CSCI 120 B – Computer Science I
Spring 2016

Instructor: Thyago Mota	Classes: MWF 08:55–10:05am
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Office: PPHAC 220	Office Hours: MW 10-11:30am
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Course Description

The goal of this course is to introduce students to the techniques computer scientists use to answer questions and solve real-world problems. The course emphasizes the design and creation of computer programs to solve problems and the analysis of program capabilities. In general, what is the best way to solve a given problem? Computer programming will be used as a vehicle for learning computer science concepts. In particular, this course includes data types, control structures, functional abstraction, parameter passing, and structured data, including simple objects.

During the in-class portion of the course, students will learn programming skills and discuss applications of these ideas. Weekly laboratories will give students the opportunity for hands-on exploration of the material and the chance to solve real-world problems.

Course Goals

Upon completion of this course, a successful student will be able to:

- Describe how the concepts of computer science are applied to solve real-world problems;
- Write programs in Python using assignments, conditions, loops, functions, and objects; and
- Break down problems using top-down / bottom-up design and functional decomposition.

Textbook

Zelle, J. *Python Programming: An Introduction to Computer Science*. Second Edition. Franklin, Beedle & Associates Inc.

You should expect to spend about an hour before each class session working through the readings. This means reading the text for detail, typing code into the computer, studying the syntax for new language features, and working to learn vocabulary – not just skimming through the material before class.

Course Resources

Supplementary material, including this syllabus, the class schedule, power point slides, papers to read, and assignments will be made available through Canvas (canvas.moravian.edu). Make sure you are enrolled in our course on Canvas and email me ASAP if you are not. Additionally, assignment notification may be sent automatically to your Moravian College email. In these cases, you will be required to download the assignments and submit your work through a version control system based on Git.

Grading Policy

Homework (12%) – The goal of homework problems is for you to practice using the current course content and to explore the topics in more detail. Problems will be assigned nearly **every** class session and will be due the next class. Each homework problem will be graded using the following scale:

(3) "You got it" – The solution is perfect or near perfect.

(2) "You mostly got it" – The solution has some errors or omissions but was headed in the right direction.

(1) "You were far off" – The solution has significant errors or omissions, but a serious attempt was made.

(0) "You didn't do much" – The solution shows little progress or the problem was not attempted.

Programming Assignments (22%) - Three programming assignments will be assigned during the semester. These are larger programming tasks, and you will be give one to two weeks to complete the work. Each programming assignment will be graded out of 100 points.

Laboratory Exercises (17%) - Lab sessions will be held in the CS Computer Lab, PPHAC 114. During the lab, you will be given a series of activities to complete, individually or with a partner, depending on the lab. Labs are designed to utilize concepts of the past week's classroom session to answer real-world problems. In addition to writing programs to solve the problems, you will collect data from the program and write-up answers to questions. Each lab will be graded out of 25 points.

Exams (22%) - Two midterm exams will be given during the semester: Exam I on February 26th and Exam II on April 15th. You may only re-schedule a test for college-approved absences or documented illness. In either case, you must contact me before the beginning of the exam.

Final Exam (15%) - The final exam will be cumulative and will be given in-class on May 2nd at 11:30am. Any change to the final exam schedule must be approved by both me and the dean of students.

Participation (12%) – Attendance in class and active participation during class activities. We will be doing short quizzes mostly every day.

Final grades will be calculated on the standard scale using pluses and minuses.

Late Work

Homework is due right before each class session and we will not accept submissions after that, unless because of illness, family trauma, or a documented excuse (e.g., participation on a competition). In all cases you are required to contact the instructor prior to the deadline. Although we expect students to finish their practice during lab session, we will accept submissions by Friday, 11:59pm. Programming assignments will have specific instructions regarding their deadlines and late policies.

Special Accommodations

Students who wish to request accommodations in this class for a disability should contact the Academic Support Center, located on the first floor of Monocacy Hall (extension 1401). Accommodations cannot be provided until authorization is received from the Academic Support Center.

Academic Honest Policy

Please read and understand the College's Academic Honesty Policy (which you can find online in the Student Handbook). As stated in the policy, "all work that students submit or present as part of course assignments or requirements must be their original work unless expressly permitted by the instructor." Also, "When students use the specific thoughts, ideas, writings, or expression of others, they must accompany each instance of use with some form of attribution to the source." This applies to using code downloaded from the Internet. In this case, students must properly cite the part of the code that was used adding an appropriate comment such as, "this part of the code was downloaded from URL."

This syllabus is subject to change.