CIS106 Honors: General Computer Science for Engineers

Course Description:

Principles of computer science illustrated and applied through programming in a general-purpose language. Programming projects illustrate computational problems, styles, and issues that arise in computation.

Prerequisites: MATH 117 or MATH 115 (pre-calculus)

Instructor: Debra Yarrington
410 Smith Hall
yarringt@udel.edu

Class Times: 106 -80 MWF 1:25-2:15 222 ISE Lab

Lab Times: 080L T 2:30-3:20 Spencer Lab 010

Textbook: Starting Out With Python, Tony Gaddis

STUDENT OUTCOME OBJECTIVES:

The goal of this course is to teach students with no prior experience in computing to approach problems with the mindset of a computer scientist. By the end of the course, students should be able to:

1. Write programs over atomic data, mixtures of data, and data of arbitrary size
2. Use basic input and output libraries for text, graphics, plots, and files
3. Use function composition correctly
4. Use conditional statements correctly
5. Explain state, mutation, and scoping in programming
6. Write iterative programs using for and while loops
7. Familiarity with basic searching and sorting algorithms
8. Become aware of basic time/space behavior of simple programs
9. Develop test procedures for programs

CLASS RULES:

1. **All labs and projects must be submitted via Canvas.**
2. **All lab and project grades must be contested within two weeks of the posted grade. After that the grade is final.**

Class Courtesy:

This class operates on a policy of inclusivity and respectful behavior to fellow classmates, the TAs, and the professor.

EMAIL:

Email is the only consistent method of communication I have with the entire class. It is imperative that you know that you are receiving mail from the class list. Anything mailed at least 24 hours prior is considered your responsibility to know. It may be very helpful to check email before, during or after any unusual event (i.e. power outages, snow, tests, holidays) Check the UD Homepage for any University wide cancellations.

LABS AND PROJECTS:

For labs you may work with a partner using paired programming if you choose. In paired programming, one partner will be the navigator, and one will be the driver. The navigator should be instructing the driver what to do, and the driver should be typing into the computer. You and your partner should switch roles every 15 minutes to ensure you are both comfortable in either role. The paired partner concept shall be discussed in more detail in class.

Occasionally, labs end up with an odd number of students. If that is the case, you may work with a third person in your group. You must get permission from both your TA and from the instructor for a 3-person group. I expect this to be the rare exception to the rule of paired programming.

Lab session attendance:

Lab attendance is optional!

Lab attendance this semester is optional on-line. Students may attend any lab, although they should be aware that questions regarding grading should be directed to their TA and only their TA.

Learn your Section number and the name and email address of your TA!

Lab and Project Assignments:

Labs and Projects are due Wednesday at midnight unless otherwise instructed. Labs and Projects will be accepted one day late with no penalty. After that, every day later is a penalty of 10%.

Lab and Project Score Disputes:

Your TA will email you when grades have been released. **You have two weeks after the TA has released scores to dispute your grade.** After that, the grade is final.

ACADEMIC DISHONESTY:

Collaboration with others in the class is ENCOURAGED for any in-class work. Copying anyone's work is considered Academic Dishonesty and will be prosecuted.

Collaboration of any kind is PROHIBITED during Exams.

Copying any other person's work (off the Internet, for example) without proper acknowledgment is plagiarism, a serious offense, and the one most common to computer science courses.

Anyone that aids another student in copying or with work that is expected to be done without collaboration is as guilty as the person who seeks help. Both will be prosecuted. It is strongly recommended that you familiarize yourself with the University's Policy of Academic Dishonesty.

Please be advised that the University of Delaware Academic Honesty & Dishonesty Policy is taken seriously by this Instructor and NOTE WELL that it will be followed in the conduct of this course. This policy covers all forms of

- Plagiarism, including "copying, or allowing another student to copy, a computer file that contains another student's assignment, and submitting it, in part or in its entirety, as one's own";
- Fabrication, including "submitting as your own any academic exercise (e.g., written work, printing, sculpture, etc.) prepared totally or in part by another";
- Cheating, including "copying from another student's test paper, allowing another student to copy from a test paper, collaborating on a test, quiz, or other project with any other person(s) without authorization"; and
- Academic Misconduct, including "other academically dishonest acts such as … taking part in obtaining or distributing any part of an unadministered test".

Course Assignments:

All reading assignments, homeworks, labs and projects will be posted to the course Web site (http://www.eecis.udel.edu/~yarringt/106). You are responsible for checking the Web site regularly to make sure you are on target.

All course assignments, homeworks, labs, and projects must be submitted via Canvas.

Grading:

Weekly hands-on	20%	Hwks, Labs & Projects:	60%
Mini projects	20%		

Scale:

Number	100-90	89-80	80-70	70-60	< 60
Letter	A	B	C	D	F

Week of	**Tentative Course Schedule**
Feb 10	Syllabus / Introduction to Computers
Feb 17	Intro to Python, atomic data, simple functions (Chap 3)

	Feb 21: Last day of Drop/Add
Feb 24	Functions, Function composition, Boolean expressions (Chap 3)
Mar 2	Conditionals, Logical Operators, Nested if (Chap 4)
Mar 9	Variables,Loops
Mar 16	Spring Break
Mar 23	Spring Break
Mar 30	Strings/loops
Apr 6	Strings/Loops, Lists (Chap 8)
Apr 13	Lists, Loops, Matrices
Apr 20	Matrices ***May 1: Last day to withdraw without penalty***
Apr 27	Matrices
May 4	Sorting/Searching
May 11	Classes/objects (tentative)
May 18	*May 19: Reading Day*