Computer Science 111: Concepts of Computer Science

Instructor: Steve Klein Email: steklei@siue.edu

Objectives: This course has three major sections called "Units": 1) how computers work, 2) how programs work, and 3) how to write simple programs.

- Unit 1 includes: how computers store and process data in binary and how computing hardware works. Unit 1 also has a section on how science works.
- Unit 2 includes: how programming languages work, basic algorithms, and common data structures.
- Unit 3 is an introduction to very basic programming using the programming language Python.

Class Websites: The course uses 3 different websites:

- 1. Blackboard (bb.siue.edu) is where everything starts. It has the syllabus, announcements, weekly schedule, etc. Most class activities will also be done here.
- 2. Textbook: <u>Computer Science Illuminated</u>, by Nell Dale and John Lewis. This online textbook is where you will complete Unit 1 and Unit 2. The textbook can be accessed using links on the Blackboard website.
- 3. Python chapters: <u>Automate the Boring Stuff with Python</u>, by Al Sweigart. This website is where you will complete Unit 3. You can find the link for it on the Blackboard website.

What we will do in this course:

Unit 1: Part 1: is chapters 1 and 2 of the online textbook. Part 2 is chapters 3 and 4.

Unit 2: Part 1 is chapters 5 and 6 of the online textbook. Part 2 is chapters 7 and 8.

Unit 3: Part 1 is the Intro and chapters 1 and 2 of the Python website. Part 2 is chapters 3 and 4 Each unit has its own page on the Blackboard website listing all the things you need to do in that unit.

Each chapter has a reading guiz and an activity.

Each unit has an exam.

For each unit, do these things:

- 1. Read the assigned chapters and complete the chapter reading quizzes.
- 2. Complete the scheduled activities in each part of each unit.
- 3. Take the exam for that unit.

Once you have completed all three Units, you're done!

Assignment Chart Grading Scale:

Assignment	Number	Points Each	Total
Chapter Reading Quizzes	12	10	120
Unit Exams	3	50	150
Activities	13	10	130
Points for Course:			400

Grade Scale		
Points	Grade	
400-360	Α	
359-320	В	
319-280	С	
279-240	D	
239 or less	F	

Chapter Reading Quizzes: For Units 1 and 2, these are taken on the textbook website. For Unit 3, these are taken on Blackboard in the Unit 3 page. Each quiz is 15 questions long.

Activities: One or two are assigned for each chapter. They are posted on Blackboard and must be completed there.

Unit Exams: Are available to be taken on the Saturday of each week. They are 50 points each and take 1 hour to complete.

Schedule:

Week	Deadline Date	Readings	Topics	Tasks	
		Syllabus			
1	20-Dec	Textbook:	Big Picture	Unit 1, Part 1	
		Chapters 1, 2	Binary Values, Number Systems		
1		Textbook:	Gates & Circuits	Unit 1, Part 2	
	22-Dec	Chapters 3, 4	Computing Components		
1	23-Dec	Unit 1 Exam			
2	27-Dec	Textbook:	Low-Level Programming Languages	Unit 2: Part 1	
		Chapters 5, 6	Algorithms: Sorting & Searching		
2 29-1	29-Dec	Textbook:	Data Structures	Unit 2: Part 2	
	Chapters 1		High- Level Languages	UIIIL Z. Pail Z	
2	30-Dec	Unit 2 Exam			
3	3-Jan	Python site:	Installation of Python		
		Introduction	Python Basics	Unit 3: Part 1	
		Chapter 1, 2	Flow Control		
3	5-Jan	Python site:	Functions	Unit 3: Part 2	
		Chapters 3, 4 Lists			
3	6-Jan	Unit 3 Exam			

Deadlines: Every assignment has a deadline, when the deadline passes, the assignment will not be available.

Missing Deadlines:

- a. **On accident:** Chapter Reading Quizzes and Activities cannot be made up. If you miss a Unit Exam, you can take it late for a 10-point penalty per day, including weekend days.
- b. **Because you have to:** If you know you are going to miss a deadline for some serious reason, notify me via email as soon as you are able. I will respond to these notifications on a case-by-case basis.

Academic Honesty: Any occurrence of plagiarism in this course will, as per university guidelines, be grounds for academic discipline and a final grade of F for the course.

Grade Disputes: Once a grade has been posted on Blackboard, students have one week (7 days) to contest the grade if they feel there has been an error. After that, no grade disputes will be allowed. This policy applies to all graded work.

Services for Students Needing Accommodations:

Students needing accommodations because of medical diagnosis or major life impairment will need to register with Accessible Campus Community & Equitable Student Support (ACCESS) and complete an intake process before accommodations will be given. Students who believe they have a diagnosis, but do not have documentation, should contact ACCESS for assistance and/or appropriate referral. You may contact ACCESS to make an appointment by calling (618) 650-3726 or sending an email to myaccess@siue.edu. Please visit the ACCESS website located online at www.siue.edu/dss for more information.