# Frequently Asked Questions
## Public Chapter 979 of the Public Acts of 2022
## Codified at T.C.A. 49-1-232
## Computer Science

## Law Overview

[Chapter 979 of the Public Acts of 2022](#), codified at T.C.A. 49-1-232, ensures that all public elementary, middle, and high school students have access to computer science (CS) coursework and resources. It also provides teachers with a no-cost route to earn an additional CS endorsement and offers both teachers and schools incentives to participate in high-quality CS professional development. The following timeline outlines key deliverables in executing T.C.A 49-1-232.

## Timeline

| Deliverable | Date |
|---|---|
| Computer Science Endorsement Pathway rollout | Fall 2022 |
| [Computer Science TN website](#) rollout | Spring 2023 |
| Professional development on new standards, course materials, and resources | Fall 2023 |
| Computer Science standards available | Fall 2023 |
| Computer Science Momentum Expedition | December 2023 |
| Computer Science Accelerator Week | July 2024 |
| Middle and high school educators must have a Computer Science endorsement to teach courses | Fall 2024 |
| Elementary school integration requirement begins | Fall 2024 |
| Middle school course requirement begins | Fall 2024 |
| Incoming freshman cohort high school course graduation requirement begins | Fall 2024 |
| The first cohort of high school students who completed the computer science course graduation requirement will graduate from high school | Class of 2028 |

## Computer Science Courses and Standards

1. ***Are new computer science (CS) standards available?***
   Yes, [CS standards](#) were developed by Tennessee K-12 educators and approved by the Tennessee State Board of Education and are available for district implementation starting in the **2023-24** school year. However, schools are not required to implement the new standards until the **2024-25** school year.

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2. **What materials are available to support the courses and standards implementation in 2023-24?**
   The Tennessee Department of Education (TDOE), in partnership with the Tennessee STEM Innovation Network (TSIN), Tennessee educators, and CS experts, has created courses with standards, materials, and resources that support CS implementation at the elementary, middle, and high school levels. The TDOE CS courses developed for middle and high school will also include an online course.  Through the [Reach Them All](#) CS training, all public schools will receive a classroom robotics set once the training is delivered.

3. **Are there grade banded resources to support instruction?**
   [CS materials and resources](#) are available for grades **K-5**, **6-8**, and **9-12**.

4. **Will elementary school students have to take a CS course?**
   No, elementary students will not be required to take a CS course. However, no later than the **2024-25** school year, elementary school students will have CS content embedded into everyday instruction. Elementary schools may choose to offer CS courses as standalone courses, but this is not required.

5. **Will middle school students have to take a CS course?**
   Yes, no later than the start of the **2024-25** school year, public middle school students will be required to take at least one course in CS education that includes instruction for at least one grading period during one school year of their middle school career.

6. **What CS courses count for the middle school course requirement?**
   The middle school academic CS course (**G25X40**) is currently the only course that counts for the middle school requirement.

7. **What if a middle school wants to offer a CS course that is not on the approved list of CS courses?**
   Middle schools interested in offering a CS course that is not on the approved list of courses must submit a special course application for approval by the State Board of Education.

8. **Will high school students have to take a CS course?**
   Yes, beginning at the start of the **2024-25** school year, every public high school must offer access to CS education that will include one high school credit of CS. Starting with the **freshman** cohort of the **2024-25** school year, each public high school student must take at least one course in CS education as a graduation requirement.

## Graduation Requirements
9. **What CS courses count for the graduation requirement?**
   The Tennessee State Board of Education approved the following options to count for the CS graduation requirement:
   - International Baccalaureate Computer Science Program
   - Cambridge International Computer Science Program
   - Dual Enrollment Computer Science Program
   - Computer Science

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- AP Computer Science Principles
- AP Computer Science A
- Computer Science Foundations
- Coding I
- Coding II
- Coding Practicum
- Cybersecurity I
- Cybersecurity II
- Cybersecurity Practicum
- Mobile App Development

10. ***What if a school wants to offer a CS course that is not on the approved list of CS courses for the graduation requirement?***
High schools interested in offering a CS course that is not on the approved list of courses must submit a special course application for approval by the Tennessee State Board of Education.

11. ***When will incoming freshmen be responsible for the CS graduation requirement?***
Beginning with the incoming **2024-25 freshman** cohort, candidates for regular high school diplomas must receive at least one CS credit in high school.

12. ***What current graduation requirements can be substituted for the computer science credit?***
CS can be counted as either a **third-lab science** or a **fourth-credit math**. Please see question nine or the approved list of [substitute courses](#).

13. ***Can CS be utilized as a third-lab science or a fourth-credit math in the 2023-24 school year?***
Yes, students can substitute a **third-lab science** or a **fourth-credit math** for CS in the **2023-24** school year, but students are not required to take CS as a graduation requirement until the incoming 2024-25 freshman cohort.

14. **Does a student have to take a CS course in their junior year for it to substitute for the third-lab science?**
No, students can substitute a CS course for the **third-lab science** during any school year. To meet graduation requirements students must take three science credits, including biology, chemistry, or physics, and a third lab course.

15. **Does a student have to take a CS course in their senior year for it to substitute for a fourth credit math?**
No, students can substitute a CS course for a **fourth-credit math** during any school year. While students are required to take a sequence of either Algebra I, Geometry, Algebra II or Integrated Math I, II, and III, students can achieve the fourth credit of math at any point prior to, in between, or following the sequence.

16. **Can the CS requirement course be earned before high school or outside the regular school day/year?**

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Yes, once students have met middle school CS course requirements, they can enroll in a high school CS course to meet graduation requirements.

17. **What are the CS graduation requirements for students who transfer from another state?**
Only students who transfer from another state during their senior year shall be exempt.

## Teacher Endorsement

18. **What teachers will need to receive an endorsement in CS?**
Any middle or high school teacher who teaches a CS course must meet the endorsement requirements and any additional teacher certifications/training required for that course. Teachers utilizing a Computer Science Employment Standard to meet these requirements must have a CS Endorsement starting in the **2024-25** school year. Computer Science Foundations is the only CTE course that does not have required teacher certifications/training. Please utilize the online course catalog to determine eligible endorsements and required additional certifications/training for each of the approved courses.

19. **Do elementary school teachers need to obtain an endorsement in CS?**
No, CS will be embedded into regular classroom instruction. Only teachers who teach a stand-alone CS course will be required to have an applicable endorsement.

20. **Are there multiple options for teachers to receive an endorsement in CS?**
Yes, pre-service teachers will still be required to complete an educator preparatory program and complete CS Praxis (5652). Current licensed teachers will be able to complete the free CS Endorsement Pathway to receive an endorsement in CS.

21. **What is the CS Endorsement Pathway (CSEP)?**
The CSEP provides teachers with a **no-cost** route to CS **endorsement**. The Endorsement Pathway contains **six self-paced modules** that allow teachers to demonstrate their knowledge and skills of the CS standards by embedding these practices into their current instruction. Interested teachers can visit TN computer science to sign up for upcoming cohorts.

22. **How does this affect teachers that have the CS Employment Standard?**
Teachers who obtained an employment standard will be required to complete a modified version of the CS Endorsement Pathway with fewer modules.

23. **Will these changes affect teachers who currently hold a CS 173 Endorsement?**
No, teachers who hold a CS 173 Endorsement will continue to be able to teach CS courses. They will not need to complete the CSEP.

24. **When do teachers need to have a CS endorsement?**
Beginning in the **2024-25** school year.

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## Professional Development

**25.** ***What professional development options will be available to teachers?***
Teachers will have ongoing and free CS training available through the department, the Tennessee STEM Innovation Network, and the STEM Regional Hubs. Statewide training will be provided for the CS standards, online course options, summer self-paced online CS readiness courses, and other CS professional development opportunities.

**26.** ***How does Code.org training help teachers interested in teaching Computer Science?***
Code.org training prepares new CS teachers to teach CS across grades K-12. Teachers who complete or have completed Code.org training will complete a modified version of the CS Endorsement Pathway with fewer modules.

**27.** ***What is the CS Momentum Expedition?***
The CS Momentum Expedition conference will spark the creativity of Tennessee teachers by exposing them to numerous ways that CS is integrated into various industries. It is intended to inspire teachers with innovations and demonstrate the interdisciplinary connections that CS has to a plethora of career fields and to their classrooms.

Please visit TN computer science for more detailed information on computer science in Tennessee.

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