ALABAMA STATE DEPARTMENT OF EDUCATION
EDUCATOR PREPARATION SECTION
5215 GORDON PERSONS BUILDING
POST OFFICE BOX 302101
MONTGOMERY, AL 36130-2101
Telephone: (334) 694-4594
Alabama Achieves

Computer Science Training Approval Request for Alabama Colleges and Universities
2024-2025 Scholastic Year

This application must be completed to request approval to offer training for a specific P-12 computer science course. A separate application must be completed for each P-12 course. Select the course for which approval is being sought.

❑ **App Creators (PLTW)**
App Creators introduces students to the field of computer science and the concepts of computational thinking, through the creation of mobile apps. Students are challenged to be creative and innovative, as they collaboratively design and develop mobile solutions to engaging, authentic problems. Students experience the positive impact of the application of computer science to society as well as other disciplines, particularly biomedical science.

❑ **Computer Science A, AP**
A one credit college-level course following the curriculum established by the College Board Advanced Placement (AP) Program for computer science; emphasizes object-oriented programming methodology with a concentration on problem-solving and algorithm development.

❑ **Computer Science Discoveries**
Computer Science Discoveries is a full-year introductory computer science survey course for students in Grades 6-8. The course takes a wide lens on computer science by covering topics such as programming, physical computing, HTML/CSS, and data. Students are empowered to create authentic artifacts and engage with CS as a medium for creativity, communication, problem-solving, and fun.

❑ **Computer Science Endeavors**
Computer Science Endeavors is designed for students in Grade 6. Students will be introduced to computer science and will strengthen their coding skills. As a foundational computer science course, students will understand the basics of block coding, coding concepts, algorithms, the Internet of Things (IoT), and ethical computing. 18 weeks (minimum of two units) OR 36 weeks (all units).

❑ **Computer Science Essentials (PLTW)**
Computer Science Essentials is a one-credit course that introduces students to coding fundamentals through an approachable, block-based programming language where they will have early success in creating usable apps. As students sharpen their computational thinking skills, they will transition to programming environments that reinforce coding fundamentals by displaying block programming and text-based programming side-by-side. Finally, students will learn the power of text-based programming as they are introduced to the Python® programming language.

❑ **Computer Science for Innovators and Makers (PLTW)**
Computer Science for Innovators and Makers teaches students that programming goes beyond the virtual world into the physical world. Students are challenged to creatively use sensors and actuators to develop systems that interact with their environment. Designing algorithms and using computational thinking practices, they code and upload programs to microcontrollers that perform a variety of authentic tasks. Students' understanding of computer science concepts through meaningful applications will be broadened. Teams select and solve a personally relevant problem related to wearable technology, interactive art, or mechanical devices.

❑ **Computer Science HL, IB**
Emphasis on computational thinking which lies at the heart of the course and is integrated with other topics; designated by the IB program as an experimental science alongside biology, chemistry, etc.; topics are supported by practical activities including programming.

❑ **Computer Science and Society**
Computer Science and Society is designed for students in Grade 8. Students will be able to enhance their knowledge of computer science and how it affects society as they explore topics that include: facial recognition; artificial intelligence; cybersecurity and ethics; coding; app development; and other innovations in computing. 18 weeks (minimum of two units) OR 36 weeks (all units).

❑ **Computer Science Principles, AP**
College-level advanced course following the curriculum established by the College Board Advanced Placement (AP) program for computer science; focuses on the innovative and multidisciplinary aspects of computing as well as the computational thinking practices that help students see how computing is relevant to many areas of their everyday lives; introduces students to the creative aspects of programming, abstractions, algorithms, large data sets, the Internet, cybersecurity concerns, and computing impacts.

❑	**Computer Science SL, IB** Emphasis on computational thinking which lies at the heart of the course and is integrated with other topics; designated by the IB program as an experimental science alongside biology, chemistry, etc.; topics are supported by practical activities including programming.
❑	**CS Makers** CS Makers is for Grade 8 students and focuses on foundational Computer Science concepts, computational practices, and making things from software and computer hardware. The goal of CS Makers is to engage students in the computational practices of algorithm development, problem-solving, and computer programming activities within the context of problems that are relevant to the lives of Alabama students. Students will design and create computational artifacts in a CS makerspace while exploring human/computer partnerships, digital citizenship, and the role of computers in society. Students will learn how to design items, develop algorithms, and create computer programs.
❑	**Cybersecurity (PLTW)** Cybersecurity - PLTW is a one-credit course that introduces students to the tools and concepts of cybersecurity and encourages them to create solutions that allow people to share computing resources while protecting privacy. Nationally, computational resources are vulnerable and frequently attacked; in Cybersecurity, students solve problems by understanding and closing these vulnerabilities. This course raises students' knowledge of and commitment to ethical computing behavior. It also aims to develop students' skills as consumers, friends, citizens, and employees who can effectively contribute to communities with a dependable cyber-infrastructure that moves and processes information safely.
❑	**Exploring Computer Science** Exploring Computer Science is an introductory year-long high school computer science course for students in Grades 9-10 focused on foundational computer science concepts and computational practices. Students will be introduced to the breadth of the field of computer science through an exploration of engaging and accessible topics. The course is designed to focus on the conceptual ideas of computing and help students understand why certain tools or languages might be utilized to solve particular problems. The goal of Exploring Computer Science is to develop in students the computational practices of algorithm development, problem-solving and programming within the context of problems that are relevant to the lives of today's students. Students will also be introduced to topics such as interface design, limits of computers, and societal and ethical issues. Prerequisite: It is recommended that students have completed Algebra I prior to enrolling or be concurrently enrolled in Algebra I. Exploring Computer Science is designed to be a college preparatory high school course and thus, should provide a rigorous, but accessible, introduction to computer science. No previous computer science experience is required.
❑	**Introduction to Computer Science (TEALS)** Introduction to Computer Science - TEALS is a one-credit engaging course that explores a variety of basic computational thinking and programming concepts through a project-based learning environment. Every unit culminates in a comprehensive project and roughly 75% of student time is spent building projects and practicing the skills they are learning.

The items listed below must be submitted with this request. All requests and supporting documents should be emailed to Dr. Kelly Stanton at kstanton@alsde.edu.

❑	Copy of Syllabus -Syllabus should be annotated to show how the college/university course is aligned with the standards outlined in the specific Computer Science course listed above.
❑	Schedule of when the course will be provided and format(s) of delivery.
❑	Course cost(s)

❑	Course Instructor(s)
	  ☐ Full Name(s)
	  ☐ Employer Information: entity on campus that employs the individual(s)
	  ☐ Official transcript(s) of the highest degree held (required)
	  ☐ Professional Educator or Professional Leadership Certificate(s) held (optional)

Name of Alabama College or University Requesting Approval		
College of Education Dean *(please print)*	**College of Education Dean** *(signature)*	**Date**
College of Education Authorized Certification Official *(please print)*	**College of Education Authorized Certification Official** *(signature)*	**Date**

FOR ALSDE USE ONLY

Submission Date	
2nd Submission Date after Revisions	
3rd Submission Date after Revisions	

❏ Approved ❏ Denied	Signature Line	
❏ Approved ❏ Denied	Signature Line	
❏ Approved ❏ Denied	Signature Line	
❏ Approved ❏ Denied	Signature Line	