Dear Students and Parents,

Welcome to the IB Computer Science course. This course outline was created from the current curriculum guide and will include current issues in Computer Science. As an experienced educator, programmer, systems manager and business owner , I am pleased to have been selected to lead this course Through hands-on activities my goal is to increase your student's passion for technology and learning, increase their awareness of the complexities that are involved in technology they use every day, and to strengthen their problem solving skills. Please feel free to contact me with any questions, concerns, or suggestions – feedback is always welcome.

Sincerely,

- Jim Brennan

Contact Information:

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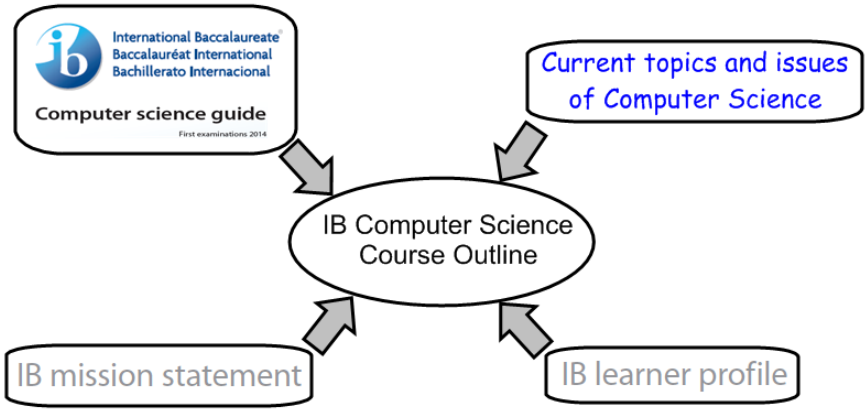

Student Assessments

Students will be assessed using the following categories:

Class Participation:	20%
Homework:	20%
Quizzes:	20%
Tests:	20%
Projects:	20%

Notes:

- Often there may be little difference between what constitutes a homework assignment and what constitutes a project assignment. The length of time that a student is given to complete an assignment is often the difference.
- Students that participate in class activities will be successful with homework and quizzes. Projects are intended to require persistence.
- Students that do not achieve a proficient score on any quiz may seek extra help and retake quizzes until a proficient score is achieved to the student's satisfaction. Higher quiz grades *replace* lower quiz grades.
- Success on quizzes and projects are good indicators for success on tests.

International Baccalaureate Computer Science

Course Outline

Trimester I Introduction to Computer Science

Unit 1 Introduction to Programming and Personal Computing
Topics: Basic programming; programming the TI 84 graphing calculator; Inside the computer, hardware, software.

Unit 2 How Computers Operate
Topics: Low-level programming; Inside the CPU; Number systems and Logic.

Unit 3 Introduction to Operating Systems
Topics: The roles and responsibilities of operating systems; The command line interface; Graphical User Interfaces; Introduction to Linux/Unix.

Trimester II Introduction to Web Science

Unit 4 Web Programming and Network Computing
Topics: HTML; CSS; JavaScript programming; VB Script; cgi programming, PHP.

Unit 5 Introduction to Networks and Protocols
Topics: Network Topologies; Client-Server Architecture; Peer-to-Peer Networking; Network addressing and data communication.

Unit 6 Non-Web Network Services
Topics: Wireless networks; Network services and protocols; Telnet, FTP, DNS, DHCP, network Monitoring.

Trimester III Introduction to Systems Development

Unit 7 The System Development Life Cycle (SDLC)
Topics: Front-end system development life cycle phases: System Planning, System Analysis, Conceptual System Design, System Evaluation and Selection; Back-end system development life cycle phases: Detailed/Functional System Design, System Implementation; System Maintenance and Monitoring.

Unit 8 Programming Complex Systems
Topics: Data Structures and Algorithms; Systems Analysis

Unit 9 Information Systems Management Project
Topics: Class project to design and implement a web-based information system. Project management.