



Strategic Considerations

Opportunities for TCS Graduates





Computer Science

Opportunities for TCS Graduates



Computer Science

- Computer science drives job growth and innovation throughout our economy and society. Occupations in Computing are the number 1 source of all new wages in the U.S.
- They make up over 50% of all projected new jobs in STEM fields, making Computer Science is one of the most in-demand college degrees.
- Computer Science is not widespread throughout education. Only 51% of U.S. high schools teach any computer science courses and only 11% of bachelor's degrees are in Computer Science.

Computer Science

- In North Carolina, there are currently 22,785 open computing jobs with an average salary of \$92,273.
- There were only 2,332 graduates in computer science in 2019 and only 59% of all public high schools teach a foundational course.
- Only 5,352 exams were taken in AP Computer Science by high school students in North Carolina in 2020.
- Only 199 schools in NC (33% of NC schools with AP programs) offered an AP Computer Science course in 2019-2020.

Computer Science

- Overall, using 2021 date, there were/are 627,763 open computing jobs nationwide
- 47% of public high schools teach a CS class
- 79,991 Computer science students graduated into the workforce last year
- Across 37 states, only 4.7% of high school students are enrolled in foundational computer science.
- Artificial Intelligence is one area of Computer Science. Cyber security is another.

Computer Science

- Cybersecurity is important because it protects all categories of data from theft and damage. This includes sensitive data, personally identifiable information, protected health information, personal information, intellectual property, data, and governmental and industry information systems.
- Cyberattacks are now very common. Recent reports show that hackers attack a computer in the US every 39 seconds.
- Faster broadband, better technology, cloud computing all increase vulnerability.

Computer Science

- In Cyber Security alone, as companies large scramble to respond to the growing threats, jobs in the cybersecurity field are rapidly growing.
- The U.S. Bureau of Labor Statistics (BLS) predicts that jobs for information security analysts will grow by 28% between 2016 and 2026. That's more than twice as fast as the average computer-related occupation, and four times as fast as American jobs in general.

Computer Science – A Place to Start

- AP Computer Science
- Computer Science as part of Career and Technical Education
- Coursework in partnership with the NC School of Science and Math (NCSSM)
- Blue Ridge Community College
- NCVPS

Computer Science – A Place to Start

- Currently, students have 22 required credits
- CTE Pathways have changed and the number of courses required to complete a pathway have been reduced
- TCS Places a high value on a well rounded students. Courses in the arts, music, and CTE are valued and encouraged.
- Consideration for Computer Science as a requirement for graduation fits with our mission and vision.

Computer Science – A Place to Start

- On Saturday, January 29th, National Governors Association (NGA) Chairman and Arkansas Governor Asa Hutchinson kicked off the NGA's 114th annual Winter Meeting with a dedicated session on his Chairman's Initiative focused on K-12 Computer Science Education.
- Governor Hutchinson began by noting the historically bipartisan support for K-12 computer science education, including the 14 Governors from both parties that comprise the Governors' Partnership for K-12 Computer Science.

Computer Science – A Place to Start

- Beginning in 2015, Governor Hutchinson worked with the Arkansas Legislature to pass a law mandating that computer science be offered in every high school in the state. He then moved to incorporate computer science in elementary and middle schools to provide younger students with exposure to foundational skills.
- In 2021, the Governor signed into law a requirement that a student complete at least one computer science course prior to graduation from high school and that every high school employ at least one certified computer science teacher.

Computer Science – A Place to Start

- Beginning as a graduation requirement in 2022-23 or 2023-24.
- Input from community and schools
- Coursework could be completed via a traditional course, or via an online option.
- Current opportunities for enhanced computer science continue in all grades, including coding.
- Students could begin in middle school and have 4 to 6 years to complete requirement

Computer Science

The future is here now



FAFSA

Opportunities for all students



FAFSA-Free Application for Federal Student Aid

- In North Carolina, 46% of the high school class of 2021 didn't complete the Free Application for Federal Student Aid (FAFSA).
- As a result, \$126 million in Pell Grant awards was left on the table on the table in North Carolina (ranking #6 in the U.S).
- As part of the MyFutureNC initiative, by 2030, 2 million North Carolinians have a postsecondary degree or credential—more than doubling projected growth over the next 10 years.
- The state will need to help an estimated 400,000 additional residents attain a high quality credentials or post secondary degrees for our state to meet the demands of our businesses and industries.

FAFSA

- Completing the FAFSA is a critical—and complicated—step in the process of going to college, especially for students who need financial aid.
- To support all students across NC and reach 2 million by 2030, we must also direct FAFSA and college access support to students and their families, including (but not limited to):
 - *Students who may be eligible for a Pell Grant*
 - *Students who would be the first in their family to attend college*
 - *Students who didn't have college on their radar until recently*
 - *Students who have circumstances that make the steps to college difficult*

FAFSA

- Our counselors are actively encouraging students to complete the FAFSA
- We are working on an initiative to provide graduation cords as an incentive
- Career counselors and college coaches with the community college system and Appalachian State University are working with high school seniors
- Graduation Requirement? It is a consideration in the state. Locally, it is one that would be relatively easy to meet.

FAFSA

Opportunities for all students

