

Bachelor of Science in Computer Science

Catalog Year: 2025-2026



**KENNESAW STATE
UNIVERSITY**

Updated 6/3/2025

Total Degree Credit Hours: 120

I Institutional Priority	2 Classes 5 credit hours	Complete the following course: ECON 1000	Complete <u>one</u> course from the following: AMST 1102, ASIA 1102, BLCK 1102, COMM 1100, GWST 1102, ISD 2700, LALS 1102, LDRS 2300, PAX 1102, POLS 2401, RELS 1102
M Mathematics & Quantitative Skills	1 Class 3 credit hours	Complete the following course: MATH 1113	
P Political Science & U.S. History	2 Classes 6 credit hours	Complete the following course: POLS 1101	Complete <u>one</u> course from the following: HIST 2111 or HIST 2112
A Arts, Humanities & Ethics	2 Classes 6 credit hours	Complete <u>one</u> course from the following: CHIN 1001, CHIN 1002, ENGL 2110, ENGL 2120, ENGL 2130, ENGL 2140, FREN 1001, FREN 1002, GRMN 1001, GRMN 1002, HEBR 1001, HEBR 1002, ITAL 1001, ITAL 1002, JAPN 1001, JAPN 1002, KOR 1001, KOR 1002, LATN 1001, LATN 1002, PHIL 2010, PORT 1001, PORT 1002, RUSS 1001, RUSS 1002, SPAN 1001, SPAN 1002, WLC 1001, WLC 1002, WLC 2209	Complete <u>one</u> course from the following: ART 1107, DANC 1107, MUSI 1107, TPS 1107
C Communication in Writing	2 Classes 6 credit hours	Complete the following course: ENGL 1101	Complete the following course: ENGL 1102
T Technology, Mathematics, & Science	3 Classes 12 credit hours	Complete the following course: MATH 1190	Select <u>two</u> course pairs from the following for a total of 8 credit hours: CHEM 1211 and CHEM 1211L CHEM 1212 and CHEM 1212L PHYS 1111 and PHYS 1111L PHYS 1112 and PHYS 1112L PHYS 2211 and PHYS 2211L PHYS 2212 and PHYS 2212L BIOL 1107 and BIOL 1107L BIOL 1108 and BIOL 1108L <i>Please note: You <u>CANNOT</u> take both PHYS 1111/L and PHYS 2211/L nor PHYS 1112/L and PHYS 2212/L</i>
S Social Science	2 Classes 6 credit hours	Complete <u>one</u> course from the following: HIST 1100, HIST 1111 or HIST 1112	Complete <u>one</u> course from the following: ANTH 1102, CRJU 1101, ECON 2105, ECON 2106, GEOG 1101, PSYC 1101, SOCI 1101, or STS 1101

Core Field of Study (18 credit hours)

Prerequisites

CSE 1321/L Programming & Problem Solving I	Lecture & Lab must be taken at the same time	4	
CSE 1322/L Programming & Problem Solving II	Min. grade of 'B' in CSE 1321/L & MATH 1113/1190/2202*	4	
MATH 2202 Calculus II	MATH 1190	4	
MATH 2345 Discrete Mathematics	MATH 1113 or MATH 1190	3	
TCOM 2010 Technical Writing	ENGL 1102	3	

CSE 1321/L and CSE 1322/L must have a minimum grade of 'B'.

* - can be taken before or at the same time

Free Electives

Select 5 credit hours of 1000-4000 level coursework from the University Catalog

Major Requirements (40 credit hours)

Prerequisites			
CS 3305 Data Structures	MATH 2345 & CSE 1322/L	3	
CS 3503 Computer Org & Architecture	CSE 1322/L	3	
CS 3502 Operating Systems	CS 3305 & CS 3503	3	
SWE 3313 Intro to Software Eng.	CSE 1322/L	3	
CS 3410 Intro to Database Systems	CSE 1322/L	3	
CS 4306 Algorithm Analysis	CS 3305	3	
CS 3622 Fundamentals of Data Com.	CSE 1322/L	3	
CS 4504 Parallel & Distributed Computing	CS 3305, CS 3503, & CS 3502*	3	
CS 4308 Concepts of Programming Languages	CS 3305 & CS 3503	3	
CSE 3801 Professional Practices & Ethics	CSE 1322/L	2	
CS 4850 Senior Project	CS 3502 & SWE 3313	3	
STAT 2332 Probability & Data Analysis	MATH 1190	3	
MATH 3260 Linear Algebra	MATH 1190	3	

All major courses must have a minimum grade of 'C', except for CSE 1321/L & CSE 1322/L which must be min. 'B'

* - can be taken before or at the same time

+2 credits carried over from IMPACTS

Major Electives OR Concentration (15 credit hours)

Students must complete at least 9 credit hours of 'CS' prefix courses. You may mix and match electives OR complete all requirements of the listed concentrations. If you are not doing a concentration, you may still take **CS courses** listed within the concentrations as electives.

Choose a concentration

Data Science

Prerequisites

1	CS 4265 Big Data Analytics	CS 3305 & CS 3410	
2	CS 4412 Data Mining	CS 3305 & CS 3410	
3	CS 4422 Information Retrieval	CS 3305 & CS 3410	
4	CS 4522 HPC & Parallel Programming	CS 4504	
5	Choose 1		
	CS 4524 Cloud Computing	CS 4504	
	CS 4722 Computer Graphics & Multimedia	CS 3305	
	In concentration: CS 4491 Adv Topics, CS 4492 Undergrad Research, or CSE 4983 Computing Internship		

Cyber & Network Security

Prerequisites

1	CS 3626 Cryptography	MATH 2345 & CS 3305*	
2	CS 4612 Software Security	CS 3626 & CS 3502	
3	CS 4622 Computer Networks	CS 3503 & CS 3622	
4	CS 4626 Computer & Network Security	CS 3626 & CS 4622	
5	Choose 1		
	IT 4823 Info Sec Admin	MATH 2345 & CS 3503	
	IT 4833 Wireless Security	CS 4622	
	IT 4843 Ethical Hacking	CS 4622	
	IT 4853 Computer Forensics	CS 4622	
	IT 4883 Infrastructure Defense	CS 4622	
	In concentration: CS 4491 Adv Topics, CS 4492 Undergrad Research, or CSE 4983 Computing Internship		

Artificial Intelligence

Prerequisites

1	CS 3642 Artificial Intelligence	CS 3305	
2	CS 4267 Machine Learning	CS 3642	
3	CS 4732 Machine Vision	CS 3642	
4	CS 4742 Natural Language Processing	CS 3642	
5	Choose 1		
	CS 4277 Deep Learning	CS 3642 & CS 4267*	
	In concentration: CS 4491 Adv Topics, CS 4492 Undergrad Research, or CSE 4983 Computing Internship		

OR Choose 5 electives

Course

Prerequisites

CS		
CS		
CS		

You may choose from any CS 3000 or 4000 level course not already required, including concentration courses. You may choose up to 2 classes from the below list.

SWE 3633 Software Arch & Design	SWE 3313
SWE 3643 Software Testing & QA	SWE 3313
SWE 3683 Embed. Sys. Analysis & Design	CS 3305
SWE 4633 Cloud Software Dev.	CS 3305
CSE 4983 Computing Internship	Permission