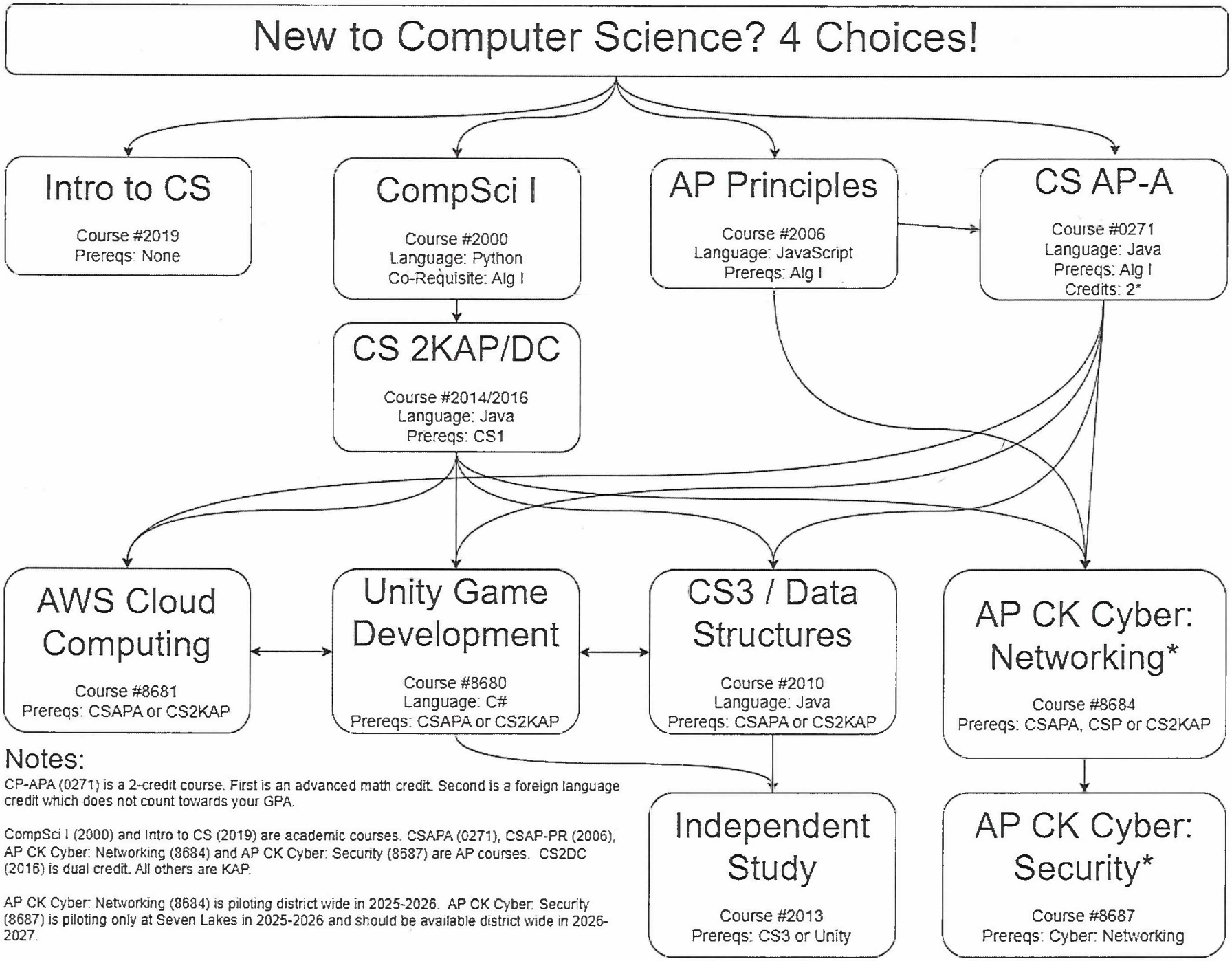
New to Computer Science? 4 Choices!



Notes:

CP-APA (0271) is a 2-credit course. First is an advanced math credit. Second is a foreign language credit which does not count towards your GPA.

CompSci I (2000) and Intro to CS (2019) are academic courses. CSAPA (0271), CSAP-PR (2006), AP CK Cyber: Networking (8684) and AP CK Cyber: Security (8687) are AP courses. CS2DC (2016) is dual credit. All others are KAP.

AP CK Cyber: Networking (8684) is piloting district wide in 2025-2026. AP CK Cyber: Security (8687) is piloting only at Seven Lakes in 2025-2026 and should be available district wide in 2026-2027.

Course	Code	Pre-requisites	Description
Intro to CS	2019	None	Students will learn about the computing tools that are used every day, while developing their ability to creatively solve real-world problems. Through interactive activities and projects students will learn computational thinking, problem-solving, and programming concepts.
CompSci I	2000	Algebra I (co-requisite)	This foundation course for computer programming emphasizes programming methodology and problem solving using packaged software and graphics. Students learn to code animation and games in various computer languages.
CompSci II KAP CompSci II DC	2014 2016DC	CompSci I (2000)	Computer Science II expands on the foundation created in Computer Science I and introduces students to more advanced programming concepts. This course will introduce students to object-oriented programming where they will use Java to analyze, write, and test code. Students will explore concepts such as variables, looping, conditionals and the fundamental building blocks of data structures. At the end of the course, each student's knowledge and skills will be challenged through an industry recognized certification in Java
CompSci AP Principles	2006	Algebra I	Students are introduced to the foundations of computer science with a focus on how computing powers the world. Students will learn to analyze data, create technology that has a practical impact, and gain a broader understanding of how computer science impacts people and society.
CompSci AP-A	0271	Algebra I	AP Computer Science A emphasizes programming methodology, procedural abstraction, in- depth study of algorithms, data structures and data abstractions and is taught in Java. Students enrolled in an AP course are expected to take the corresponding Advanced Placement exam.
CompSci III Data Structures	2010	CS: APA (0271) or CSII (2014/2016)	Using advanced problem-solving skills and computer science topics, this course provides a stronger foundation for students interested in technology-related careers, including business and engineering.
CompSci Independent Study	2013	CSIII (2010) or Unity (8608)	This course extends the understanding of what was learned in AP Computer Science A of programming through study of various contemporary programming techniques.
AWS Cloud Computing	8681	CS:APA (0271) or CSII (2014/2016)	The AWS Advanced Cloud Computing course is an exploration of cloud computing. Upon completion of the course, students are prepared to sit for the cloud computing professional certification. In this course, students explore AWS cloud computing services, applications, and use cases. Students dive deeply into cloud computing best practices and learn how cloud computing helps users develop a global infrastructure to support use case at scale while also developing and inventing innovative technologies.
Unity Game Development	8608	CS:APA (0271) or CSII (2014/2016)	Unity Game Development will build on the programming foundation developed in AP Computer Science A / Computer Science II with C# and the Unity platform. Students will build the skills necessary to design and develop 2D and 3D games. A few of the technical concepts that this course will cover are object-oriented programming, pathing algorithms, artificial intelligence, sound/image/model management, sprite creation, collision detection and data storage. Students will collaborate with one another, their instructor, and various electronic communities to create multiple game projects in the latest Unity game engine. At the end of the course, each student will have the opportunity to demonstrate their knowledge and skills through the Unity Certified User Industry Certification.
AP CK Cyber: Networking	8684	CS:APA (2071) or CSII (2014/2016) or APCSP (2006)	AP CK Cyber: Networking introduces students to the foundations of computer networking, which is critical to understanding cybersecurity concepts at a deeper level. Using the OSI model as a blueprint for the course, students learn about various network devices like switches, routers, and firewalls as well as protocols that power digital communication. This course is built to engage and support students with all levels of experience in computing. This course is aligned with and is a pre-requisite for the AP CK Cyber: Security course.
AP CK Cyber: Security	8687	CK Cyber: Networking	This course covers foundational cybersecurity concepts and skills and is equivalent to a college-level Introduction to Cybersecurity course. Students will explore the current cyber threat landscape to understand the types of adversaries organizations face and the techniques adversaries use to compromise systems and data. Students will learn how vulnerabilities create risk and how organizations implement security controls to manage that risk. Topics in the course include physical, operational, application, and network security; security controls; cryptography; access control; attacks and detection; and response and recovery. Students will research emerging trends in cybersecurity and gain hands-on experience implementing security protocols.

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