

PROGRAMMING

COMPUTER SCIENCE I /Visual Basic

4801M

Computer Science I introduces the structured techniques necessary for efficient solution of business-related computer programming logic problems and coding solutions into a high-level language. The fundamental concepts of programming are provided through explanations and effects of commands and hands-on utilization of lab equipment to produce correct and accurate outputs. Topics include program flowcharting, pseudo coding, and hierarchy charts as a means of solving problems. The course covers creating file layouts, print charts, program narratives, user documentation and system flowcharts for business problems; algorithm development and review, flowcharting, input/output techniques, looping, modules, selection structures, file handling, and control breaks and offers students an opportunity to apply skills in a laboratory environment.

- **Recommended Grade Level: 10-12**
- **Credits: 1 credit per semester; 2 semesters**

COMPUTER SCIENCE II/PROGRAMMING

5236M

Computer Science II course introduces students to the fundamental topics of computer science that include problem solving, design strategies/methodologies, data structures, algorithms and ethical computing. Students will learn to develop in Java and create solutions that can scale up from small, simple problems to large, complex problems. The project based curriculum helps students learn teamwork and time management skills as well as keeping the students engaged by always having a fun creative project that enforces the fundamental computer science topics.

- **Recommended Grade Level: 11, 12**
 - **Required Prerequisites: Computer Science I**
 - **Credits: 1 credit per semester; 2 semesters**
- WEIGHTED COURSE (1.0)**

COMPUTER SCIENCE II/ Video Gaming Apps

5252M

Video Gaming and Apps is MCIT's cutting edge course which will allow students to create fully developed video games. Using Unity 3D, we will make two video games over the course of the year. Students will work to develop a storyline, create the 3D models and textures, and program the levels before publishing our games. Team taught, students will have the time and resources to design and create assets and code games. FPS, 3rd person, 2D, RPG, all game types will be explored.

- **Recommended Grade Level: 12**
- **Required Prerequisites: Computer Science I**
- **Credits: 2-Block course; 2 semesters; 4 total credits**

