Computer Science Inquiry (CSI)
CS100

Instructors:	Ms. Namrata Pandya	Dr. Pat Patankar	Mr. Tom Meyer
E-mail:	npandya@imsa.edu	ppatankar@imsa.edu	tmeyer@imsa.edu
Phone:	630-907-5965	630-907-5479	630-907-5482

Office hours:
1. Drop in the CS office and see if we are available
2. 9:00am – 10:00am or by appointment (Ms. Pandya)
3. 10:15am – 11:15am or by appointment (Dr. Patankar)
4. 1:15pm – 2:15pm or by appointment (Mr. Meyer)

Attendance: We strictly follow IMSA attendance policy; NO EXCEPTIONS.

Course Description: We will explore fundamentals of computer science that are essential for students in the 21st century. The principles of computer science are taught with two concurrent themes. ***Creativity Theme*** topics: Computing as a creative activity, processing of data creates knowledge, abstraction, levels of abstraction, managing complexity, computational thinking, problem solving, programming (in Python) and debugging. ***Principles Theme*** topics: Data and information, algorithms, basic ideas behind technologies including computers, hardware, software and networks, Internet and search engines, and multimedia, social uses and abuses of information, and the foundations of privacy.

Student Expectations:

All students are expected to

- be involved in class discussions and explorations.
- keep up with the reading material and check moodle regularly for handouts, assignments and submissions.
- complete all assignments and exercises in a timely manner.
- take responsibility for learning certain basic skills and relationships.
- take responsibility for seeking additional help as it is needed.
- have a working computer with them during each class.

Topics to be covered:

- History of computing and computer science
- Hardware and Software
- Computer Number Systems
- Boolean Logic and Digital Electronics
- Computer Networks and the Internet

- Cryptography
- Computer and network Security
- Web Development using HTML and CSS
- Logical Thinking and Programming using Python
- Programming constructs: variables, conditional statements, loops, lists, functions etc.
- Introduction to Arduino: An open source programming platform which allows you to easily control electronics with a microcontroller
- Creating simple Arduino projects

Course components:

Exercises: Must be completed on a timely basis. Will be checked regularly during class/lab time.

Projects: Projects will be assigned throughout the semester. Ample time is allowed for each project in and out of class time.

Labs: Labs are designed to be completed in class. As such the labs are due by the end of the class the day they are assigned. The labs are meant to help students exercise specific concepts covered in (or out of) the class.

Quizzes/Exams: Pencil and paper tests/quizzes will be given periodically to test students' understanding of the material. All the tests/quizzes are comprehensive and will include all the material taught in class as well as some material that students are responsible for learning from their projects/assignments and/or online resources.

Late homework/projects will be severely penalized:

by end of the day: -20%

by beginning of the next class: -50%

All the assignments are to be submitted by the beginning of the class on a due date. Assignment will not be accepted after 5 school days of its due date and students will receive zero for that assignment.

Academic Honesty: All programs/assignments must be your own work. Copies of another's work will be considered plagiarism and treated accordingly. IMSA's plagiarism policy will be strictly enforced.

Class Rules: No food or drinks will be allowed in the class. No gaming in the class (unless it is an assignment). No head phones allowed during class. Every student will stay on task during the class time and will not leave the class till dismissed or he/she risks being marked absent.

Quarterly grades will be averaged using the following weighting:

Projects	30%
Quizzes/Tests	30%
Exercises	15%
Labs	20%
Participation/Organization	5%

Semester grades will be averaged using the following weighting:

Cumulative semester work	95%
Semester Final Exam	5%

PowerSchool calculates the grades using the above grade set up. Grades are calculated accurate to two decimal places. **No manual rounding will take place** after the semester grade is calculated by PowerSchool.