CSC 131 - 001/002: Introduction to Computer Science (Python)

Fall 2015

Course Schedule

Lecture (CIS 1012)	MW 09:00 a.m. - 09:50 a.m.
Lecture & Lab (CIS 2006)	2:00 p.m. - 3:40 p.m. (M -001; W -002)

CIS Lab 2004 is available to all students registered for CSC 131 in 24/7.

Instructor Information

Instructor	Office	Telephone	Email	Office Hours
Hua Li	CIS 2040	910.962.3247	lihua@uncw.edu	MW 10:00 a.m. - 11:00 a.m.

Notes: You can also come on MW (11:00 a.m. - 12:00), which are your instructor's office hours for ART/CSC/FST 220. You can always send your instructor an email to make an appointment.

Teaching Assistants

TBA

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 and ' C ' (2.00) or better is required for taking any course for which CSC 131 is a prerequisite. Satisfies University Studies IV: Building Competencies/Quantitative and Logical Reasoning.

Prerequisites

MAT 111 or 115. No previous computer experience is assumed.

Major Topics Covered

This course is an introduction to computer science using Python. Topics include: expression, function, selection, iteration, string, list, module, file, and object-oriented programming. Problem solving methods are applied by using Python. The course covers the following topics, although some material may be omitted due to time constraints:

- Introduction to computer programming and problem solving approaches
- Python basics: data types, variables, expressions, module, selection, iteration
- Object-oriented programming: strings, lists, Turtle graphics, classes
- I/O:file reading and writing
- External resources: libraries and IDLE

Required Materials

- Title: Starting Out with Python, 3/E

- Author: Tony Gaddis
- ISBN: 9780133582734
- Publisher: Pearson; 3 edition (February 2, 2014)

Recommended Materials

- Title: Python Programming: An Introduction to Computer Science
- Author: John M. Zelle
- ISBN: 978-1590282410
- Publisher: Franklin, Beedle & Associates Inc.; Second edition (May 18, 2010)

Online textbooks (free):

- How to Think like a Computer Scientist - Learning with Python: Interactive Edition
  http://interactivepython.org/runestone/default/user/register
- Computer Science Circles -The Centre for Education in Mathematics and Computing
  http://cscircles.cemc.uwaterloo.ca/using-this-website/
  - ◇ Register for **CSC131HUA** @ both online textbooks using your first and last name and UNCW email. You can change the course to this one later if needed.

Other reference:

- Exploring Python by Timothy A. Budd, published by McGraw Hill, (c) 2010.

Evaluation

In order to pass the course, students must obtain a passing grade on the final exam.

Components	**Weight**	**Due Dates**	Notes
Assignments	24%	Sept. 17, Oct. 15, Nov. 19	three, each 8% (by 06:00 p.m. on Thursdays)
Labs (Quizzes)	20 %	lab times	ten, each 2%
In-Class Tests	26%	001: Sept. 21, Nov. 9 002: Sept. 23, Nov. 11	two, each 13 % 001: M (2:00 p.m. - 3:40 p.m.) two, each 13 % 002: W (2:00 p.m. - 3:40 p.m.)
Final Exam	30%	Dec. 4	Fri. (8:00 a.m. - 11:00 a.m.), 30%

In-Class Tests

In-class tests will be 100 minutes in length and closed book. Allow bringing a double sided cheat sheet (A4). No internet for resources.

Final Exam Notes

The final exam will be closed book and will cover all the material presented during the lectures, labs, and class discussions for the entire term.

Assignments

There will be three (3) assignments in this course, and they will be accessible from the course web page. Assignments must be submitted on UNCW Blackboard BEFORE the due date and time. **NO LATE ASSIGNMENTS WILL BE ACCEPTED.**

Labs

The Rules:

- Tutorials are always on M (001) or W (002) (2:00 pm - 3:40 pm).
- Tutorial attendance is mandatory and will be counted towards your final grade.
- During your tutorial session, you must work on the assigned tutorial and quizzes provided. Anyone not working on the tutorial and quizzes will be asked to leave the room.
- For each tutorial, you get 0.5 point for attendance and 1.5 point for your work.
- For each tutorial, you get zero if:
  - you are absent for any reason
  - you do other work during the session
  - you do not complete at least 50% of the tutorial work

Attendance

Course slides will be made available before the lectures, but these will only contain the outlines for the lectures. The final exam will cover all the material presented during the lectures, labs, and in the class discussions. Class attendance is **strongly** recommended. If you must miss any lectures or labs, please contact your instructor in advance with written notices based on special circumstances. More than **four (4)** absences will result in class failure.

Collaboration Policy

Collaborating on assignments is strictly disallowed. You must complete the work by yourself. If you need help, please see a TA or your instructor. Posting assignment solutions on discussion boards before the due date and time is also prohibited.

Undergraduate Academic Resources

- University Learning Center (ULC): The ULC offers a different type of learning opportunity for those students who want to polish their learning skills. ULC services are free to all UNCW students and include the following: learning services, math services, study sessions, study skills, writing services, and others.

Academic Honor Code

- It is the responsibility of every student to uphold and maintain the UNCW Academic Honor Code (see your Student Handbook). You violate the honor code when you represent someone else's work as your own. Programming assignments may be discussed at a conceptual level with other students but details and coding must be your own. Copying and team collaboration is prohibited.

Students with Disabilities Requiring Academic Accommodations

- If you have a disability and need reasonable accommodation in this course, you should inform your 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 with the Office of Disability Services in Westside Hall (extension 3746) and obtain a copy of your Accommodation Letter. You should then meet with your instructor to make mutually agreeable arrangements based on the recommendations of the Accommodation Letter.

Course Student Learning Outcomes (SLOs)

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.

Relationship between Evaluation and SLOs

SLO	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Assignment# 1	✓	✓	✓					✓
Assignment# 2	✓	✓	✓	✓	✓			✓
Assignment# 3	✓	✓	✓	✓	✓	✓	✓	✓
Labs (Quizzes)	✓	✓	✓	✓	✓	✓	✓	✓
In-Class Test # 1	✓	✓	✓	✓	✓			✓
In-Class Test # 2	✓	✓	✓	✓	✓	✓		✓
Final Exam	✓	✓	✓	✓	✓	✓	✓	✓

Grade Conversion

Numeric Score	Letter Grade
93-100	A
90-92	A-
87-89	B+
83-86	B
80-82	B-
77-79	C+
73-76	C
70-72	C-
67-69	D+
63-66	D
60-62	D-
0-59	F

*This syllabus may be subject to change with reasonable notice.