TAE coding
Technology Applied Edaucation

COURSE CATALOG

970 Roosevelt #100 | Irvine, CA 92620 | 949-445-1118 | master@taecoding.com

WHY CODING

A new era of the 4th Industrial Revolution is anticipated and especially advancement in technologies such as artificial intelligence, the Internet of Things(IoT) and Big Data are rapidly changing every field of our society. It has been a critical issue how to prepare our children for these unprecedented changes.

We believe that every student should have a quality coding/programming education in order to develop logical computational thinking and creative problem-solving skills. They will be a creative leader in any fields in our new era.

At TAE Coding, we provide systematic curriculum in a streamlined track to guide our students to learn fundamentals of programming for different interests and goals.

TRACKS OFFERED

CS PRINCIPLE TRACK [GRADES: 4TH – 6TH]

- **[CS11]** Introduction to Programming in Scratch
- **[CS12]** Programming Fundamentals in Scratch
- **[CS13]** Game Development in Scratch
- **[CS14]** Mobile App Development in App Inventor

CS FOUNDATION TRACK [GRADES: 7TH AND UP]

- **[CS21]** Introduction to Programming in Python
- **[CS22]** Programming Fundamentals in Python

CS APPLICATION TRACK [GRADES: 7TH AND UP]

- **[CS31]** Web Animation and Game Development
- **[CS32]** Web Design and Development
- **[CS33]** Web App Development in Angular
- **[CS34]** Mobile App Development in Ionic

CS AP TRACK [GRADES: 7TH AND UP]

- **[CS41]** Introduction to AP Computer Science
- **[CS42]** Programming Fundamentals in JAVA
- **[CS43]** AP Exam Preparation

CS OLYMPIAD TRACK [GRADES: 7TH AND UP]

- **[CS51]** Introduction to Competition Programming
- **[CS52]** Olympiad Bronze Contest Preparation
- **[CS53]** Olympiad Silver Contest Preparation
- **[CS54]** Olympiad Algorithm

CS DATA SCIENCE TRACK [GRADES: 7TH AND UP]

- **[CS61]** Introduction to Data Science
- **[CS62]** Data Visualization and Statistics
- **[CS63]** Machine Learning Fundamentals

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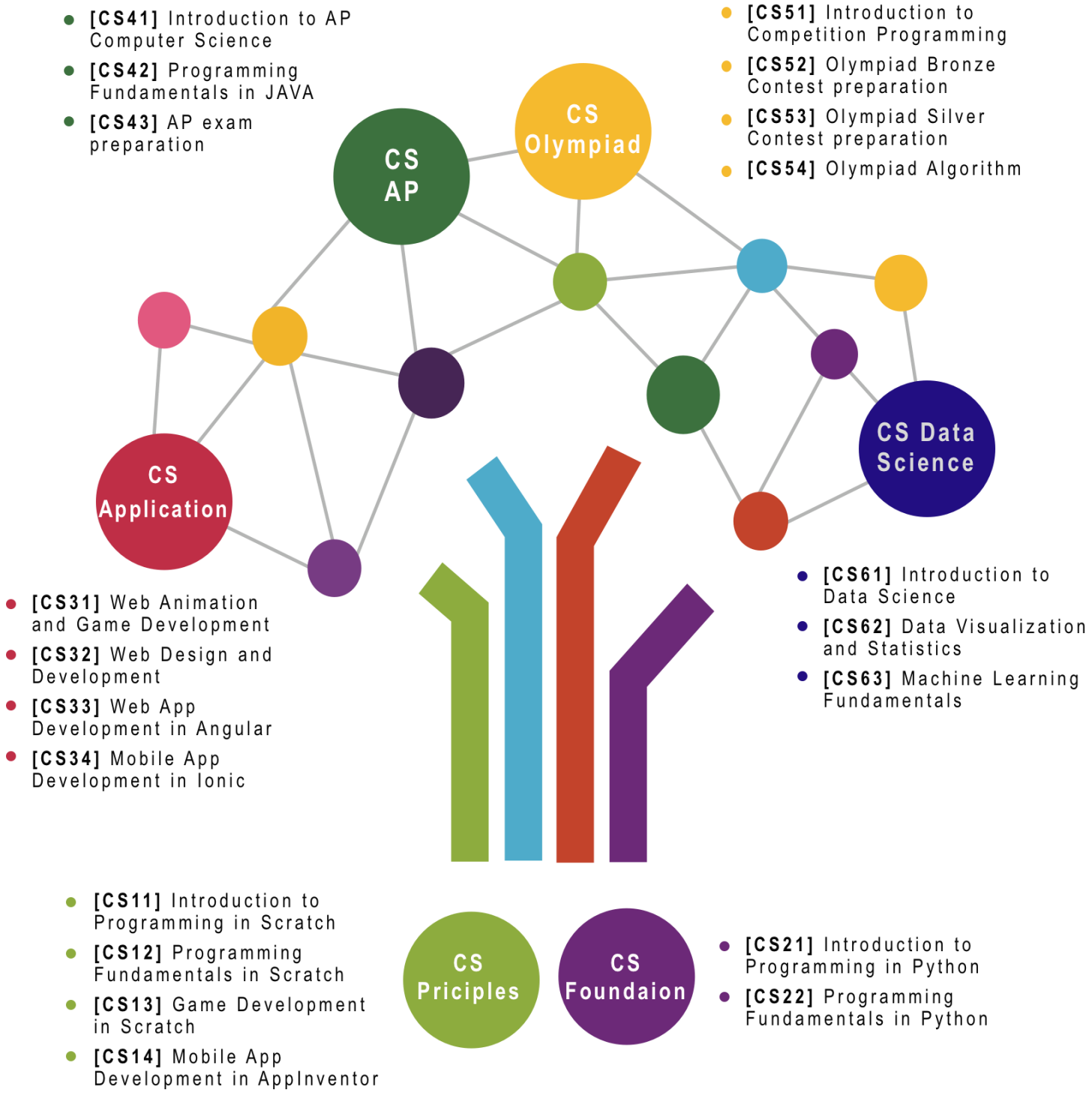
COURSE TRACK TREE



TAE coding Technology Applied Edaucation 2018 Spring Session Schedule

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Group Lessons

Course	Grade	Time	Location	Days	Tuition
[CS21] Introduction to Programming in Python	7th & Up	SUN 4:00 PM - 6:00	970 Roosevelt	3/18, 3/25, 4/1, 4/15, 4/22, 4/29, 5/6, 5/13, 5/20, 5/27	$500
[CS22] Programming Fundamentals in Python	7th & Up	FRI 7:00 PM -9:00	970 Roosevelt	3/16, 3/23, 3/30, 4/13, 4/20, 4/27, 5/4, 5/11, 5/18, 5/25	$500
[CS31] Web Animation and Game Development	7th & Up	SAT 7:00 PM -9:00	970 Roosevelt	3/17, 3/24, 3/31, 4/14, 4/21, 4/28, 5/5, 5/12, 5/19, 5/26	$500
[CS54] Olympiad Algorithm	7th & Up	SAT 4:00 PM -6:00	970 Roosevelt	3/17, 3/24, 3/31, 4/14, 4/21, 4/28, 5/5, 5/12, 5/19, 5/26	$500
Office Hour		SAT 6:00 PM -7:00	970 Roosevelt		

Sibling discount

The second child will receive a 10% discount.

Class Policy

If students are unable to attend the scheduled classes, a refund or credit will not be issued. Instead, students will be able to have a make-up session with TAs in our Office Hour. If students need additional help, private tutoring sessions are available.

TAE coding Technology Applied Education CS PRINCIPLE TRACK

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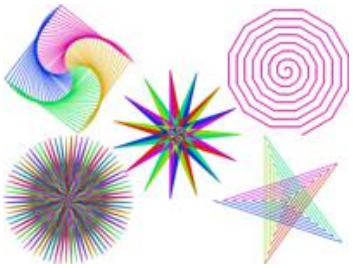
In this Computer Science Principle Track, students will learn essential concepts for programming principles by learning Scratch and App Inventor. Both Scratch and App Inventor are block-based programming languages developed by MIT. Scratch and App Inventor are visually powerful to facilitate the learning of complex programming principles. Students will also learn how to create interactive data-oriented animations and games and how to share their creations with others. By the end of this track, students will have a strong foundation for programming principle and logical computational thinking to move on to more advanced tracks.

Length: 4 Courses
Recommended Grades: 4th – 6th
Prerequisites: None

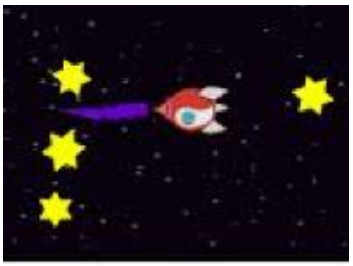
[CS11] INTRODUCTION TO PROGRAMMING IN SCRATCH

This is the first course in Computer Science Principle Track. Students will learn essential programming concepts, such as variables, operators, expressions, conditional statements, loops, and functions. Also, students will learn how to create basic interactive animations and games. Quizzes and homework will be assigned on a weekly basis.



[CS12] PROGRAMMING FUNDAMENTALS IN SCRATCH

This is the second course in Computer Science Principle Track. On top of the essential programming concepts, students will learn more advanced programming concepts, such as string, list manipulation, and recursions. Also, students will learn how to create more advanced data-oriented animations and games. Quizzes and homework will be assigned on a weekly basis.



[CS13] GAME DEVELOPMENT IN SCRATCH

This is the third course in Computer Science Principle Track. With all the programming concepts, students will focus on developing more complicated and interactive games. Also, students will learn how to publish and share their creations with others in the world. By working through projects, students will also learn the basic life cycle of computer science. Quizzes and homework will be assigned on a weekly basis.

[CS14] MOBILE APP DEVELOPMENT IN APP INVENTOR

This is the last course in Computer Science Principle Track. Students will learn the essential constructs of App Inventor and how to design and develop functional mobile apps for smartphones and tablets. Quizzes and homework will be assigned on a weekly basis.

TAE coding Technology Applied Edaucation CS FOUNDATION TRACK

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In this Computer Science Foundation Track, students will learn essential concepts for programming principles by using Python. Python is an expressive programming language to facilitate the learning of complex programming principles and, also a popular versatile language even suitable for data science. By the end of this track, students will have a strong foundation of programming principles and logical computational thinking to move on to learn how to develop the advanced applications.

Length: 2 Courses
Recommended Grades: 7th and up
Prerequisites: None

[CS21] INTRODUCTION TO PROGRAMMING IN PYTHON

This is the first course in Computer Science Foundation Track. By learning Python programming, students will learn essential programming concepts, such as variables, constants, operators, expressions, conditional statements, loops, and functions. Quizzes and homework will be assigned on a weekly basis.

[CS22] PROGRAMMING FUNDAMENTALS IN PYTHON

This is the second course in Computer Science Foundation Track. Students will learn string, list, range sequences, the power of list iteration, string and list methods. Also, students will learn the data structures and other practical tasks of Python programming. Quizzes and homework will be assigned on a weekly basis.

TAE coding CS APPLICATION TRACK

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In this Computer Science Application Track, students will learn how to develop the advanced applications for desktop, web and mobile with the latest industry standard technologies and tools, including JavaScript, HTML5 and CSS, VSCODE IDEA, Typescript, Angular, Ionic and Node.js. By working through fun projects, students will also learn the core software development principles. More importantly, they will learn the common structures in applications and how to apply them to learn new technologies more quickly. By the end of this track, students will have a strong foundation of developing applications and move on to more advanced applications.

Length: 4 Courses
Recommended Grades: 7th and up
Prerequisites: CS Foundation Track

[CS31] WEB ANIMATION AND GAME DEVELOPMENT

This is the first course in Computer Science Application Track. Students will learn the constructs of JavaScript programming and how to build animations, interactive art and games in Typescript. Also, students will learn how to publish websites with animations and interactive games. Quizzes and homework will be assigned on a weekly basis.

[CS32] WEB DESIGN AND DEVELOPMENT

This is the second course in Computer Science Application Track. Students will learn the constructs of HTML5 and CSS for web designing and styling. Students will also learn how to integrate CSS and JavaScript to give a professional look and feel. Quizzes and homework will be assigned on a weekly basis.

[CS33] WEB APP DEVELOPMENT IN ANGULAR

This is the third course in Computer Science Application Track. Students will learn Google Angular framework, which is the latest application development technology. By learning Angular framework, student will be able to build applications suitable for all platforms, such as web, mobile web, native mobile, and native desktop. Quizzes and homework will be assigned on a weekly basis.

[CS34] MOBILE APP DEVELOPMENT IN IONIC

This is the fourth course in Computer Science Application Track. Students will learn Ionic 2, one of the most popular open source frameworks especially for building mobile applications. Students will learn how to develop their own mobile applications and how to publish it. Quizzes and homework will be assigned on a weekly basis.