

## PHASE I

### 4-7 GRADES

#### 1<sup>st</sup> year



#### Robotics – Level 1

Build simple robots and control their movements. Teach robots to communicate and interact by programming their motors and sensors.



#### IT Fundamentals – Level 1

Dive into the world of computer technology. Learn basic system administration and file management. Improve your skills in safe Internet browsing and in-office applications. Get familiar with the idea of online collaboration.



#### 3D Design – Level 1

Create beautiful and complex 3D models using open-source software —Tinkercad. Model real-world objects. Learn the basics of making 3D characters.



#### Introduction to Programming and Game Development

Start your journey into the classic programming using Python. Learn programming basics. Use a variety of different modules to design and program your own games.

### CCSE A

#### 2<sup>nd</sup> year



#### Robotics – Level 2

Build advanced level robots. Combine different sensors to perform complex tasks. Boost your team-building skills to solve a variety of challenging problems.



#### IT Fundamentals – Level 2

Learn advanced topics of file management and operating systems administration. Work with Windows, Linux, Android, and iOS. Become a professional office software user.



#### Introduction to Web Development and Design

Understand the concepts and recognize different types of websites by their design and purpose. Get familiar with the website's structure and layout. Learn to create your own website from scratch.



#### Programming and Game Development – Level 1

Design the characters, story, and logic to create a fantasy world. Explore games' genres and their distinctive features. Learn programming basics to build your own multi-level game.

#### 3<sup>rd</sup> year



#### Robotics – Level 3

Learn advanced mechanics. Design and program robots for a wide spectrum of tasks requiring adaptive behavior and the optimal algorithms.



#### Hardware and Troubleshooting

Learn computer components. Take apart a PC and put it back together; troubleshoot common issues. Understand the hardware market to buy or update your PC components.



#### Raster Graphics and Digital Photo

Explore the most popular design software Adobe Photoshop. Learn the fundamentals of professional photo editing and post-processing of digital images.



#### Programming and Game Development – Level 2

Improve your programming skills. Work with complex constructions. Combine your knowledge and skills to program personal mini-computers.

### 7-9 GRADES

### CCSE B

#### 1<sup>st</sup> year



#### Robotics – Level 2

Build advanced level robots. Combine different sensors to perform complex tasks. Learn advanced mechanics. Design and program robots for a wide spectrum of tasks requiring adaptive behavior and optimal algorithms.



#### IT Fundamentals – Level 3

Learn advanced topics of file management and operating systems administration. Work with Windows, Linux, Android, and iOS. Become a professional office software user. Learn computer components. Assemble and disassemble a PC. Troubleshoot common issues.



#### Raster Graphics and Digital Photo

Explore the most popular design software Adobe Photoshop. Learn fundamentals of professional photo editing and post-processing of digital images.



#### Programming and Game Development – Level 2

Start your journey into classic programming using Python. Learn programming basics and apply them to complex tasks. Combine your knowledge and skills to program a personal mini-computer.

## PHASE II

### TECHNICAL

### 7-9 GRADES

#### 1<sup>st</sup> year



#### Arduino Gadgets and IoT (Internet of Things)

Introduction to microcontrollers. Learn advanced low-level programming of Arduino circuits using classic procedural programming with C language. Design and develop complex projects. Build advanced gadgets. Work on Smart Home projects.



#### Web Development – Level 1

Learn the basics of front-end development. Apply the basics of HTML, CSS, and JavaScript to build your own website. Learn to debug your project code.



#### Game Development – Level 3

Create interactive animation in Adobe Animate using scripting language. Design, program, and perform your own game project.



#### Programming – Level 3

Learn programming, object-oriented paradigms, and algorithmic fundamentals with Java, the most common programming language in the world. Apply your knowledge for your own project.

#### 2<sup>nd</sup> year



#### BigData and Machine Learning

Develop artificial intelligence application for text and image recognitions. Program self-educated chat bot. Work on Raspberry Pi.



#### Web Development – Level 2

Create and integrate media and interactive content into your website using popular WordPress CMS. Learn mobile web development aspects.



#### Game Development – Level 4

Apply object-oriented paradigms to create your own 3D game using Unity, professional game development software. Learn C# programming to automate game scripting.



#### Programming – Level 4

Continue to learn Java programming, boost your programming skills and work on real-world programming tasks. Develop your collaboration and teamwork skills by creating your team project.

### CREATIVE

### 7-9 GRADES

#### 1<sup>st</sup> year



#### Animation and Game Design

Create interactive animations and games in Adobe Animate. Master character design and make complex animated movies.



#### Vector Graphics and Digital Publishing

Learn the industry-standard vector graphics editor Adobe Illustrator. Make a professional design and layout for digital and printed publishing in Adobe InDesign. Explore elements of professional applied design development.



#### 3D Character Design and 3D Printing

Model composite 3D objects. Design and apply textures. Print out 3D prototypes. Design your own 3D human character in Adobe Fuse. Incorporate your 3D objects within other Adobe products. Edit and animate your 3D model to enhance your design.



#### Photo Lab

Dive into the world of professional photography. Improve your understanding of Adobe Photoshop and Adobe Lightroom. Master your skills in professional photo editing and post-processing of digital images.

#### 2<sup>nd</sup> year



#### Video Lab

Cut, process, and edit video data in Adobe Premiere. Create your own clips and trailers. Add professional effects in Adobe After Effects.



#### Interior and 3D Design

Create real life 3D objects. Work with the most famous and powerful open source 3D editing software - Blender. Get familiar with interior design software SketchUp. Model your dream-home.



#### Sound Lab

Create and edit your own audio data using professional software Adobe Audition. Enhance audio quality with a set of precise tools. Mix your own track.



#### Professional 3D Design with Maya

Learn professional 3D design techniques with Autodesk Maya 3D software. Get to know the number one tool that is used in the film industry to create animation.

