CISC 106 - General Computer Science for Engineers
Summer 2014

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: None
Co-requisites: MATH 117 or MATH 115

Instructor:	Mustafa Zengin, 201 Smith Hall Email: zengin@udel.edu Office Hours: Wednesday 3-5pm
TA:	Haozhu "Peter" Wang, 201 Smith Hall Email: haozwang@udel.edu Office Hours: Friday 10-12 p.m.

Class Times: MW   1:00 – 2:45 p.m.
Lab Times: M   3:00 – 4:30 p.m.

Textbook: Gaddis, Starting Out with Python, 3/E
ISBN-13: 978-0133582734

Student Outcome Objectives:
1. Develop abstract, computational data models
2. Follow and explain an explicit Design Recipe to go from an idea to a final program
3. Develop test procedures for programs
4. Write programs over atomic data, classes, mixtures of data, and data of arbitrary size
5. Use basic input and output libraries for text, graphics, plots, and files
6. Use function composition correctly
7. Use conditional statements correctly
8. Explain state, mutation, and scoping in programming
9. Write iterative programs using for and while loops
10. Write recursive programs
11. Familiarity with basic searching and sorting algorithms
12. Recognize basic time/space behavior of simple programs
13. Abstract over and analyze simple programming patterns (refactoring)
14. Write programs for numeric problems

Class/Laboratory Rules:

Classes: Two lecture sessions per week, 1 hour and 45 minutes per session to be held at Allison West Hall Rm 206.
Attendance in lecture, though not mandatory, is expected. You are responsible for the topics covered in the lecture.

Labs:
One lab session per week, 1 hour and 30 minutes per session (Du Pont Hall 140)

Lab Assignments:
All lab assignments are assigned Monday morning and are due the following Sunday evening (6 days total to work on the assignment) at 11:59 p.m. unless otherwise instructed. Lab attendance is

MANDATORY and is worth 10% of the lab grade. All lab submissions must be typed and submitted online through Sakai. Late items may be submitted to Sakai after the due date at a penalty of 10 points per day late. Labs will not be accepted after 3 late days. Penalties are based on when the assignment is TURNED IN, not when it was run on the computer.

Resubmissions:
Some assignments might allow for resubmissions. When resubmitting, ensure that only the files you want graded are in the final submission, by deleting old files. Sakai does not overwrite files: if you resubmit a file with the same file name as a prior submission, Sakai will maintain both files in your submission, and will make the oldest one available for grading, not the newest one. The TA will thus grade your oldest submission, which might result in a lower grade. The TA will not investigate through files to realize which one is newer or "better", nor will the TA accept further submissions to "clarify" duplicates. DELETE old files and leave only what you want graded.
If you resubmit an assignment past the due date, the whole submission is considered late. There is no partial grading. For example, there are 5 problems in a certain lab. You submit the first 4 problems by the due date, and submit the last problem two days late. In this case, the whole 5-problem submission is considered two days late.

Grading:

Midterm 1	15%	Project	20%
Final Exam	25%	Labs	30%
End of Course Evaluation	3%	Quizzes	7%

Scale:

Number	100-93	93-90	90-87	87-83	83-80	80-77	77-73	73-70	70-67	67-63	63-60	<60
Letter	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F

Exams:
Attendance is MANDATORY for all exams. If an exam is missed because of an excused absence, it cannot be taken later and it will not be included in the computation of the final grade; the other exams will be weighted extra. If an exam is missed because of an unexcused absence, it cannot be taken later, and a score of 0 will be included in the computation of the final grade.
The Final Exam is cumulative. Final Exam Schedules are not known until halfway into the course. Do not plan to leave before the end of exam period. This class has often had its final on the last possible day.

Quizzes:
There will be approximately 7 quizzes during the semester.

Project:
The project will be a small group project for 2 people.

End of Course Online Evaluation
At the end of the course, there will be an online evaluation. Complete it to earn 3 points on your final grade.

Final Grade Rule: *Your final grade cannot be more than one letter grade higher than your best exam grade.* This is to ensure mastery of fundamental skills.

Grading Appeals:
Any appeals for re-grading of assignments and exams must be initiated within one week of when the grade was made available to you. Contact the TA first for labs and project. If you are not satisfied after discussing the grade with the TA, then you may bring it to the instructor. Bring exams directly to the instructor.

Academic Dishonesty:
Collaboration with anyone is ENCOURAGED for any in-class work.
Collaboration of any kind is PROHIBITED during Exams and Labs.
In the Real World, programming is almost never a solo activity. However, it is crucial that each student work on their own assignment using their own skills.

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 or team 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.

Tentative Schedule:

Week	Starts	Text Coverage (chapter)	Lab	Notes
1	Jun 9	1, 2	1	How computers work and introduction to Python. Basic syntax and semantics. Expressions, variables, types.
2	Jun 16	5	2	Functions
3	Jun 23	3	3	Conditional expressions.
4	Jun 30	4	4	Repetition Structures
5	Jul 7	7	5	Lists and tuples
6	Jul 14	12, **Midterm (Jul 16)**	6	Recursion
7	Jul 21	8, 6	7	More about Strings, Files and Exceptions
8	Jul 28	9	8	Dictionaries and Sets
9	Aug 4	10	9	Classes and Object-Oriented Programming
10	Aug 11	n/a	10	Introduction to MATLAB
	Aug 15	**FINAL EXAM**		