Instructor: Adewale Sekoni
Time and Place: 1:10-2:40 PM, Trexler 363
Office hours: 12:00-1:00 PM, Mon,Wed,Thur,Fri, or by appointment (Trexler 365B).
Email: sekoni@roanoke.edu

Course Objectives

At the core of every smart phone is a computer that functions by manipulating bits. So, how can these diminutive computers allow users to play music, share photos, and play games by manipulating bits? In this course students will learn from a high-level how create mobile apps for smart phones with the visual programming language. Students will also examine the social and ethical consequences of a society where individuals carry a device that can collect, manipulate, and transmit personal information.

The course is designed to …

- increase the student's understanding of how computers process information.
- increase the student's quantitative and computational reasoning skills.
- increase the student's awareness of the social and ethical implications of the pervasive use of computers and their ability to manipulate information.
- increase the student's ability to communicate, in written form, both technical information and well-reasoned arguments

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

1. describe and apply methodologies of mathematics or computer science appropriate for the course's discipline and topic. In particular, students will be able to

    1. represent (encode) various data types (numbers, text, pictures, sound) in binary, octal, and hexadecimal.

    2. develop computer programs, that will demonstrate an understanding of fundamental programming concepts (variables, conditionals, loops, functions).

2. write about course topics clearly and effectively.

3. communicate effectively about the course topic in an oral format.

Course Content

Texts:

TouchDevelop: Programming on the Go (3ʳᵈ Edition), by Nigel Horspool and Kikolai Tillmann, Apress, 2013.

A Writer's Reference (7ᵗʰ Edition) with Writing in the Disciplines (Roanoke College Edition), by Diana Hacker, Bedford/St. Martin's, 2010.

Assignments: App development assignments are designed to give students the opportunity to put into practice the problem solving and programming skills they have learned. The assignments consist of writing a design document for an app and programming an app. The assignments will vary in length and difficulty. You are encouraged to start on them immediately when assigned and get help from the instructor as needed.

Project: At the end of the semester students will combine all of the skills they have learned throughout the semester to design, implement, and present a mobile app.

Activities: App development activities are designed to give the student a structured experience in app development. Unless otherwise specified, the activities must be done during class and turned in before leaving. Late work will receive no credit.

Tests and Exam: Three tests and one comprehensive final exam will be given.

Test Dates: Test #1   Thursday, September 20
                 Test #2   Thursday, October 25
                 Test #3   Thursday, November 15
                 Final Exam   Thursday, December 10 (2:00PM-5:00PM)

Co-curricular: The Department of Mathematics, Computer Science, and Physics is offering a series of lectures designed to engage the campus community in discussions of ongoing research, novel applications, and other issues that face these disciplines. You are invited to attend all of the events but participating in at least one is mandatory. Within one week of attending an event you must submit a one page, single-spaced, paper (to Inquire) reflecting on the discussion. If you do not turn the paper in within the one week time frame you may not count that event as one you attended.

Grading: Course grades are assigned based on the following weights and scale:

Grade Weights: assignments…….12%   activities………..12%   project…………..14%
                      tests………………30%   final exam……….30%   co-curricular…….2%

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. Moreover, in-class activities are not available for make-up.

Late Assignment Policy: Assignments are to be submitted before the specified time on the due date. If you anticipate being unable to meet a deadline, talk to me at least 24 hours before the deadline. In extenuating circumstances we may be able to make special arrangements. Please note that this must be discussed – just sending an email does not automatically grant you extra time. If you have not been granted extra time ten percent per calendar day (24 hours) will be deducted for late work (including weekends and holidays); work more than 2 days late will receive no credit. Electronic "glitches" do not waive your responsibility to submit your work in a timely manner.

Make-up Policy: Everyone is expected to take tests and the exam at the scheduled time. Make-ups will be given only for legitimate, documented absences that the instructor has been notified of ahead of time. Make-up tests, if given, may be oral. There will be no make-up quizzes.

Academic Integrity: It is accepted that you have read and understood the standards for academic integrity at Roanoke College. All tests, exams, and assignments 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 in-class activities 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.

Computer Use Policies: All students must abide by the Computer Use policies of Roanoke College. Failure to do so will result in involuntary withdrawal from the course.

Electronic Devices: The use of any electronic device during a test or quiz is prohibited. This includes cell phones, personal media players, personal digital assistants, and laptops. Any use of such a device during a test or quiz will be considered a breach of academic integrity.

Writing Center: The Writing Center @ Roanoke College, located on the Lower Level of Fintel Library, offers writing tutorials focused on written and oral communication for students working on writing assignments/projects in any field. Writers at all levels of competence may visit the Writing Center at any point in their process, from brainstorming to drafting to editing, to talk with trained peer tutors in informal, one-on-one sessions. The Writing Center is open Sunday through Thursday from 4 to 9 pm. Simply stop in, or schedule an appointment by going to www.roanoke.edu/writingcenter, where our schedule of writing workshops and creative writing playshops is also posted. Questions? Email writingcenter@roanoke.edu or call 375-4949.

Disability Support Services: The Office of Disability Support Services, located in the Goode-Pasfield Center for Learning and Teaching in Fintel Library, provides reasonable accommodations to students with identified disabilities. Reasonable accommodations are provided based on the diagnosed disability and the recommendations of the professional evaluator. In order to be considered for disability services, students must identify themselves to the Office of Disability Support Services. Students requesting accommodations are required to provide specific current documentation of their disabilities. Please contact Rick Robers, M.A., Coordinator of Disability Support Services, at 540-375-2247 or e-mail robers@roanoke.edu.

If you are on record with the College's Office of Disability Support Services as having academic or physical needs requiring accommodations, please schedule an appointment with Mr. Robers as soon as possible. You need to discuss your accommodations with him before they can be implemented. Also, please note that arrangements for extended time on exams, testing, and quizzes in a distraction-reduced environment must be made at least one week before every exam.

Schedule

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

Dates	Topic
Sep 1 – Sep 22	Graphics
Sep 27 – Oct 27	Games
Nov 1 – Nov 17	GUIs
Nov 22 – Dec 8	Social