CSE 101: Computer Science Principles

Syllabus

Term: Spring 2020

Instructor: Pravin Pawar (pravin.pawar@sunykorea.ac.kr, Office B424, +82-32-626-1227, +82-10-8692-4908)

Lectures: Tue & Thu 5-6:20 pm

Labs: Mon 12:30-1:50 pm

Office Hours: Tue & Thu 10:30-12:30 pm in B424 or by appointment

Course Homepage: http://ppawar.github.io/Spring2020/CSE101-S20/index.html

Teaching assistants (TA) are available for tutoring in the CS Commons in B Building on the 4th floor. The TA schedule will be posted after the semester begins.

Course Description

Introduces central ideas of computing and computer science, instills practices of computational thinking, and engages students in the creative aspects of the field. Also introduces appropriate computing technology as a means for solving computational problems and exploring creative endeavors. Requires some programming.

Course Learning Outcomes

- An ability to use computing tools and techniques to create computer program artifacts.
- An ability to use multiple levels of abstraction, models, and simulation in computation.
- An ability to use algorithms to develop and express solutions to computational problems.

Textbooks

Required Texts:

Explorations in Computing: An Introduction to Computer Science and Python Programming by John S. Conery. Chapman and Hall/CRC, 2014. ISBN 978-1466572447.

This book provides a solid introduction to algorithmic thinking and programming in Python.

While completing the assigned readings, students are expected to complete the tutorials at the end of each section of each chapter. These tutorials reinforce the concepts in each chapter and provide practical, hands-on experience in Python programming. The tutorials also supplement the material covered in lecture, lab and homework. Students are responsible for completing the assigned readings and tutorial exercises in preparation for examinations. The exercises in the text use a set of modules called PythonLabs (We will install it when we are ready to use it.)

How to Code in Python 3 by Lisa Tagliaferri, Digital Ocean, New York, NY. ISBN 978-0-9997730-1-7.

This text focuses more on Python syntax and semantics. Students are expected to read assigned chapters of this text. Since it is not focused on algorithms, but only language elements, the text will help develop a solid understanding of the Python programming language itself.

Optional Texts:

There are two optional texts that you can use during the course, both are freely available at the provided links.

Learn Python - Free Interactive Python Tutorial. The first section of the tutorial ("Learn the Basics") may be good to go through in sync with our lectures.

Blown to Bits: Your Life, Liberty, and Happiness after the Digital Explosion, by Hal Abelson, Ken Ledeen, and Harry Lewis, Addison-Wesley. 2008. ISBN 0137135599.

Grading

The course provides a total of 500 points distributed across the following categories.

- **Class Participation:** 5% (25 points)
- **Assignments:** 20% (100 points)
- **Labs:** 10% (50 points) Weekly graded laboratory assignments.
- **Quizzes:** 15% (75 points) Short quizzes will be given on concepts in the reading. The lowest quiz grade will be dropped.
- **Midterm Exams:** 30% (150 points) Two exams spaced at around 6 week intervals (75 points each). The exams are based on readings and concepts presented in lectures and also test the ability to write and understand short programs in Python.
- **Comprehensive Final Exam:** 20% (100 points) An exam covering all the concepts covered during the semester.

Your final grade is calculated by the total points you accumulate in the class.

- **Important note**: You must attain a grade of at least 50% on exams and 50% on assignments to achieve a grade higher than C-. Additionally, if you have over 20% unexcused absences, the final course grade will be an F.

Makeup examinations will only be given for extenuating circumstances (e.g. hospital admission) or for verified, officially sanctioned university activities. All makeup examinations may be oral.

Regrading

Should you discover what you think is an error in grading your work, you have exactly one week after the grades are made available to you to request a regrade - no exceptions.

To promote consistency of grading, questions and concerns about grading should be addressed first to the TA and then, if that does not resolve the issue, to the instructor.

You are welcome to contact the TA by email or come to their office hours. If you would like to speak with the TA in person and have a schedule conflict with their office hours, you are welcome to make an appointment to meet the TA at another time.

For the final exam, there will be a special office hour designated to resolve any grade queries or disputes. This will be announced after the final exam. The final exam papers will not be returned.

Tentative Weekly Class Schedule

The following **tentative** course schedule provides topics, problem sets, quiz dates, and exam dates. Check back frequently.

Date	Activity	Topics	Readings	Course Material
Mon, Feb 24, 2020	Lab	Course Introduction		
Tue, Feb 25, 2020	Lecture			
Thu, Feb 27, 2020	Lecture			
Mon, Mar 2, 2020	Lab			
Tue, Mar 3, 2020	Lecture	Assignment 1		
Thu, Mar 5, 2020	Lecture			
Mon, Mar 9, 2020	Lab			
Tue, Mar 10, 2020	Lecture			
Thu, Mar 12, 2020	Lecture	Quiz 1		
Mon, Mar 16, 2020	Lab			
Tue, Mar 17, 2020	Lecture	Assignment 2		
Thu, Mar 19, 2020	[No Class - School Anniversary]			
Mon, Mar 23, 2020	Lab			
Tue, Mar 24, 2020	Lecture			
Thu, Mar 26, 2020	Lecture	Quiz 2		
Mon, Mar 30, 2020	Lab			
Tue, Mar 31, 2020	Lecture	Assignment 3		

Thu, Apr 2, 2020	Lecture			
Mon, Apr 6, 2020	Lab			
Tue, Apr 7, 2020	Lecture	Midterm 1		
Thu, Apr 9, 2020	Lecture	Assignment 4		
Mon, Apr 13, 2020	Lab			
Tue, Apr 14, 2020	Lecture			
Thu, Apr 16, 2020	Lecture			
Mon, Apr 20, 2020	Lab			
Tue, Apr 21, 2020	Lecture	Assignment 5		
Thu, Apr 23, 2020	Lecture	Quiz 3		
Mon, Apr 27, 2020	Lab			
Tue, Apr 28, 2020	Lecture			
Thu, Apr 30, 2020	[No Class - Buddha's Birthday]			
Mon, May 4, 2020	[No Class - Adjustment Day]			
Tue, May 5, 2020	[No Class - Children's Day]			
Thu, May 7, 2020	Lecture			
Mon, May 11, 2020	Lab	Midterm 2		
Tue, May 12, 2020	Lecture	Assignment 6		
Thu, May 14, 2020	Lecture			
Mon, May 18, 2020	Lab			
Tue, May 19, 2020	Lecture			
Thu, May 21, 2020	Lecture	Assignment 7		

Mon, May 25, 2020	Lab			
Tue, May 26, 2020	Lecture			
Thu, May 28, 2020	Lecture	Quiz 4		
Mon, Jun 1, 2020	Lab	Assignment 8		
Tue, Jun 2, 2020	Lecture			
Thu, Jun 4, 2020	Lecture			
Mon, Jun 8, 2020	Lecture (Thursday schedule)	Final Exam Review		
Final				
Final Grades		Final Grades		

Academic Integrity: Cooperation vs Cheating

Working with others on assignments is a good way to learn the material and we encourage it. However, there are limits to the degree of cooperation that we will permit.

When working on programming assignments, you must work only with others whose understanding of the material is approximately equal to yours. In this situation, working together to find a good approach for solving a programming problem is cooperation; listening while someone dictates a solution is cheating. You must limit collaboration to a high-level discussion of solution strategies, and stop short of actually writing down a group answer. Anything that you hand in, whether it is a written problem or a computer program, must be written in your own words. If you base your solution on any other written solution, you are cheating.

It is okay to help other students, within limits. If you are asked for help by another student, two things that are absolutely forbidden are to show that student your solution or to put your hands on that student's keyboard or paper. That isn't helping; that is facilitating cheating! Instead answer questions, give tips, help with tools, explain Python, point out a bug, and/or give encouragement. In other words, interact with other students the way that the TAs do.

When taking an exam, you must work completely independently of everyone else. Any collaboration here, of course, is cheating.

We do not distinguish between cheaters who copy others' work and cheaters who allow their work to be copied.

If you cheat, you will be referred to the appropriate office at the University. If you have any questions about what constitutes cheating, please ask.

The statement from the university on academic integrity is: Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty members are required to report any suspected instances of academic dishonesty

to the Academic Judiciary Committee or the Department of Academic Affairs, Campus Building A, Room 201, (032) 626-1121.

Students with Disabilities

If you have a physical, psychological, medical or learning disability that may impact your course work, please contact the Department of Student Affairs, Campus Building A, Room 207, (032) 626-1190. They will determine with you what accommodations, if any, are necessary and appropriate. All information and documentation is confidential.

Critical Incident Management

SUNY Korea expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Department of Academic Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn.