Course Syllabus

Course Information

Computer Science I	CSCI 1100	Section 01-09		
RPI Spring 2018	4 cr			
Lecture	Sections 1-9	MR	10:00PM-11:20PM	DARREN 308
Lab	Section 1	T	10:00AM-11:50AM	VCC South
Lab	Section 2	T	12:00PM-1:50PM	Walker 5113
Lab	Section 3	T	2:00PM-3:50PM	J-ROWL 2C06
Lab	Section 4	W	10:00AM-11:50AM	EATON 216
Lab	Section 5	W	12:00PM-1:50PM	EATON 215
Lab	Section 6	W	2:00PM-3:50PM	SAGE 2704
Lab	Section 7	W	10:00AM-11:50AM	EATON 215
Lab	Section 8	W	12:00PM-1:50PM	EATON 216
Lab	Section 9	W	2:00PM-3:50PM	LOW 3116
Test	(On 2/12, 3/26 and 4/16)	M	6:00PM-7:50PM	TBA

Course Website: http://www.cs.rpi.edu/academics/courses/spring18/csci1100/

Prerequisites or Other Requirements:
There are no prerequisites for this class.

Instructor/Administrator

Wesley Turner	wdturner@gmail.com
Konstantin Kuzmin	kmkuzmin@gmail.com
Erica Eberwein	eberwe@rpi.edu

Office Hours: See course webpage	

Teaching Assistant(s)

Name	Office	Office Hours	Email Address
Mackenzie Haydon	See course webpage	See course webpage	haydom@rpi.edu
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Course Description

This course is an introduction to computer science emphasizing computational thinking, problem-solving, small-scale programming, and applications. This includes basic programming constructs such as data, variables, functions, conditionals, loops, lists, files, sets and dictionaries. It also includes, especially in the latter part of the semester, object-oriented programming and problem solving. Applications will include web-centric computing, image processing, numerical computing, and graphics. Previous programming experience is neither required nor expected.

Course Text(s)

We will use the University of Toronto book, Practical Programming: An Introduction to Computer Science Using Python by Campbell, Gries, and Montojo. This is available in both print and electronic versions. While purchase of this book is not mandatory, we will follow its order and coverage fairly closely. The examples we use in class will largely complement rather than repeat the ones in the book.

Very important: You must have the second edition of this text because it works with Python 3.5 which we will use in this class. The first edition of this book and earlier class materials (before Fall 2016) use an earlier version of Python which is not compatible with Python 3.5.

Course Goals / Objectives

The main objective of this class is to teach computational problem solving using Python. Python has a simple syntax, a powerful set of programming primitives,

and a rich set of libraries, making it ideal for classroom learning and for rapid prototyping.

Student Learning Outcomes

1. Demonstrate proficiency in the purpose and behavior of basic programming constructs.
2. Design algorithms and programs to solve small-scale computational programs
3. Write, test and debug small-scale programs
4. Demonstrate an understanding of the wide-spread application of computational thinking to real-world problems.

Course Assessment Measures

Assessment	Due Date	Learning Outcome #s
Exam	4	1, 2, 3
Homework	9	1, 2, 3, 4
Lab Report	12	1, 2, 3, 4
In class exercise	22	3

Grading Criteria

Lecture Exercises: 4%, Labs: 13%, Homeworks: 33%, Tests: 30%, Final: 20%

The cutoff for grades are as follows:

A : 93-100
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 : 60-66
F : 0-59

Cut-offs may end up lower than this but will not be raised from here. Thus, for example, if you earn a 93 average you are assured of earning an A, regardless of what other students earn.

Lecture Exercises: Even though attendance in class is not required, submission of solutions to lecture exercises is required. Each lecture will be divided into two

(or three) segments of 25-35 minutes each. At the end of each segment you will be given a few short practice problems to work on to help you get started in your understanding and application of the ideas discussed. You will be given time during lecture to work on these problems, and students who work efficiently will have time to finish. You are encouraged to work with your friends and fellow students; the goal is to build your own understanding.

Students will have 24 hours after the start of lecture to submit solutions electronically. Solutions will be graded completely automatically. We will practice with the Lecture 2 exercises in Lab 1 so these exercises will not be due until then. The 24-hour submission requirement will be imposed starting with Lecture 3.

There will be 22 lecture exercises each equally weighted, and each student's best 19 will be counted towards their final grade. Since this gives each student a chance to miss up to three sets of exercises without affecting their grade, we will not be accepting any excuses for missing lecture exercises.

Labs: There will be 13 labs (numbered from 0 to 12), each one equality weighted. Labs will be designed so that students who prepare in advance and work diligently can earn full credit.

Homeworks: There will be 8-9 homework assignments given throughout the semester, which will usually be due on Thursday nights by 11:59:59 pm. Students will have at least one week to work on each assignment. The schedule is posted on the course website. Submission instructions will be provided on-line as well.

Tests: Three tests will be given during the semester on the dates shown in the on-line course schedule. In addition, there will be a final exam during the scheduled finals period. The three tests during the semester will combine to count for 30% of the grade. To compute this, the best two test scores for each student individually will be worth 12% and the worst test score will be worth 6%. The cumulative final is worth 20%.

Weighted Test Average and The Final Grade: Importantly, students must have a weighted test average - including the final - of at least 50% to pass the course. This is a firm rule and will be determined by the test average rounded to the nearest integer. Exceptions will not be made.

Attendance Policy

Class attendance is strongly encouraged, but not required. Students must attend their assigned lab sections unless prior arrangements are made with the lab TAs.

Lecture notes will be posted on the course web site at least two days in advance of each class. Students are strongly encouraged to study these carefully, including the examples that are provided. Our experience in teaching this class has been that many questions students ask are already answered in the notes.

Other Course Policies

Piazza: We will be using Piazza for announcements, on-line discussions, and posting of both homework assignments and lab exercises. You must sign up for an account on

http://piazza.com/rpi/spring2018/csci1100

using your rpi.edu email address. You should be checking this site at least once a day for announcements and discussion, and much more often when you are working on assignments and prepping for exams. Better yet, sign up on Piazza to receive email alerts of postings.

What to post on Piazza? What not to post? Use common sense. Please do post questions about lectures, labs, homeworks and tests. Choose Piazza instead of emailing your instructor or your TA, and make sure that other students can see your questions. (In other words, don't use piazza for a private chat with the instructors.) Your posting can be anonymous to other students, but it will not be anonymous to the instructors. Before you post, check what has already been posted so that you don't repeat a question. Do not post a significant section of code you have written for a lab or a homework problem, but instead post questions about how to find and fix an error or about what an error message might mean. Help with debugging your code is best done one-on-one during office hours, lab and extra help sessions.

Lab Sections: Each lab will be led by a graduate student TA, assisted by three undergraduate mentors. Assignment of TAs to lab sections will be announced via the course web site. Get to know your TA, your mentors, and other students in your lab sections. Your TA will get to know you. Your TA is your first point of contact for this course. You may attend the office hours of the instructors or of any TA, not just the one supervising your lab. Office hours will be posted on the course website.

Lab Late Policy: You must complete labs during the lab time to get full credit. Unfinished components of labs may be finished up to a week late for half the credit.

Grade Appeals: All grade appeals on labs and homeworks must be submitted within a week of receiving a grade. Students will be able to see all of their grades on-line.

Homework Late Policy: Homework assignments must be submitted electronically by the deadline, as measured by our computers. Assignments that are a minute late are considered a day late! Each student will be given a total of **three days (whole or partial) of grace** for late homework assignments for the whole semester. These grace days should be used carefully, and **no more than two** may be used for any one assignment. Once the late days have been exhausted, late assignments **will not be accepted** without a written excuse from the Student Experience office.

As an example, if student X submits his/her 1st assignment 26 hours late, X will have used two late days and have only one day left. If X then submits another assignment 5 hours late, X will have used his/her last late day. If X then submits a 3rd assignment 1 minute late, it will not be accepted.

Students should use their late days **carefully**, saving them for the latter part of the semester or, better yet, not using them at all. Save them for crashed computers, crashed disks, failed virtual machines, and late semester crunches of having too many assignments due at once.

If there are extenuating circumstances, such as a personal or medical emergency, that cause your homework to be late, please obtain an excuse from the Student Experience office. Crashed computers, failed disk drives, and overwritten files are not considered valid excuses for late homework.

Academic Integrity

Student-teacher relationships are built on trust. For example, students must trust that teachers have made appropriate decisions about the structure and content of the courses they teach, and teachers must trust that the assignments that students turn in are their own. Acts that violate this trust undermine the educational process. The Rensselaer Handbook of Student Rights and Responsibilities defines various forms of Academic Dishonesty and you should make yourself familiar with these.

In this class, all assignments that are turned in for a grade must represent the student's own work.

You are encouraged to collaborate in labs as long as you write the final solution to the lab on your own.

Homework submissions should be your own work, but you are allowed to discuss the goals of an assignment and the overall design, testing and debugging of the solution. Your code should be your own. Program submissions, especially longer ones, that are too similar to have been written independently will be flagged electronically (comparing all submissions across all section), and students will be asked to explain the cause of the similarity. Students who do not submit their own work will receive a 0 on the assignment and will likely receive an additional overall grade penalty, depending on the severity of the infraction. Typical penalties are 5 to 10 percentage points subtracted from the semester average. Students caught a second time will receive an F in the course. All infractions will be reported to the Dean of Students office.

Copying, communicating or using disallowed materials during an exam is cheating. Students caught cheating on an exam will receive an F in the course and will be reported to the Dean of Students office.

Students who do not submit their own work will receive a 0 on the assignment and will likely receive an additional overall grade penalty, depending on the severity of the infraction. Typical penalties are 5 to 10 percentage points subtracted from the semester average. Students caught a second time will receive an F in the course. All infractions will be reported to the Dean of Students office.

Students caught cheating on an exam will receive an F in the course and will be reported to the Dean of Students office.

If you have any question concerning this policy before submitting an assignment, please ask for clarification.

Other Course-Specific Information

Erica Eberwein is the Course Coordinator for CS1. She will coordinate many of the exception requests.

All questions that require attention from the instructors or the course coordinator must be sent to: cs1instructors@cs.lists.rpi.edu. This alias goes to all instructors: Wes Turner, Konstantin Kuzmin and Erica Eberwein. Please include your name, section number in all your emails.

Excuses and exceptions: If you are going to miss an assignment or an exam, you must notify your TA and instructor as soon as you know this is happening. You may be allowed to make up a missed assignment or exam only if you get an

official excuse from the Office of Student Experience. Remember crashed computers or forgetting the day of an exam are not valid reasons for an excuse!