## **Computer Science**

## **Program Information**

**Degree Type:** AS

**Program Code:** CMPS

Degree Worksheet PDF: 2023\_2024\_cmps.pdf [1]

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**CMPS** 

2023\_2024\_cmps.pdf [2]

This AS degree program provides a solid foundation in algorithm development techniques and the implementation of algorithms and data structures in a modern high-level programming language. Hardware capabilities are examined in depth, with an emphasis on better understanding of program behavior. Computer architecture, theory of computation, concurrence, artificial intelligence, software engineering, and program complexity, correctness, and efficiency are introduced. This program is designed to provide the first two years of a rigorous program in Computer Science. Recommended high school preparation: Three years of mathematics courses and high school electives in computer science.

Cr.	Course Title	Course Code
1-2	FRESHMAN EXPERIENCE	<u>HRD100 HRD100A</u> or <u>HRD110</u>
3	Introduction to College Writing	ENG101
3	Writing II	
		ENG102, ENG103, ENG104,
		ENG105, ENG106, ENG107,
		ENG108, ENG109 or ENG110
4	Calculus I	MAT131
3-4	SUNY GEN ED Natural Sciences (and Scientific Reasoning) lab science	EGR105 Engineering Physics I or PHY111 General Physics I recommended

3	,	MAT132 Calculus II
	Quantitative Reasoning) or	recommended
	SUNY GEN ED Natural	
	Sciences (and Scientific	
	Reasoning)	
6	Choose 2 GEN ED categories	
	from:	
	SUNY GEN ED World History and	
	Global Awareness	
	SUNY GEN ED US History and	
	Civic Engagement	
	SUNY GEN ED Social Science	
	BONT GEN ED SOCIAL SCIENCE	
3	SUNY GEN ED The Arts, SUNY	
	GEN ED World Languages, or	
	SUNY GEN ED Humanities	
3	SUNY GEN ED Diversity: Equity,	
3	Inclusion and Social Justice Introduction to Programming	CIS143 (Prereg Required)
3	Intermediate Programming in a	CIS144 (Prered Required)
	Windows Environment	<u></u> (
3 4	Topics in Computing	CIS150 (Prereq Required)
4	Data Structures and Objects in	CIS243 (Prereq Required)
	<u>C++</u>	016244 (6 : 1 - 1 - 1
3	Computer Systems and Programming	<u>CIS244</u> (Spring only-Prereq Required)
3	Discrete Mathematics	MAT129
3-4	COMPUTER SCIENCE or	17(122)
	MATHEMATICS ELECTIVE	
		Choose 1 (Prereq Required) from:
		EGR183 (Spring only - even
		years), <u>CIS151</u> , <u>CIS237</u> (Spring
		only), <u>MAT132</u> or <u>MAT231</u> (Fall
		only)
3	TECS Elective	
	I LOS LICCUVE	
		Choose 1 from:
		Choose I Holli:
		CIS120 CIS121 CIS170
		CIS120, CIS131, CIS178
•		IOT ( 15/11 (Spring only)
		or <u>CIS211</u> (Spring only) or <u>EGR120</u>

6	Liberal Arts and Sciences [3]	
4	Electives	
	Minimum credits required for graduation	

Recommended Fir	st Year
First Semester	
1-2	HRD100, HRD100A or HRD110
3	ENG101
3	MAT129
3	CIS143
3	SUNY GEN ED Diversity: Equity, Inclusion and Social Justice
3	Liberal Arts and Sciences
Second Semester	
3	ENG102 - ENG110
3	CIS144
3	CIS150
3	SUNY GEN ED US History and Civic Engagement, SUNY GEN ED
	World History and Global Awareness or SUNY GEN ED Social
	Sciences
3	TECS Elective (See Note 1)
Recommended Se	cond Year
Third Semester	
4	CIS 243
4	MAT131
3-4	SUNY GEN ED Natural Sciences (and Scientific Reasoning) lab
	science (EGR105 or PHY111 recommended)
3	SUNY GEN ED The Arts, SUNY GEN ED World Languages or
	SUNY GEN ED Humanities
3	SUNY GEN ED US History and Civic Engagement, SUNY GEN ED
	World History and Global Awareness or SUNY GEN ED Social
	Sciences
Fourth Semester	
3	CIS244
3-4	Computer Science or Mathematics Elective (See Note 2)
3	SUNY GEN ED Mathematics (and Quantitative Reasoning) or
	SUNY GEN ED Natural Sciences (and Scientific Reasoning) – By
	advisement
3 4	Liberal Arts and Sciences
4	Electives

## **NOTES**

- 1. TECS Electives: CIS 120, CIS 131, CIS 178, CIS 211 (Spring only) or EGR 120
- 2. Computer Science and Mathematics Electives: CIS 151, CIS 237, EGR 183 (Spring only even years), MAT 132 or MAT 231 (Fall only)

**Source URL:** <u>https://catalog.sunyadk.com/programs/computer-science</u>

## Links:

[1] https://catalog.sunyadk.com/<div class=



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[3] http://catalog.sunyacc.edu/academics/degreerequirements