DSM Academy
Computer Science Courses (2022 Spring)

All courses will be delivered via Zoom. Lecture recording and notes will be available to students.

***Early bird discount**: sign up and pay tuition by January 19, 2022.
Course Registration: https://www.DSM-Academy.net/
Contact: DSMAcademy.Shen@gmail.com, js48@txstate.edu

WeChat: jianshentx **DSM Academy WeChat Group:**

15 weeks (January 28 – May 21, 2022)
Meet once a week on Friday or Saturday
Total Lecture Hours: 19 Hours (= 15 Meetings X 1 Hour 15 Minutes)
No classes on March 11-12 and 18-19 (Spring Break)

Course/ Instructor	Time	Students	Tuition
Scratch Programming II Dr. Wenbin Luo	6:30—7:45 PM (Central Time) Friday	Grades 3--8	$300 (regular) Early Bird: $280
Python Programming I TBA	5:00—6:15 PM (Central Time) Friday	Grades 5--11	$300 (regular) Early Bird: $280
Python Programming II Dr. Wenbin Luo	5:00—6:15 PM (Central Time) Friday	Grades 5--11	$300 (regular) Early Bird: $280
Java Programming Dr. Chao Gong	6:30—7:45 PM (Central Time) Saturday	Grades 7—12	$300 (regular) Early Bird: $280
C++ Programming Dr. Ayad Barsoum	5:00—6:15 PM (Central Time) Friday	Grades 7—12	$300 (regular) Early Bird: $280

CS Course Instructors:
Dr. Wenbin Luo – Professor of Computer Engineering at a private university. He has a Ph.D. in Computer Engineering.

Dr. Chao Gong -- Associate Professor of Computer Science at a private university. He has a Ph.D. in Computer Science.

Dr. Ayad Barsoum --- Associate Professor of Computer Science at a private university. He has a Ph.D. in Computer Engineering.

DSM Computer Science Course Description:

Scratch Programming II

Scratch Programming II is for students who have completed Scratch Programming I last semester. In this course, students will learn more advanced topics and programming skills. Some of the projects include, but are not limited to, simulating rocket launching, building an analog & digital clock, bubble sort, binary search, and message encryption & decryption etc. Students will be able to showcase and share their programming products online with family and friends. Scratch programming is ideal for students 8 to 16 years old.

Python Programming I

Python is one of the most popular programming languages among data scientists and machine learning researchers. It is a perfect language for students to learn fundamental programming skills and concepts. In this course, students will not only build solid programming skills, but also master Python specific features. The instructor will guide students to solve some programming competition problems using Python 3, which *United States of America Computing Olympiad* (USACO) officially supports. Python programming is ideal for students 11 to 19 years old.

Python Programming II

Python Programming II is for students who have completed Python Programming I. In this course, students will learn more advanced topics in Python. Topics covered include, but are not limited to the following: string & file manipulation, dictionaries, regular expressions, basic searching algorithms (linear search & binary search), sorting algorithms (bubble sort, selection sort, insertion sort, quick sort, and merge sort etc.), recursion, backtracking, stacks, and queues.

Java Programming

Java is another popular programming language. According to Oracle, Java is the #1 developer platform in the world with more than 10 million Java developers and 13 billion devices run Java. In this course. students will learn fundamental programming and computational thinking skills. In addition, students will master Java specific features. Java is one of the three programming languages (Python, Java, and C++) that USACO officially supports. The instructor will guide students to solve some programming competition problems from USACO and Canada Computing Olympiad etc. Java programming is ideal for students 14 to 19 years old.

C++ Programming

C++ is a powerful general-purpose programming language. It can be used to develop operating systems, browsers, games, and mobile apps. C++ supports different ways of programming like procedural, object-oriented, and functional. This makes C++ powerful as well as flexible. C++ is also one of the languages that United States of America Computing Olympiad (USACO) officially supports. In this course students will learn the C++ programming language and enrich their problem-solving skills through hands-on programming challenges. C++ programming is ideal for students 14 to 19 years old.