

Capital University - Fall 2012

CS160 Introduction to Computer Science

Instructor: David Reed, Ph.D. (email: dreed@capital.edu) Time/Day: 1:00-1:50, 2-2:50 MWF
Office: BHSN 117B, 614-236-6133, 614-429-4329 (home) Room: BHSN 224
Office Hours: 12-1 MWF, 12:30-1:30 Tue, 10-11 Thurs, and by appointment

Catalog Description: Algorithm design, algorithm development techniques and programming with emphasis on good program style. Topics include control structures, functions, arrays, classes, and files.

Prerequisites: Mathematics 120 (corequisite) or permission of instructor

Credits: 3

Text: *Python Programming : An Introduction to Computer Science, Second Edition*
by John M. Zelle, Franklin, Beedle & Associates, 978-1-59028-241-0

Course Objectives:

1. Learn the basic areas of the computer science field.
2. Improve problem solving skills.
3. Learn sound programming techniques, emphasizing structured, modular, and object oriented programming.
4. Learn the syntax and semantics of a significant subset of the Python language so that students can write small to medium sized programs to solve problems.

Attendance and active participation in class are required. There is no penalty for the first three absences; for every unexcused absence over the first three, your class participation/attendance grade will be reduced by five percentage points. Being late for class, lack of attention, not taking notes, etc. will also reduce your grade. If you miss class, you are still responsible for all material that is covered and all announcements that are made. Make-up exams are normally only given if the absence is beyond the student's control. You must notify me in advance if you will miss an exam.

The last day to withdraw or choose the pass/fail option is October 26.

Grades are based on your performance on the following and are weighted as noted:

Attendance/Participation (5%)

Homeworks/Quizzes (15%) (drop lowest 2)

Labs (35%)

3 Exams (30%)

Final Exam (15%) 1PM section Monday December 10, 3:30PM-5:30PM, 2PM section Wednesday December 12 3:30-5:30PM

Tentative Grading Scale:

| Percentage | Letter Grade | Percentage | Letter Grade | Percentage | Letter Grade |
|------------|--------------|------------|--------------|------------|--------------|
| 93-100 | A | 80-82 | B- | 67-69 | D+ |
| 90-92 | A- | 77-79 | C+ | 60-66 | D |
| 87-89 | B+ | 73-76 | C | 0-59 | F |
| 83-86 | B | 70-72 | C- | | |

Late homeworks and labs will not be accepted unless permission to turn it in late was granted by the instructor prior to the due date. Depending on the circumstances, a late penalty may be applied.

Academic Integrity: All assignments are to be your own work unless explicitly indicated otherwise. Any form of assistance from anyone other than the instructor or lab assistant is strictly forbidden. Violators will receive a zero for the assignment, the dean will be notified, and you may receive an I-F for the course. Please review the Academic Integrity Policy in the Capital University student handbook. See my academic integrity document for assignments for what type of collaboration is allowed and how you must report your collaboration.

University policies governing drop dates, penalties, plagiarism, and academic integrity, as detailed in the university bulletin, student handbook(s), and/or undergraduate time schedule, will be observed.

The key to being successful in this class is to not get behind because the material is cumulative. Please see me as soon as possible if you feel you are getting behind. The office of Academic Success (formerly the Center for Excellence in Learning and Teaching) provides valuable academic support resources for students as they study and work to complete assignments. Independently arranged one-on-one tutorials are also available in a wide range of subjects; consult the Tutor Yellow Pages (available in the Academic Success office and on the Academic Success website at <http://www.capital.edu/academic-success/> starting the third week of fall semester and the second week of spring semester) to find a tutor for a particular course. Students can contact Academic Services Coordinator Bruce Epps at 236-6461 or tutor@capital.edu to schedule an individualized study strategies consultation, or for additional information about Academic Success programs and services.

Students with disabilities who need accommodations should contact the Office of Disability Services (ODS) at the beginning of the semester. The ODS offers a range of accommodations and support services to ensure equal educational opportunities for eligible students with disabilities. Students may request accommodations by providing documentation of their disability to the Disability Services Coordinator. The ODS is located in the Center for Health and Wellness. Contact Disability Services Coordinator Dr. Jennifer Speakman at 236-6114 or disabilityservices@capital.edu for additional information.

Assignments and grading rubrics will be posted on iLearn: <https://ilearn.capital.edu/>

Tentative Schedule:

| Week | Monday | Wednesday | Friday |
|-----------------|----------------------|---------------------------|------------------------------------|
| 1. 8/27-8/31 | 1 introduction | 2 Ch 1 | 3 Python setup, assign HW 1 |
| 2. 9/3-9/7 | No Class | 4 2.1-2.5.2, assign lab 1 | 5 2.5.3-2.8, assign HW 2 |
| 3. 9/10-9/14 | 6 3.1-3.3 | 7 3.4-3.6, lab 1 due | 8 4.1-4.3, quiz 1 |
| 4. 9/17-9/21 | 9 in class work | 10 4.4-4.5 | 11 4.5-4.6, lab 2 due |
| 5. 9/24-9/28 | 12 exam 1 | 13 7.1-7.3 | 14 5.1-5.4, assign HW 3 |
| 6. 10/1-10/5 | 15 5.5-5.7 | 16 catch-up, quiz 2 | 17 6.1-6.3, lab 3 due, assign HW 4 |
| 7. 10/8-10/12 | 18 6.4-6.6 | 19 in class work | 20 7.4-7.5, quiz 3 |
| 8. 10/15-10/19 | 21 lab 4 due, review | 22 exam 2 | No Class |
| 9. 10/22-10/26 | 23 8.1-8.2 | 24 8.3 | 25 8.4 |
| 10. 10/29-11/2 | 26 lab day | 27 8.5, lab 5 due | 28 9.1-9.2, assign HW 5 |
| 11. 11/5-11/9 | 29 9.3-9.5 | 30 10.1-10.2 | 31 in class work |
| 12. 11/12-11/16 | 32 10.3-10.4 | 33 10.5-10.6, quiz 4 | 34 lab 6 due, review |
| 13. 11/19-11/23 | 35 exam 3 | No Class | No Class |
| 14. 11/26-11/30 | 36 11.1-11.2 | 37 11.3-11.4 | 38 11.5-11.6, assign HW 6 |
| 15. 12/3-12/7 | 39 12.1-12.2 | 40 12.3-12.4 | 41 lab 7 due, review |