CSC 131 Honors Introduction to Computer Science
Section 300
Fall 2019: August 21 – December 12
4 Credits

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Office: CI 2040
Office Hours: Tuesday, Thursday 2:30-4:30 and by appointment

Class Location & Times:
Bear 165
Tuesday Thursday 9:00-10:40

Course Description:
Problem solving methods and algorithms in a modern high-level programming language. Introduces one or more programming environments. Emphasis on a programming style and the design, coding, and testing of complete programs. Recommended primarily for computer science majors. A grade of 'C' (2.00) or better is required for taking any course for which CSC 131 is a prerequisite. Satisfies University Studies I: Foundations/Mathematics and Statistics. Satisfies University Studies IV: Building Competencies/Quantitative and Logical Reasoning. Partially satisfies University Studies III: Transdisciplinary Cluster/Modeling.

Honors section addition: Introduces students to computational problem-solving in the context of computer vision. Using examples in image analysis, students will learn the fundamentals of programming in a high-level programming language while exploring algorithms for extracting features from images, matching and tracking features across image sets, and uncovering 3D scene information from 2D images.

Prerequisites:
MAT 111 or MAT 115

Required Text:
Introduction to Computer Science Using Python: A Computational Problem-Solving Focus
by Charles Dierbach
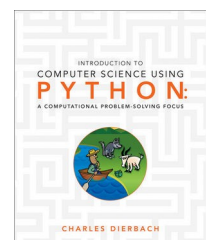
Grading:
Final letter grades will be assigned as follows:

	A: 93+	*A-*: 90-92
B+: 87-89	*B*: 83-86	*B-*: 80-82
C+: 77-79	*C*: 73-76	*C-*: 70-72
D+: 67-69	*D-*: 63-66	*D-*: 60-62

F: Less than 60

Coursework will be used to compute final grades as follow:
Homework assignments: 20%
Programming assignments: 30%
Quizzes: 20%
Final Exam: 15%
Final Project: 15%

The lowest grade in each of the homework assignments and quiz categories will be dropped. The two lowest programming assignment grades will be dropped.

Attendance during the lab sessions (Thursday meetings) is required. A new programming assignment will be assigned each week. To receive full credit for the assignment, students must either:
1) attend the entire lab session (and work on the assignment) or
2) complete the programming assignment during lab and demo the working code to the instructor.

Students who complete their entire programming assignment during the class period may leave early with no grade penalty. Students who do not attend the lab session will only be eligible to receive a max of 50/100 points on that week's assignment. This policy is for your benefit. Students who attend lab sessions have the opportunity to ask one-on-one questions and receive feedback from the instructor. Students who take advantage of this tend to progress faster in their programming skills.

Course Policies:
- It is your responsibility to keep up with course material, deadlines, and quiz/exam dates. ***If you miss class***, you are expected to use the course textbook to cover missed material. Check the course schedule to find out what chapters we are covering each week. Also check with another student for additional notes. ***After*** reading the textbook, please see me if you need help getting caught up on missed material.
- No late assignments will be accepted.
- Make-up quizzes or exams will be given only except under extreme conditions (medical, family reasons) that keep you away from school for an extended period. Proof of extenuating circumstances ***must*** be provided (doctor's note, prescription, etc.). You have the option of taking an exam or quiz in advance if an academic or work-related conflict arises.
- Academic integrity is expected on all coursework. Evidence of copying or sharing work on assignments will result in a zero for the assignment and will be reported to the university. The university may or may not decide to take further action.
- This syllabus is subject to change with reasonable notice.

Programming Language:

We will be learning and using Python version 3+ in this course as a tool for studying computer science and computer vision topics.

Student Learning Outcomes:
1. Students demonstrate an understanding of basic programming concepts including data types, variables, modularity, parameters, conditional statements, iteration, and arrays.
2. Students demonstrate program development techniques to describe and understand the problem statement, think through input/process/output, leading to problem representation and finally coding.
3. Students demonstrate the ability to use program control structures (i.e., iteration, conditionals).
4. Students develop and use algorithms to solve a variety of problems, for instance those related to array processing, statistical calculations, image and audio processing, and text processing.
5. Students practice modular programming by developing, debugging and integrating modules into a larger program.
6. Students demonstrate the ability to use programming language specific software libraries.
7. Students demonstrate the ability to use basic file input and output.
8. Students demonstrate the ability to use software development tools from command line compile and run commands to an integrated development environment.

Academic Integrity

University Policy on academic integrity will be followed for this course. Cheating will be taken very seriously, resulting in harsh penalties. Since the skills required in this class are also required in the next class, cheating in this class will seriously hamper your ability to pass the next class.

The University of North Carolina Wilmington is a community of high academic standards where academic integrity is valued. UNCW students are committed to honesty and truthfulness in academic inquiry and in the mastery of existing knowledge. This commitment begins when new students matriculate at UNCW, continues as they create work of the highest quality while part of the university community, and endures as a core value throughout their lives.

It is the responsibility of every faculty member, student, administrator and staff member of the university community to uphold and maintain the highest academic standards and integrity of the university. Any member of the university community who has reasonable grounds to believe that an infraction of the Honor Code has occurred has an obligation to report the alleged violation to the faculty member teaching the class who, in turn, must report the allegation to the Office of the Dean of Students. This obligation is a core value of the Honor Code, and must be fulfilled by each and every member of the university.

Special Needs

If you have a disability and need reasonable accommodation in this course, you should inform the instructor of this fact in writing within the first week of class or as soon as possible. If you have not already done so, you must register the Office of Disability Services in DePaolo Hall (ext. 2-3746) and obtain a copy of your Accommodation Letter. You should then arrange a meeting to make mutually

agreeable arrangements based on the recommendations of the Accommodation Letter.

Title IX

UNCW takes all forms of interpersonal violence very seriously. When students disclose, first- or third-hand, to faculty or staff about sexual misconduct, domestic violence, dating violence and/or stalking, this information must be reported to the administration in order to ensure that students' rights are protected, appropriate resources are offered, and the need for further investigation is explored to maintain campus safety.

There are three confidential resources who do not need to report interpersonal violence: UNCW CARE, the Student Health Center, and the Counseling Center. If you want to speak to someone in confidence, these resources are available, including CARE's 24-hour crisis line (910-512-4821).

For more information, please visit www.uncw.edu/sexual misconduct or www.uncw.edu/care.