edhesive

AFE-Sponsored Edhesive Courses - All

The following is a quick-view of all Edhesive courses included in the AFE sponsorship program. Schools may select from:

- Introduction to Computer Science - Python (Single Semester or Full-Year)
- AP Computer Science Principles (Full-Year)
- AP Computer Science A-Java (Full-Year)
- Professional Development for Introduction to CS Python (40-hours)
- Professional Development for AP Computer Science Principles (40-hours)
- Professional Development for AP Computer Science A-Java (40-hours)

For more detailed course information, please refer to the Course section of the Implementation Guide.

Introduction to Computer Science - Python

Duration: Available as a half-year course (Term 1) or a full-year course (Terms 1 and 2)
Student Prerequisites: No prior computer science knowledge or experience is necessary.
Teacher Background: No prior computer science knowledge or experience is necessary.

Grades 9-12

This course is designed to offer an introduction to computer science. Students will learn the basics of computer programming along with the basics of computer science. The material emphasizes computational thi2nking and helps develop the ability to solve complex problems.

This course covers the basic building blocks of programming along with other central elements of computer science. It gives a foundation in the tools used in computer science and prepares students for further study in computer science, including AP Computer Science Principles and AP Computer Science A courses.

The course allows students to work independently in text-based Python. The course also includes a career focus, where at the end of units, students meet (via videos) individuals from different industries who work in coding (medical, music, etc.).

AP Computer Science Principles

Duration: Full Year
Student Prerequisites: No prior computer science knowledge or experience is necessary;
Algebra I highly recommended
Teacher Background:

Grades 10-12

edhesive

The AP CS Principles course is a full year AP course geared towards 10th-12th graders. Edhesive has partnered with the University of Texas at Austin's UTeach Institute to launch an online version of the esteemed UTeach CS Principles curriculum. This curriculum has been endorsed by the College Board.

UTeach CS Principles has been designed as a year-long high school course that fully addresses the seven "Big Ideas" of computer science and six "Computational Thinking Practices", as specified by the College Board's AP Computer Science Principles curriculum framework.

The lessons and materials used throughout this course incorporate Project-Based Learning (PBL), a pedagogical approach that actively engages students in the educational process, improves retention and develops problem-solving, critical thinking, and group communication skills. Through this collaborative, learner-centric approach, students are encouraged to explore the advantages and societal impact of computational technology while developing their own programming and computational thinking skills.

The course is roughly 20% coding, and 80% focused on CS applications through project-based, inquiry-based, collaborative learning.

AP Computer Science A - Java

Duration: Full Year
Student Prerequisites: No prior computer science knowledge or experience is necessary;
Algebra 1 is required; Algebra II is recommended
Teacher Background: All experience levels (No prior computer science knowledge or experience
is necessary)

Grades 11-12

AP CSA is a full-year AP course geared towards 11th-12th graders who are serious about programming. Java requires a good mathematical background and strong problem-solving skills. The course will prepare students for the Advanced Placement Computer Science exam, level A.

Students will learn to design and implement computer programs that solve problems relevant to today's society, including art, media, and engineering. AP Computer Science A teaches object-oriented programming using the Java language and is meant to be the equivalent of a first semester, college-level course in computer science. It will emphasize problem-solving and algorithm development, and use hands-on experiences and examples so that students can apply programming tools and solve complex problems.

Edhesive's AP Computer Science A is approved by the College Board as an authorized AP Computer Science A course.

edhesive

Professional Development: Get Ready to Teach Intro to Computer Science – Python

Duration: 40 Hours
Prerequisites: No prior computer science knowledge or experience is necessary
Supplemental Course: Introduction to Computer Science

Get Ready to Teach Intro to CS (Python) is a robust, online professional development course that prepares teachers to confidently lead Introduction to Computer Science, the first course in our blended computer science curriculum. Participating teachers will build a foundational understanding of the curriculum, create their own implementation, prepare for the first day of school, and continue their learning throughout the year.

With this asynchronous learning tool, teachers have the opportunity to learn and complete material on their own time and at their own pace, using summer months or break periods. The training covers content relevant to both new and experienced computer science teachers.

Topics will include how to:

- Code in Python and conceptualize course content
- Navigate and utilize Edhesive's online course
- Pace course learning for themselves and students
- Differentiate teaching methods for varied learners
- Customize online modules for student success
- Manage a blended classroom with hands-on techniques
- Effectively use teacher and student support resources

Professional Development: Get Ready to Teach AP Computer Science Principles

Duration: 40 Hours
Prerequisites: No prior computer science knowledge or experience is necessary
Supplemental Course: AP Computer Science Principles

This professional learning program is a 40-hour online professional development course that will provide teachers with the information and resources they will need to successfully facilitate the AP Computer Science Principles course in a blended learning environment.

The AP Computer Science Principles professional learning model is designed to leverage the knowledge and expertise of all community members to enhance the experiences and competencies of participating teachers.

edhesive

The course is completely asynchronous, so teachers can complete the program at their own pace. However, teachers should complete this program before school starts so they're ready on Day One. The program will remain available for the duration of the school year as an ongoing reference.

The program focuses on the following:

- Familiarizing teachers with the comprehensive teacher materials and curriculum, often from the perspective of a student
- Exploring background mathematics and computer science content in the context of course activities
- College Board requirements and expectations for AP implementation

Professional Development: Get Ready to Teach AP Computer Science A-Java

Duration: 40 Hours
Prerequisites: No prior computer science knowledge or experience is necessary
Supplemental Course: AP Computer Science A (Java)

This course description will be available on May 6, 2019.