DGTL121A
Introduction to Coding
Syllabus

Instructor: Dr. Durell Bouchard

Office Hours: by appointment or open door

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Course Objectives

Anyone can learn how to use a computer program to help solve problems or to be more efficient. But only people who know how to code can create new programs. In this course students will learn computer coding so that they can give instructions to a computer to solve novel problems.

Intended Learning Outcomes: At the end of the course the successful student will be able to

1. write computer code to solve problems abstractly

2. use variables, loops, conditionals, functions, and lists

3. debug logical errors in code

Other Intended Outcomes: I hope that by working hard you will:

1. look forward to coming to class

2. think of programming assignments as fun puzzles

3. celebrate failure as an opportunity to learn

4. feel like there is no system too complex for you to learn

Course Content

This course is probably different than other classes you have taken. Because programming is a skill that is best learned by doing, most class time will be devoted to programming activities and practicing the skill of programming. The absence of lectures means that doing the before-class readings are particularly essential for getting the most out of the in-class programming activities, which will help you succeed.

Prerequisites: There are no prerequisites for this course.

Text: *How to Think Like a Computer Scientist: Learning with Python: Interactive Edition*, by Bradley Miller and David Ranum, Runestone Interactive, 2015.

Activities: Programming activities during class give the student a structured experience in software design, implementation, and debugging and increase the student's ability to use and understand the tools available for software development. The activities connect the reading and lectures to the practice of programming and prepare students for assignments. Activities not completed during class are due the next class.

Assignments: Regular small programming assignments are designed to reinforce class concepts. You are encouraged to start on them immediately when assigned and get help from the instructor as needed. Assignments are due before the beginning of class. Late assignments will receive no credit.

Quizzes, Tests, and Exams: Short quizzes will be given to make sure you understand the concepts and are keeping up with the course work. Quizzes will be at the beginning of class. No make-up quizzes will be given. One test and one comprehensive final exam will be given.

Test Dates: Test   Monday, March 30
                   Final Exam   Monday, April 27 (6:30PM-9:30PM)

Grading: Course grades are assigned based on the following weights and scale:
Grade Weights: activities…10% assignments…12%   co-curricular…3%

          project……60% final exam…….15%

Grade Scale: 93-100 A   83-86 B   73-76 C   63-66   D

             90-92 A-   80-82 B-   70-72 C-   60-62   D-

             87-89 B+   77-79 C+   67-69 D+   below 60 F

Course Policies

Attendance Policy: Class attendance is vital to your success in this course; material covered during missed sessions is the responsibility of the student. Conversations held in class illuminate the published class materials and are subject to evaluation on subsequent tests and quizzes. If you anticipate being unable to attend class, email me before class to be excused.

Make-up Policy: Everyone is expected to take the test and the exam at the scheduled time. If you have an excused absence, email me to arrange for a make-up. Unexcused absences will result in receiving no credit for missed tests and exams.

Late Assignment Policy: Unless otherwise specified, assignments are to be turned in before the start of class on the due date. If you anticipate being unable to meet a deadline, email me before the deadline to request an extension. Unexcused late work will receive no credit.

Academic Integrity: It is accepted that you have read and understood the standards for academic integrity at Roanoke College. All tests and exams are to be the work of the individual student. You are encouraged to get help from the instructor if you need help with any aspect of the course, including programs and assignments. Student assistants, tutors, and classmates may help you understand course concepts but may not show you how to do any particular aspect of an assignment. Students may discuss work and help each other out, but in all cases, the work you turn in must be your own. Copying someone else's work or turning in someone else's work is NEVER allowed. Using someone else's work or ideas as your own is plagiarism and an academic integrity offense. Examples of academic integrity violations include copying a program or part of a program (even one line) from someone else, writing code for someone else, telling someone else how to solve a problem or having someone tell you how to solve a problem. Discussion among students about programming projects should be limited to general concepts, not specific aspects of how to complete the work.

Subject Tutoring: Subject Tutoring, located on the lower level of Fintel Library (Room 5), is open 4 pm – 9 pm, Sunday – Thursday.

We are a Level II Internationally Certified Training Center through the College Reading and Learning Association (CRLA). Subject Tutors are highly trained Roanoke College students who offer one-on-one tutorials in a variety of general education and major courses such as: Business, Economics, Mathematics, INQ 240, Modern Languages, Lab Sciences, INQ 250, and Social Sciences (see all available subjects at www.roanoke.edu/tutoring). Tutoring sessions are available in 15, 30, or 45-minute appointments. Feel free to drop by for a quick question or make an appointment at https://www.roanoke.edu/tutoring for a longer one-on-one appointment. For questions or concerns, please contact us at 540-375-2590 or subject_tutoring@roanoke.edu.

Accessible Education Services: Accessible Education Services (AES) is located in the Goode-Pasfield Center for Learning and Teaching in Fintel Library. AES provides reasonable accommodations to students with documented disabilities. To register for services, students must self-identify to AES, complete the registration process, and provide current documentation of a disability along with recommendations from the qualified specialist. Please contact Laura Leonard, Assistant Director of Academic Services for Accessible Education, at 540-375-2247 or by e-mail at aes@roanoke.edu to schedule an appointment. If you have registered with AES in the past and would like to receive academic accommodations for this semester, please contact Laura Leonard at your earliest convenience to schedule an appointment.

Diversity: I consider this classroom to be a place where you will be treated with respect, and I welcome individuals of all ages, backgrounds, beliefs, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, sexual orientations, ability – and other visible and nonvisible differences. All members of this class are expected to contribute to a respectful, welcoming and inclusive environment for every other member of the class.

Preferred Name/Pronoun: I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records.

Course Schedule

This course expects you to spend at least 12 hours of work each week inside and outside of class.

Week of	Topic
Mar 9	Variables and Expressions
Mar 16	Loops
Mar 23	Functions
Mar 30	Conditionals
Apr 6	Strings
Apr 13	Lists