State of Hawai‘i
Department of Education

Annual Report on Computer Science Education School Year 2023-2024

December 2024

Act 158, Session Laws of Hawai‘i 2021, requires the Hawai‘i State Department of Education to annually report on the computer science courses and computer science content offered during the previous school year at the schools in each complex area.

Hawai‘i State Department of Education
Annual Report on Computer Science Education
School Year 2023-2024

Introduction

The Hawai‘i State Department of Education’s (Department) K-12 Computer Science (CS) Education program is dedicated to equipping students with the knowledge and skills necessary to succeed in an increasingly digital world powered by computing.

The program focuses on fostering critical thinking, problem solving, and computing literacy skills through comprehensive standards-based courses that are aligned to the five core computer science concepts across all grade levels. Emphasizing inclusivity, diversity, and real-world applications, the program aims to prepare students for future career opportunities and ensure they are well equipped to navigate and contribute to the technological computing advancements of the future.

Computer Science Education Annual Data Reporting

The purpose of this annual CS report is to document the Department’s progress toward the CS education goals specified in Act 158, Session Laws of Hawai‘i 2021 (Act 158). This is done by documenting the CS courses and content offered at public schools in each complex area during the 2023-2024 school year.

This annual report is based on data from the third quarter (Q3) of the 2023-2024 school year. This data is used because Act 158 reports are due to the Hawai‘i State Legislature by June 30 of each year and will need approval from stakeholders before publication and distribution. The Q3 data is used because subsequent publications (e.g., reports, dashboards) may rely on data from other points in time, which may show slightly different results. In terms of the data sources used to create this report, all course and student enrollment data were provided by the Department’s Data Quality Team. Data about instructors were provided by the Department’s Office of Talent Management.

More information about the Department’s CS program is available at *https://bit.ly/HIDOECS.*

In addition, the aggregate data for the annual report can be viewed on Hawai‘i Revised Statutes Section 302A-323 (Act 158, Session Laws of Hawai‘i 2021) Reporting Data Dashboard at *https://bit.ly/2021Act158CSData.*

Computer Science Designated Courses by Complex Area Schools

Complex Area	Elementary		Middle		High		Combo	
	All Schools	Schools Offering CS	All Schools	Schools Offering CS	All Schools	Schools Offering CS	All Schools	Schools Offering CS
ʻAiea-Moanalua-Radford	16	8	3	3	3	3	-	-
Baldwin-Kekaulike-Kūlanihākoʻi-Maui	13	8	4	4	4	4	-	-
Campbell-Kapolei	12	9	4	4	2	2	-	-
Castle-Kahuku	13	7	1	1	1	1	1	1
Farrington-Kaiser-Kalani	17	13	4	3	3	3	1	1
Hāna-Lahainaluna-Lānaʻi-Molokai	5	4	2	2	2	2	2	2
Hilo-Waiākea	8	6	2	2	2	2	1	1
Honokaʻa-Kealakehe-Kohala-Konawaena	9	1	3	3	3	3	4	4
Kailua-Kalāheo	9	5	1	1	2	2	2	2
Kaimukī-McKinley-Roosevelt	19	11	5	5	3	3	1	1
Kapaʻa-Kauaʻi-Waimea	9	6	3	2	3	3	1	1
Kaʻū-Keaʻau-Pāhoa	5	4	1	1	1	1	2	2
Leilehua-Mililani-Waialua	14	12	3	3	2	2	1	1
Nānākuli-Waiʻanae	6	5	1	1	1	1	1	1
Pearl City-Waipahu	13	13	2	2	2	2	-	-

Computer Science Designated Course Enrollment

Course Code	Enrollment	Course Code	Enrollment
ECS9500 Advanced Placement Computer Science A	151	TIE3000 Networking 2	36
ECS9800 Advanced Placement Computer Science Principles	537	TIE4100 Networking Work-Based Learning	7
ECS9900 Directed Study - Computer Science	19	TIF1000 Foundational Computer Systems & Technology	779
EMS0010 Computer Science Grade 1	6,894	TIF1001 Foundational Computer Systems & Technology A	1
EMS0020 Computer Science Grade 2	7,017	TIF1002 Foundational Computer Systems & Technology B	4
EMS0030 Computer Science Grade 3	6,904	TIM0100 Computer Literacy (Year)	47
EMS0040 Computer Science Grade 4	7,245	TIO4000 Cloud Networking	2
EMS0050 Computer Science Grade 5	7,348	TIP2000 Programming 1	257
EMS0060 Computer Science Grade 6	2,833	TIP2001 Programming 1A	1
EMS0091 Computer Science Grade K	6,269	TIP3000 Programming Mobile Apps Development 2	78
EXS0101 Introduction to Computer Science Level 1 (Year)	1,335	TIP4100 Programming Work-Based Learning	12
EXS0102 Introduction to Computer Science Level 1 (Semester)	3,224	TIW2000 Web Design & Development 1	29
EXS0103 Introduction to Computer Science Level 1 (Quarter)	750	TIY2000 Cybersecurity 1	172
EXS0201 Advanced Computer Science Level 2 (Year)	166	TIY2002 Cybersecurity 1B	2

Course Code	Enrollment	Course Code	Enrollment
EXS0202 Advanced Computer Science Level 2 (Semester)	227	TIY3000 Cybersecurity 2	87
EXS0203 Advanced Computer Science Level 2 (Quarter)	48	TIY4100 Cybersecurity 3	32
EXS0301 Applied Computer Science Level 3 (Year)	10	TMG0410 Introduction to Technology (Semester)	441
EXS1300 Introduction to Computer Science	267	TMG0500 Career & Technical - Computer Literacy (Quarter)	95
EXS1310 Introduction to Computer Science A	91	TMG0501 Career & Technical - Computer Literacy (Semester)	2,504
EXS1350 Computer Science	31	TMG0502 Career & Technical - Computer Literacy (Year)	8
EXS1400 Computer Science A	343	XAT1000 Science, Technology, Engineering, and Mathematics (STEM) Capstone	200
EXS1500 Computer Science B	306	XEP0100 Integrated STEM 6-8	1,267
EXS1700 Computer Programming - Introduction to Python	2	XEP0101 Integrated STEM A 6-8	317
FVW1000 Computer Art	111	XMD0012 Exploratory Media Production	3
FVW2000 Computer Art 2	39	XWG0003 Exploratory Wheel Grade 6 (Quarter)	150
FVW3000 Computer Art 3	12	XWG0020 Exploratory Wheel Grade 8 (Year)	571

Course Code	Enrollment	Course Code	Enrollment
TAN2312 Gaming A	48	XWG0022 Exploratory Wheel Grade 8 (Quarter)	132
TAU2210 Digital Media Technology	667	ZMR1500 Running Start: Introduction to Computer Science I	8
TAU2211 Digital Media Technology A	16	ZTI1011 Running Start: Digital Tools for the Information World	46
TAU2212 Digital Media Technology B	16	ZTI1171 Running Start: Introduction to Computer Security	12
TIE2000 Networking 1	128	ZTI1184 Running Start: Introduction to Networking	13

Gender

School Year	All Students	Enrolled in Computer Science Designated Courses Count (% of All Students)		
		Total	Female Students	Male Students
2023-2024	152,641	58,215 (38.0%)	26,863 (17.5%)	31,352 (20.5%)

Race and Ethnicity

School Year	All Students	Enrolled in Computer Science Designated Courses Count (% of All Students)								
		Total	Asian	Black	Filipino	Hispanic	Native Hawaiian	Pacific Islander	White	Other
2023-2024	152,641	58,215 (38.0%)	8,959 (5.8%)	1,670 (1.1%)	14,186 (9.2%)	1,021 (0.6%)	12,355 (8.1%)	6,958 (4.6%)	11,999 (7.9%)	1,067 (0.7%)

Special Education

School Year	All Students	Special Education Students Count (% of All Students)	Enrolled in Computer Science Designated Courses Count (% of All Students)	
			Total Number of Students	Special Education Students
2023-2024	152,641	16,691 (11.0%)	58,215 (38.0%)	6,365 (4.2%)

English Language Learners

School Year	All Students	All English Language Learner Students Count (% of All Students)	Enrolled in Computer Science Designated Courses Count (% of All Students)	
			Total Number of Students	English Language Learner Students
2023-2024	152,641	17,314 (11%)	58,215 (38%)	7,017 (5%)

Free and Reduced Lunch

School Year	All Students	All Free & Reduced Lunch Students Count (% of All Students)	Enrolled in Computer Science Designated Courses Count (% of All Students)	
			Total Number of Students	Free & Reduced Lunch or Economically Disadvantaged Students
2023-2024	152,641	86,777 (57%)	58,215 (38%)	27,598 (18%)

Computer Science Designated Course Instructors

CS courses would not be available without qualified teachers to deliver instruction. In total, there were 10,394 instructors working in schools during the 2023-2024 school year. Of the 10,394 unique instructors working for the Department, 22% (2,301) were instructors who taught at least one of the Department designated computer science courses.

Computer Science Designated Course Instructors by Gender

School Year	All Instructors	All Computer Science Designated Instructors Count (% of All Instructors)		
		Total	Female Instructors	Male Instructors
2023-2024	10,394	2,301 (22.0%)	1902 (18.2%)	399 (3.8%)

Computer Science Designated Course Instructors by Race/Ethnicity

School Year	All Instructors	All Computer Science Designated Instructors Count (% of All Instructors)							
		Total	Asian	Black	Native Hawaiian	Other Pacific Islander	Two or More Races	White	Other
2023-2024	10,394	2,301 (22.0%)	916 (8.8%)	22 (0.2%)	243 (2.3%)	6 (0.1%)	653 (6.2%)	450 (4.3%)	11 (0.1%)

Computer Science Course Instructors by Degree/Applicable Certification

School Year	All Instructors	All Computer Science Designated Instructors Count (% of All Instructors)					
		Total	Bachelor's	Master's	Post-Baccalaureate	Doctorate	Other
2023-2024	10,394	2,301 (22.0%)	916 (8.8%)	809 (7.7%)	524 (5.0%)	11 (0.1%)	41 (0.4%)