

CMSC 101 / IS 101Y: Computational Thinking and Design

Fall 2014

Course Description

Broad survey of computing topics and fields for new majors, along with the academic and professional skills necessary to succeed in those fields. Students will work with a team to complete a semester design and implementation process.

Objectives

After this course, students should be able to:

1. Discuss the characteristics and challenges of key areas of the computing disciplines.
2. Analyze and present data to support informed decision making.
3. Write basic programs using variables, conditional logic, and loops.
4. Demonstrate the skills necessary to succeed as a computing student and professional.
5. Work effectively in a team to solve a complex technological challenge.

When and Where

Listing in the Schedule of Classes:

CMSC 101-04 (lecture)
CMSC 101-02 (discussion)
IS 101Y-03 (lecture)
IS 101Y-04 (discussion)

Lecture: Tuesday/Thursday 1-2:15pm, ENG 231

Discussion: Friday 1-2pm, ENG 231

Instructors

Dr. Carolyn Seaman

- cseaman@umbc.edu
- [website](#)
- ITE 404B (x53937)
- Office Hours: Tues 11am-1pm, Thu 2:30-4pm or by appointment

Dr. Susan Martin

- susan@umbc.edu

- ITE 452 (x52822)
- Office Hours: Tue and Thu 3-4pm or by appointment

Course Staff

- Amanda Mancuso (teaching fellow / IS major) -- mancuso3 < at > umbc.edu
 - Office hours: Mon 12:30-1:30pm, Wed 1-2pm in ITE 470
- Brandon Walsh (teaching fellow / CS major) -- brando12 < at > umbc.edu
 - Office hours: Thu 2:30-3:30pm, Fri 2-3pm in ITE 470
- Joshua Massey (peer mentor / CMPE major) – masseyj1 < at > umbc.edu
- Logan Wroblewski (peer mentor / IS major) – wlogan1 < at > umbc.edu
- Grace Chandler (peer mentor / CS major) – gchan1 < at > umbc.edu
- Tahreem Gondal (peer mentor / IS major) – tgondal1 < at > umbc.edu

NOTE: Teaching fellows hold office hours in ITE 470.

Course Logistics

Required Textbooks

- *Computing for Ordinary Mortals*, Robert St. Amant, Oxford, 2013. ISBN 978-0-19-977530-9
- *Getting Started with Processing*, Casey Reas and Ben Fry, O'Reilly, 2010. ISBN 978-1-449-37980-3
- *Making Your Mark (9/e)*, Lisa Fraser, LDF Publishing, Inc., 2009. ISBN 987-0973529838 (*will be provided to students*)

Grading Policies

Grades will be based on the following categories, broken down as follows:

- Individual work total 30%
 - Professional development (Friday session) assignments (seven journal entries, surveys, cover letter, and resume)
 - Three programming assignments
- Team work 35%
 - Team project (deliverables: project design, prototype demo, prototype evaluation, project poster and presentation, and final project)
- Group peer evaluation 10%
- Tests and quizzes total 25%
 - Quizzes (individual and team grades)
 - Midterm exam
 - Final exam

Note on Team Grades

Each team deliverable for the project will receive a grade, but individual students' grades on the deliverables may vary (i.e., be higher or lower than the deliverable grade) in exceptional cases based on peer feedback and self-assessments.

The group peer evaluation grade will be based on your team members' assessments of each member's contribution to the work throughout the course of the semester (inside and outside of class). We will perform several peer evaluations over the course of the semester, so that you know where you stand on this measure and have an opportunity to adjust your performance before the final peer evaluation at the end of the semester. Only the final peer evaluation will have an effect on your final grade.

Course Policies

Classroom Conduct

1. Absolutely NO food or drink (other than bottled water) is permitted in the classroom.
2. While you are encouraged to bring a laptop or tablet to class, and will be asked to use it during some in-class activities and exercises, when it is not being used for class-related activities (e.g. during lectures), it must be closed. The instructor will let you know when it is permissible to open your laptop during class. You cannot use your laptop to take notes during lectures.
3. Please turn cell phones to vibrate (or off), and do not take calls, during class.

Late Policy

Assignments are due by the beginning of class on the day listed. Unless otherwise stated in the assignment itself, late assignments **will not be accepted**. Extensions will be granted only for documented, legitimate reasons (significant illness, death in the family, athletic or business travel, religious observations) and **must** be requested in advance. Extensions after the fact will only be granted in extraordinary circumstances, as outlined in the UMBC student handbook (significant illness with a doctor's note, death in the family with documentation).

Programming Assignment #1 must be completed on time and cannot be submitted late. The one exception to the late policy stated above is that Programming Assignments #2 and #3 may be submitted late, with a 15% penalty for each 24 hours or fraction thereof. For example, if you submit Programming Assignment #3 an hour after class on the day it is due, your grade will receive a 15% penalty. If you submit it exactly 48 hours late, your grade will receive a 30% penalty. No credit will be given for Programming Assignment #1 or #2 if they are submitted more than one week after the due date.

Missed quizzes and exams can be made up **ONLY** if arrangements are made with the instructor in advance, and only if the instructor agrees that missing the quiz or exam is unavoidable.

Quizzes missed because of an unforeseen emergency cannot be made up. Exams missed because of an unforeseen emergency will be dealt with on a case-by-case basis.

Accommodations

Students who need accommodations must document their situation with the Student Special Services (SSS) office. The SSS office will contact the instructor, but the student **must** discuss all extensions, extended-time exams, and other accommodations **in advance** with the instructor. In particular, exams to be taken with extended time or in a different room than the usual classroom **must** be explicitly scheduled **in consultation with the instructor** at least one week in advance. Last-minute accommodations cannot be granted; it is your responsibility to work in advance to make the necessary arrangements.

Academic Honesty

This course adheres to the Provost's statement on academic integrity:

"By enrolling in this course, each student assumes the responsibilities of an active participant in UMBC's scholarly community in which everyone's academic work and behavior are held to the highest standards of honesty. Cheating, fabrication, plagiarism, and helping others to commit these acts are all forms of academic dishonesty, and they are wrong. Academic misconduct could result in disciplinary action that may include, but is not limited to, suspension or dismissal. To read the full Student Academic Conduct Policy, consult the UMBC Student Handbook, the Faculty Handbook, or the UMBC Policies section of the UMBC Directory."

All individual assignments and exams in the course are expected to be your **individual** work. You may discuss assignments with anyone, but at no time should you see someone else's work, copy someone else's work, show your work to someone else, or allow someone to copy yours. Neither should you copy work or text from published or web sources without proper citation. Team assignments are expected to be the work of all team members, where interactions outside the team follow guidelines for individual work (i.e., group assignments must be the work of the team, and any help from sources other than team members must be documented). If you are ever in doubt about what constitutes appropriate collaboration, consult with a course staff member.