

ALABAMA STATE DEPARTMENT OF EDUCATION EDUCATOR PREPARATION SECTION

5215 GORDON PERSONS BUILDING POST OFFICE BOX 302101 MONTGOMERY, AL 36130-2101 Telephone: (334) 694-4594 ALSDE | Alabama Achieves



Computer Science Training Approval Request for Alabama Colleges and Universities

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.				
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	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 basic				
	of block coding, coding concepts, algorithms, the Internet of Things (IoT), and ethical computing. 18 weeks (minimur				
	of two units) OR 36 weeks (all units).				
	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 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.				
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	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 week				
	(minimum of two units) OR 36 weeks (all units).				
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	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.					
1	The items listed below must be submitted with this request. All requests and supporting documents should be					
•	emailed to Dr. Kelly Stanton at <u>kstanton@alsde.edu</u> .					
	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) College of Education Authorized Certification Official (please print) College of Education Authorized Certification Official (signature)	ay 2025					
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