Microcontroller Applications
Course Syllabus

Instructors: Dr. Mark Carlson   Mr. Tom Meyer
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Office hours: 1. 11:00 am – 11:30 am or by appointment (Dr. Carlson, B104A)
                   2. 1:00 pm – 2:00 pm or by appointment (Mr. Meyer, Math Office)

Meeting: BD mods 1-2 (8:10-9:50 PM) B145 (Carlson), B133 (Meyer)

Attendance: We strictly follow IMSA attendance policy; <u>NO EXCEPTIONS</u>.

Materials used: **1**. Class Notes

                   2. Online resources

                   3. Arduino Kit (Provided)

Course Description:

The Microcontroller Applications course assumes no prior knowledge of microcontroller or its use. During the semester, the students will learn to use several libraries, shields, electrical and mechanical components of the Arduino kit. In the latter part of the semester, student either individually or in teams would develop a Microcontroller application based on what was done earlier in the semester and based on student interest. We encourage students to consider addressing one or more of the United Nations Seventeen Sustainable Development Goals.

Course components:

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

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

      Projects: Several microcontroller projects will be assigned throughout the semester. Ample time is allowed for each project in and out of class. Final project will be a summative project.

    Quizzes/Exams: Pencil and paper tests/quizzes will be given. All the tests/quizzes are cumulative.

      Late Policy: Late homework/projects will be severely penalized:
                    by the end of the day: -20%

by the beginning of the next class: -50%

All the assignments are to be submitted by the beginning of the class, on the due date.

Academic Honesty: Students must submit their own work. IMSA's plagiarism policy will be strictly enforced. When in doubt, check with the instructor.

Class Rules: Closable water bottle is allowed in the class. Every student will stay on task during class time. Students will not leave the class until dismissed, unless permitted by the instructor.

Quarterly grades will be averaged using the following weighting:
Projects   30%
Quizzes/Tests   30%
Exercises   15%
Labs   20%
Participation, Organization, Clean-up   5%

Grading scale:

A- 90.0-92.9%   A 93.0-100%
B- 80.0-82.9%   B 83.0-86.9%   B+ 87.0-89.9%
C- 70.0-72.9%   C 73.0-76.9%   C+ 77.0-79.9%
                       D 0.00 - 69.9%

The course syllabus contents are subject to change.

The grades are computed to one decimal places. No rounding will be done so as to change the letter grade.

Arduino http://arduino.cc

Moodle website: https://courses.imsa.edu