

COMPUTER SCIENCE COURSE LAYOUT

Becoming a computer scientist is a journey – let us be your guide. In this course, we give you a framework to help you organize and plan your approach.

YEAR ONE



1 >> Scratch- CS fundamentals.

CS fundamentals is an entry level module for children in the computer science course that introduces foundational computer science concepts to students in a fun and simple way and further shifts student's mindsets from digital consumers to creators. By the end of this course segment, students will be able to articulate and apply computer science concepts to design and solve problems in scratch.

- a) Beginner's
- b) Intermediate
- c) Advanced

YEAR TWO

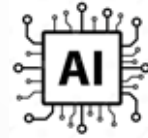


2 >> Scratch with MBlocks.

This course segment addresses real world problems. Students are able to enhance their creativity, innovation and problem-solving skills. By the end of the course segment, students will be able to understand and create their own 2D games, animations, music, art and tell their stories.

- a) 2D Game Development
- b) Story Telling and Animation
- c) Music and Art

YEAR THREE



3 >> Artificial Intelligence with Scratch – Mblocks

Students will be introduced AI and its applications, machine language and explore how training data is used to enable a machine learning model to classify new data. The students more importantly will be motivated to keep learning computer science.

- a) Machine Learning
- b) Artificial Intelligence
- c) Robotics



YEAR FOUR



4 >> Mobile Application Development – App Inventor

Mobile usage is on the rise today, billions of apps have been developed. In this course segment, students are able to learn computational thinking concepts through development of mobile applications. By the end of course segment, students will be able to create their own mobile apps.

- a) Beginner's
- b) Intermediate
- c) Advanced



YEAR FIVE



5 >> Python for Kids with Turtle.

The demand for python is growing every day. It offers a perfect start for kids in the text-based programming while allowing kids move from ideas to on-screen tangible results. The course segment is designed to re-echo computer science foundational concepts and offer an in-depth touch on real world problem solving. By the end of the course, students will be able to understand python coding and creatively solve real world problems.

- a) Beginner's
- b) Intermediate
- c) Advanced

YEAR SIX



6 >> Python for Kids – Artificial Intelligence.

Students will begin using Python for AI and data science. They will explore more advanced programming elements of Python such as dictionaries and files and learn how to employ Python's powerful modules to build games, stories and real-world data projects.

- a) Machine Learning
- b) Artificial Intelligence
- c) Intro to Data Science



YEAR SEVEN



7 >> Website Design with Netlify.

Students learn the core building blocks of web pages, including HTML, CSS and Bootstrap, as well as how the Internet works. Students will build their very first fan website featuring some of their favorite things. By the end of this class, students will also have interacted with the latest tools that help make building web pages even faster.

- a) HTML – Hypertext Markup Language
- b) CSS – Cascading Style Sheets
- c) Bootstrap.



YEAR EIGHT



8 >> Coding with JavaScript and Micro Bit.

Students unleash the power of code with micro: bit to develop games and apps, develop logical thinking skills.

- a) Beginner's
- b) Intermediate
- c) Advanced

>> Optional Tracks

1 >> 2D Game Development with Godot

- a) Beginner's
 - b) Intermediate
 - c) Advanced
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2 >> 3D Game Development with Godot

- a) Beginner's
 - b) Intermediate
 - c) Advanced
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3 >> Internet of Things

- a) Beginner's
- b) Intermediate
- c) Advanced