED codes to organize courses, there are also many definitions of computer science. Courses that one state may recognize as CS may not be recognized by another state, partly due to differing interpretations of what constitutes a CS course. Additionally, technological advancements, changes in industry, and legislative requirements are contributing factors to shifting priorities and definitions of CS. As such, OSPI maintains the list of CS courses and takes into consideration input from the CS education community to appropriately address these changes.

One widely recognized definition of CS, and one that may serve as a reference for this document, is the following from the K-12 Computer Science Framework:

> *"The study of computers and algorithmic processes, including their principles, their hardware and software designs, their implementation, and their impact on society."*
> *-Allen Tucker*

OSPI Annual CS Data Report

During the 2019–20 Legislative session, HB 1577 *Concerning K-12 computer science education data* was passed into law, stating:

> *The legislature finds that to close the gender gap in computer science fields, it is important that computer science student participation rates are incorporated into the existing reporting infrastructure... [and] that it is critical to track the gender and demographic composition of computer science course takers as well as the specific courses that they are taking…*
>
> *Beginning June 30, 2020, and by June 30 annually after that, school districts must submit to OSPI, and OSPI must post conspicuously on its website, a report for the preceding academic year that must include the following data:*
>
> - *The total number of computer science courses offered in each school and whether these courses are advanced placement classes;*
> - *The number and percentage of students who enrolled in a computer science program, disaggregated by*
>   - *gender,*
>   - *race and ethnicity,*
>   - *special education status,*
>   - *English language learner status,*
>   - *eligibility for the free and reduce-price lunch program, and*
>   - *grade level; and*
> - *The number of computer science instructors at each school, disaggregated by*
>   - *certification (if applicable),*
>   - *gender, and*
>   - *highest academic degree.*

CEDARS tracks student and educator information including the above disaggregation and more. To fulfill the legislation, data is pulled directly from CEDARS to compile the annually published CS data report. Local education agencies (LEAs) determine the state course code most appropriate for each class offered. As such, it is imperative that school districts code their CS courses with the correct state course code for the annual CS data report to accurately represent the state of CS education in Washington.

High School CS Elective Requirement

The 2019–20 legislative session also passed SB 5088 *Awarding credits for computer science* into law, stating:

> *The legislature recognizes the benefit of computer science and computational thinking in education, not only with respect to educational development, but also in cultivating the skills needed to compete and excel in our state's career landscape…*
>
> *Beginning no later than the 2022–23 school year, each school district that operates a high school must, at a minimum provide an opportunity to access an elective computer science course that is available to all high school students… Any course offered in accordance with this section must be aligned to the state learning standards for computer science or mathematics.*

CS as a Third-Year Math or Science Course

The above law was codified as Revised Code of Washington (RCW) 23A.230.300. In the 2021–22 legislative session, SB 5299 *Allowing the use of computer science credits for the purpose of graduation requirements.* amended this RCW to allow a CS course to be used as an alternative to a third-year math or science course under the following constraints:

> *(4)(a) For purposes of meeting graduation requirements under RCW 28A.230.090, a student may substitute a computer science course aligned to state computer science learning standards as an alternative to a third year mathematics or third year science course if:*
> *(i) Prior to the substitution, the school counselor provides the student and the student's parent or guardian with written notification of the consequences of the substitution on postsecondary opportunities;*
> *(ii) The student, the student's parent or guardian, and the student's school counselor or principal agree to the substitution; and*
> *(iii) The substitution is aligned with the student's high school and beyond plan.*
> *(b) A substitution permitted under this subsection (4) may only be used once per student.*

While any CS course may be used as an alternative to a third-year math or science course toward high school graduation, as of August 2022, public college admissions only recognize AP Computer Science A as an alternative to a senior-year math-based quantitative course. See the Washington Student Achievement Council (WSAC) College Admission Distribution Requirements (CADRs) for public colleges for more information.

COMPUTER SCIENCE COURSE CODE TABLES

Computer Science State Course Codes

This table lists the courses and course codes classified as computer science and meet the above legislative requirements. These courses can be confirmed under the Computer Science column of CEDARS Appendix V (2024–25).

Table 1: Computer Science State Course Codes

State Course Code	Course Name
10011	Computer Science Principles
10012	Exploring Computer Science
10013	PLTW Computer Science Essentials
10014	PLTW Computer Science A
10015	PLTW Computer Science Principles
10016	PLTW Cybersecurity
10019	AP Computer Science Principles
10020	Cybersecurity
10021	*Computer Science Discoveries
10022	*Computer Science (prior-to-secondary)
10052	Database Management and Data Warehousing
10053	Database Applications
10054	Data Systems/Processing
10055	*Particular Topics in Management Information Systems
10097	Management Information Systems—Independent Study
10098	Management Information Systems—Workplace Experience
10099	Management Information Systems—Other
10101	Network Technology
10102	Networking Systems
10108	Network Security
10109	Essentials of Network Operating Systems

State Course Code	Course Name
10151	*Business Programming
10152	Computer Programming
10153	Visual Basic (VB) Programming
10154	C++ Programming
10155	Java Programming
10156	Computer Programming—Other Language
10157	AP Computer Science A
10159	IB Computer Science
10160	Particular Topics in Computer Programming
10197	Computer Programming—Independent Study
10198	Computer Programming—Workplace Experience
10199	Computer Programming—Other
10201	Web Page Design
10203	Interactive Media
10205	Computer Gaming and Design
10206	Mobile Applications
10251	Computer Technology
10253	Information Support and Services
10254	IT Essentials: PC Hardware and Software
10297	Information Support and Services—Independent Study
10298	Information Support and Services—Workplace Experience

State Course Code	Course Name
10147	*Networking Systems—Independent Study
10148	Networking Systems—Workplace Experience
10149	Networking Systems—Other

State Course Code	Course Name
10301	Computer Forensics
21009	*Robotics
25052	*Data Science

Source: Comprehensive Education Data and Research System, Appendix V, 2024–25

*Courses categorized as CS as of 2024–25

CTE CIP Codes and CS State Course Codes

This table contains the Career and Technical Education (CTE) Classification of Instructional Programs (CIP) codes corresponding to suggested CS state course codes. CIP codes act as "buckets" or categories corresponding to certain state course codes. Similarly, V-codes indicate what teacher certifications are necessary to teach a course under the corresponding CIP code. CIP codes, their corresponding teacher certification V-codes, and the suggested state course codes are maintained in CEDARS under Appendix S.

CTE course frameworks must be submitted to OSPI for approval. Frameworks approved under any CIP codes listed in this document and subsequently taught at the high school level will meet the criteria for the CS elective requirement.

In short, only the courses listed in Table 1 count as CS courses and all CIP code alignments are suggestions, not requirements.

Table 2: CTE CIP Codes and CS State Course Codes

CIP Code Prep/Expl	V-Code	State Course Code	Course Name	Subject
110103 Exploratory	V078000 V521206	10001	**Introduction to Computer Technology	Fundamentals of Information Technology
		10002	**Computing Systems	
		10003	**Computer and Information Technology	
		10004	**Computer Applications	
		10005	**Business Computer Applications	
		10006	**Telecommunications	
		10007	**IB Digital Society	
		10008	**Particular Topics in Computer Literacy	
		10047	**Computer Literacy—Independent Study	
		10048	**Computer Literacy—Workplace Experience	
		10049	**Computer Literacy—Other	
		10055	*Particular Topics in Management Informaton Systems	
110201 Preparatory	V078000 V141000 V210100 V470110 V521206	10011	Computer Science Principles	Computer Programming

CIP Code Prep/Expl	V-Code	State Course Code	Course Name	Subject
		10014	PLTW Computer Science A	
		10015	PLTW Computer Science Principles	
		10019	AP Computer Science Principles	
		10151	*Business Programming	
		10152	Computer Programming	
		10153	Visual Basic (VB) Programming	
		10154	C++ Programming	
		10155	Java Programming	
		10156	Computer Programming—Other Language	
		10157	AP Computer Science A	
		10159	IB Computer Science	
		10197	Computer Programming—Independent Study	
		10199	Computer Programming—Other	
110204 Exploratory	V078000 V141000 V210100 V470110 V521206	10205	Computer Gaming and Design	Computer Game Programming
110701 Exploratory	V078000 V141000 V210100 V470110 V521206	10012	Exploring Computer Science	Introduction to Computer Science
		10013	PLTW Computer Science Essentials	
		10021	*Computer Science Discoveries	
		10022	*Computer Science (prior-to-secondary)	
		10152	Computer Programming	
		10160	Particular Topics in Computer Programming	
110801 Preparatory	V078000 V100100 V470110 V521206	10201	Web Page Design	Web Page, Digital / Multimedia and Information Resources Design
		10203	Interactive Media	
		11151	**Digital Media Technology	
		11153	**Digital Media Design and Production	

CIP Code Prep/Expl	V-Code	State Course Code	Course Name	Subject
110802 Preparatory	V078000 V470110 V521206	10052	Database Management and Data Warehousing	Data Modeling and Database Administration
		10053	Database Applications	
		10054	Data Systems/Processing	
110803 Preparatory	V078000 V100100 V470110 V480101 V521206	10202	**Computer Graphics	Video Game Design / Digital Computer Animation for Game Design
		10203	Interactive Media	
		10205	Computer Gaming and Design	
		10206	Mobile Applications	
110901 Preparatory	V078000 V470101 V470110	10101	Network Technology	Computer Systems Networking and Telecommunications
		10102	Networking Systems	
		10108	Network Security	
		10109	Essentials of Network Operating Systems	
		10147	*Networking Systems—Independent Study	
		10149	Networking Systems—Other	
111003 Exploratory	V078000 V141000 V210100 V470110 V521206	10016	PLTW Cybersecurity	Computer and Information Systems Security / Information Assurance
		10020	Cybersecurity	
111004 Preparatory	V078000 V100100 V470110	10201	Web Page Design	Web / Multimedia Management and Webmaster
		10203	Interactive Media	
		10204	**Particular Topics in Media Technology	
111006 Preparatory	V078000 V470110 V521206	10055	*Particular Topics in Management Information Systems	Computer Support Specialist
		***10097	Management Information Systems—Independent Study	

CIP Code Prep/Expl	V-Code	State Course Code	Course Name	Subject
		***10099	Management Information Systems—Other	
		10251	Computer Technology	
		10253	Information Support and Services	
		10254	IT Essentials: PC Hardware and Software	
		***10297	Information Support and Services—Independent Study	
118888 Exploratory	V600097	10098	Management Information Systems—Workplace Experience	Computer and Information Sciences and Support Services Cooperative Worksite Experience
		***10148	Networking Systems—Workplace Experience	
		10149	Networking Systems—Other	
		***10198	Computer Programming—Workplace Experience	
		10248	**Media Technology—Workplace Experience	
		***10298	Information Support and Services—Workplace Experience	
		10998	**Information Technology—Workplace Experience	
150405 Preparatory	V150100 V470101	13102	**Electro-Mechanical Systems	Industrial Robotics Technology / Technician
		21009	*Robotics	
		21010	**Computer Integrated Manufacturing	
150406 Exploratory	V141000 V150100 V210100 V470101	21009	*Robotics	Robotics Foundations
270301 Exploratory	CTE Cert. and Current Applied Math Training	***25052	*Data Science	Applied Math

CIP Code Prep/Expl	V-Code	State Course Code	Course Name	Subject
430116 Preparatory	V078000 V470110 V521206	10108	Network Security	Cyber/Computer Forensics
		10149	Networking Systems—Other	
		***10301	Computer Forensics	

Source: Comprehensive Education Data and Research System, Appendices S and V, 2024–25

*Courses categorized as CS as of 2024–25
**Courses not categorized as CS but aligned with the given CIP code in CEDARS Appendix S
***Course codes with CIP code alignment not yet identified in CEDARS Appendix S as of 2025

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