

Science, Technology, Engineering, and Math (STEM) Pathway

GRADE LEVEL:	FRESHMAN	SOPHOMORE	JUNIOR	SENIOR
SCIENCE	Earth Science	Biology	Chemistry	Physics
TECHNOLOGY & ENGINEERING	Intro to Engineering Design	Engineering and Architectural Design	Engineering Applications	Energy, Power, and Green Alternatives
MATHEMATICS * Accelerated	Algebra I or Geometry*	Geometry or Algebra II*	Algebra II or Precalculus*	Precalculus or Calculus* and/or AP Stats
COMPUTER SCIENCE * Accelerated	Computer Technology	Intro to CS/ Programming	Advanced CS Principles or APCS*	Advanced CS Principles or APCS

Government, Education, and the Humanities Pathway

GRADE LEVEL:	FRESHMAN	SOPHOMORE	JUNIOR	SENIOR
SCIENCE	Earth Science	Biology	Chemistry	Physics
TECHNOLOGY & ENGINEERING	A student who favors this pathway will likely replace these courses with Business & Finance Courses such as Financial Literacy and Accounting, and History and Language Courses. However, if the student intends to become an Educator in Math, Science, or Technology, they should strongly consider following the STEM Pathway guidelines above.			
MATHEMATICS * Accelerated	Algebra I or Geometry*	Geometry or Algebra II*	Algebra II or Precalculus*	Precalculus or Calculus* and/or AP Stats
COMPUTER SCIENCE * Accelerated	Web Design and Development	Intro to CS/ Programming	Advanced CS Principles	APCS*

Business and Financial Literacy Pathway

GRADE LEVEL:	FRESHMAN	SOPHOMORE	JUNIOR	SENIOR
SCIENCE	Earth Science	Biology	Chemistry	Physics
TECHNOLOGY & ENGINEERING	A student who favors this pathway will likely replace these courses with Business & Finance Courses such as Financial Literacy and Accounting . If the student intends to become an Accountant or Actuary, they should consider weighing heavily on Accounting and mathematics courses. Business and Math coursework are most essential.			
MATHEMATICS * Accelerated	Algebra I or Geometry*	Geometry or Algebra II*	Algebra II or Precalculus*	Precalculus or Calculus* and/or AP Stats
COMPUTER SCIENCE * Accelerated	Web Design and Development	Intro to CS/ Programming	Advanced CS Principles	APCS*

Health and Human Services

GRADE LEVEL:	FRESHMAN	SOPHOMORE	JUNIOR	SENIOR
SCIENCE	Earth Science	Biology	Chemistry	Physics
TECHNOLOGY & ENGINEERING	A student who favors this pathway will likely replace these courses with Family & Consumer Sciences courses such as Allied Health, Early Childhood and Intro to Individual Family Development, as well as language coursework.			
MATHEMATICS * Accelerated	Algebra I or Geometry*	Geometry or Algebra II*	Algebra II or Precalculus*	Precalculus or Calculus* and/or AP Stats
COMPUTER SCIENCE * Accelerated	Computer Technology	Intro to CS/ Programming	Advanced CS Principles	APCS*

Manufacturing Logistics Pathway

GRADE LEVEL:	FRESHMAN	SOPHOMORE	JUNIOR	SENIOR
SCIENCE	Earth Science	Biology	Chemistry	Physics
TECHNOLOGY & ENGINEERING	Intro to Engineering Design	Engineering and Architectural Design	Engineering Applications	Manufacturing Technology I
MATHEMATICS * Accelerated	Algebra I or Geometry*	Geometry or Algebra II*	Algebra II or Precalculus*	Precalculus or Calculus* and/or AP Stats
COMPUTER SCIENCE * Accelerated	Computer Technology	Intro to CS / Programming	Advanced CS Principles or APCS*	Advanced CS Principles or APCS

Communications Technology Media & the Arts Pathway

GRADE LEVEL:	FRESHMAN	SOPHOMORE	JUNIOR	SENIOR
SCIENCE	Earth Science	Biology	Chemistry	Physics
TECHNOLOGY & ENGINEERING	Graphic Design / Photo I	Graphic Design / Photo II	Graphic Design / Photo III	Digital Media / Video Develop
MATHEMATICS * Accelerated	Algebra I or Geometry*	Geometry or Algebra II*	Algebra II or Precalculus*	Precalculus or Calculus* and/or AP Stats
COMPUTER SCIENCE * Accelerated	Web Design and Development	Intro to CS/ Programming	Advanced CS Principles	APCS*

Note: A student who favors this pathway will likely take several art-related and Visual Art courses (AP Studio Art, for example).

Ranking	Career	Median Salary (based on 2010 statistics)	Projected Growth (between 2010 and 2020)	Conard Career Pathway
1	Actuary	\$87,650	27%	Business and Financial Literacy
2	Biomedical Engineer	\$81,540	62%	STEM
3	Software Engineer	\$90,530	30%	STEM
4	Audiologist	\$66,660	37%	Health and Human Services
5	Financial Planner	\$64,750	32%	Business and Financial Literacy
6	Dental Hygienist	\$68,250	38%	Health and Human Services
7	Occupational Therapist	\$72,320	33%	Health and Human Services
8	Optometrist	\$94,990	33%	Health and Human Services
9	Physical Therapist	\$76,310	39%	Health and Human Services
10	Computer Systems Analyst	\$77,740	22%	STEM

Computer Science Coursework

Computer science (and the thought process that goes along with this discipline) is the tool of choice in our world. We are all, regardless of our job of choice, required to innovate. We all need to do more with less. There is not a job on the "Top Ten" list above that does not involve a computer, either directly or indirectly. Computer Science, as a subject area, is intertwined with many different career pathways, so sometimes it can be difficult to decide which course to choose and why. This document is designed to help you to make an informed decision so you can access and be successful in your career of choice.

Course Name, Number, Prereq	Course Description
Introduction to Computer Science (HSBU2474) No prerequisites	- Fundamentals of computer programming using Visual Basic Language - Topics include flowcharting, program design, object properties, application development and writing code
Advanced Placement Computer Science (HSMA7700) Prerequisites: Algebra II	- Based on requirements comparable to an introductory course for computer science majors at a university or college - Object oriented design using java - Preparation for AP CS A Exam
Advanced CS Principles Prerequisites: Geometry	- Focus on the central ideas of computer science (the study of computers and computation) - Designed to help students learn to access mobile services and applications as creators, not just consumers.
Computer Technology (HSTE2400) No prerequisites	- Focus on building and upgrading computer hardware, peripherals, operating system software and the principles of networking - Designed to help students prepare for industry certification
Web Design & Development (HSTE2402) - No prerequisites	- Fundamental of Web Programming using a variety of coding languages including HTML, CSS, JavaScript and JQuery

Computer Science Course Offerings and Their Connection to College Career Pathways



CONARD HIGH SCHOOL

We challenge and guide our students to be active learners and productive citizens.

Conard is united in the effort of providing our students opportunities to grow as confident problem solvers. We strive to help our students to become technological *creators* instead of *consumers* in their field of choice.

This document is a result of cooperation between the Science, Technology, Engineering, and Math Departments.

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