

# CS 112 – Introduction to Computer Science II – Spring 2014

## *Course Information*

201 Copley Science Center  
MWF 10:20 – 11:20  
TR 9:50 – 11:20 (lab)  
[courses.necaiseweb.org](http://courses.necaiseweb.org)

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A continuation of CSCI-111 in which software development skills are improved and refined, this course places emphasis on data abstraction, data structures, and algorithms. The course includes a laboratory component that provides hands-on experience to help students understand the principles covered in the lectures.

The topics that will be covered include:

- data abstraction
- algorithm analysis
- arrays
- vectors
- maps
- stacks
- queues
- hash tables
- binary trees
- heaps
- searching
- sorting

### RESOURCES

**Text Book.** *Data Structures and Algorithms using Python*, by R. Necaïse, 2010, John Wiley & Sons.

**Daily Schedule.** A day by day schedule that includes reading assignments, handouts, and code samples is provided on the course web page. The schedule is tentative, but daily events will be posted ahead of each class meeting.

**Office Hours.** (tentative) MW: 11:30 – 12:30, TR: 1:00 – 2:00, or by appointment.

Please note that these are my formal office hours. I am usually on campus most of the day, and can be found around my office. You should feel free to come by if you need help. Also, email contact is generally an efficient way to get an answer to a simple question.

## COURSE WORK

The assigned work for this course will include labs, programming projects, written assignments, exams, and a final exam.

**Labs.** There will be 14 - 18 laboratory assignments during the Tuesday/Thursday meeting times. The labs are designed to be completed during the lab period, but the actual due date/time will typically extend beyond the end of the period. Laboratory assignments *can not be submitted late*, but you will be permitted to drop your two lowest lab grades.

**Programming and Written Assignments.** There will be 5 - 6 programming projects that are separate from the lab assignments and are designed to require several days to complete. Other written assignments that do not require programming may also be assigned throughout the term. No programming or written assignment grade can be dropped. All programming and written assignments are due by the date/time specified on the assignment. Any project or assignment turned in after the due date/time will be penalized 50% of the total value for that assignment. No assignment will be accepted that is more than *three* days late. If you turn an assignment in late, you must indicate this on the top of the paper. All programming and written assignments are to be done on an individual basis.

**Exams.** There will be three one-hour exams during the term. There will be no make up exams except for official college events. If you have to miss an exam due to an official event you must inform me at least two days in advance of the scheduled exam.

**Final Exam.** The final exam will be comprehensive and is scheduled for the 8:30 - 11:30am morning period on 20 May 2014.

## POLICIES

**Attendance.** You are advised to attend all class meetings. The lectures typically supplement the material found in the textbook or online resources. You are responsible for all material related to any class meeting from which you were absent.

**Programming Environment.** You will be using the Python programming language in this course. You are free to use any operating system and IDE or text editor for the development of your programs. However, all submitted work must use Python version 3.3.x and run from within the *Idle* editor or the *Wing* IDE.

**Grade Distribution.** Your final grade will be computed according to the following approximate distributions:

- 25% for laboratory assignments
- 20% for programming and written assignments
- 30% for the three one-hour exams
- 25% for the final exam

and the letter grade assigned as follows: A:  $\geq 94$ , A-: [90...93], B+: [87...89], B: [83...86], B-: [80...82], C+: [77...79], C: [73...76], C-: [70...72], D+: [67...69], D: [63...66], D-: [60...62], and F:  $< 60$ .

**Extra Credit.** No extra credit will be assigned on an individual basis.

**Academic Integrity.** The College’s Code of Academic Integrity sets out a list of prohibited behavior, including plagiarism, cheating, and tampering with or destroying College property (including computers in computer labs). The most common act of academic misconduct is plagiarism, which is defined as “Passing off a source’s information, ideas, or words as your own by omitting to acknowledge that source—an act of lying, cheating, and stealing.” (Gordon Harvey, *Writing with Sources: A Guide for Students*) Any student who commits a violation of the Code of Academic Integrity will be subject to the policies and procedures outlined in *Fishtales*. It is each student’s responsibility to read and be familiar with the Code.

All assignments must be done individually. You may discuss programming assignments informally with other students. However, sharing a solution in the form of experimental results or the design or implementation of a program, or parts of a program, is an honor violation. If you have any uncertainty about what this means, consult with me before you collaborate.

**Students with Disabilities.** The Americans with Disabilities Act of 1990 and other Federal laws require Randolph-Macon College to provide a “reasonable accommodation” to any individual who advises us of a physical, psychological, or learning disability. If you have a physical, psychological, or learning disability that requires an accommodation, you must first register with the Office for Disability Support Services, located in the Higgins Academic Center. Please arrange a meeting with the course instructor to discuss your needs and how to register for support services.

**College Final Exam Policy.** Students are required to take all final examinations during the time specified for their administration. However, a student may, with the permission of the course instructor, take an examination with another section of the same course taught by the same instructor. Any other rescheduling of exams requires the approval of the Provost or Associate Dean of the College. Failure to obtain the permission of the Provost’s Office will result in an automatic failure of the course. Absence from a final examination can only be excused by the Provost or the Associate Dean of the College. Absence from a final examination without such an excuse will result in failure of the course.

**Use of Laptops.** The use of laptops and mobile computing devices are permitted during class so long as they are being used for the course such as for taking notes, finding information related to the course, etc. Laptops are not to be used during class for reading email, social networking, completing assignments for other courses, etc. If the use of laptops becomes distracting for myself or other students in the course, *I reserve the right to prohibit their use during class.*

**Common Courtesy.** Please be courteous to everyone in the classroom. Do not leave the room during class unless you absolutely must as this is distracting to others. If you are late to class, please be as quiet as possible when entering the room and find a seat close to the door so as to not disrupt the class. Do not use a mobile phone during class and make sure the phone is turned off or the ringer is muted before entering the classroom. Finally, my office door is open most of the time. *If it is closed, however, this is an indication that I can not be disturbed at the moment.* Please respect this and try back again later. You are always welcome to contact me by email.