Casper College Course Syllabus
COSC 2409 — Python Programming
Spring 2015

Lecture hours: 3
Lab hours: 0
Credit hours: 3

Class time: 9–9:50 a.m. (section 1)
12–12:50 p.m. (section 2)

Days: MWF

Room: PS 325

Instructor’s name: Kevin Lenth

Office: PS 341

Office hours: M 1–2, T 9–10, W 11–12, Th 11–1, F 11–12

Office phone: 268-2519

E-mail: lenthk@caspercollege.edu

Course Description

Describes various computer languages focusing on their differences from prerequisite languages and the uses of these new features. This course will give the student the chance to study new and unusual languages and their uses.

Prerequisites

COSC 1010 or instructor consent

Goal

This course develops a familiarity with the Python programming language and its applications with particular emphasis on the development of web apps.

Outcomes

General education

This course meets the following Casper College general education outcomes:

3. Solve problems using critical thinking and creativity
8. Use quantitative analytical skills to evaluate and process numerical data

Casper College may collect samples of student work demonstrating achievement of the above outcomes. Any personally identifying information will be removed from student work.

Course objectives

Upon successfully completing this course, students will be able to
use essential language structures such as if statements, loops, and functions to perform calculations and list processing in Python;

represent structured data in an appropriate fashion using Python's data types, lists, and dictionaries;

build the backend of data-driven web application.

Methodology

This course is presented as a lecture combined with time for hands-on experimentation.

Evaluation Criteria

The grade breakdown is as follows.

<table>
<thead>
<tr>
<th>Assignments</th>
<th>60%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projects</td>
<td>2 × 20%</td>
</tr>
</tbody>
</table>

Final grades will follow the usual 60/70/80/90 scale (90% or higher is an A, etc.) with the following exception:

Students who demonstrate dedication to the course (i.e., good attendance, much class participation, frequent office hour visits) may have their final grade bumped upward in borderline cases at the instructor's discretion.

Assignments will be given to allow students to master each section of course material and may take the form of written work, a program, problems from CodeLab, or any combination thereof. In the case of programming assignments, the grade breakdown is summarized below.

<table>
<thead>
<tr>
<th>Weight</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>70%</td>
<td>The submission correctly and completely implements the required behavior</td>
</tr>
<tr>
<td>10%</td>
<td>The submission is structured in a reasonable fashion and makes use of appropriate language constructs</td>
</tr>
<tr>
<td>10%</td>
<td>The submission is adequately commented and easy to read</td>
</tr>
<tr>
<td>10%</td>
<td>A sufficient narrative document is supplied</td>
</tr>
</tbody>
</table>

Each programming assignment submission must be accompanied by a narrative document, a brief description of the purpose of the program along with a discussion of the process of writing the program (challenges, mistakes found, additional resources used, etc.).

Two projects will be assigned, one due around midterm and the other at the end of the semester. Students may work individually or in groups of up to three on a project of their choice. Each group must submit a proposal that mentions specific goals; project grades will be determined by how fully the final product meets these goals.
**Required Text, Readings, and Materials**

The required textbook is *Python Programming in Context* (second edition, with CodeLab) by Miller and Ranum (ISBN-13: 978-1-4496-9939-0). The student may obtain a traditional physical copy of the book or an electronic edition (available at coursesmart.com among other sites) at his or her option. **A CodeLab access code is required for this course.** This code is included with new copies of the physical book and may also be purchased standalone at jblearning.turingscraft.com.

The CodeLab section access code (course ID) for this class is **CASPER-3582-0**.

**Class Policies**

*Last Date to Audit or Withdraw:* April 16th

*Attendance.* Every student is expected to attend every class meeting with punctuality.

*Class participation.* All students are expected to participate actively in class; this entails asking questions and being receptive to questions asked by the instructor. Students are also expected to use the classroom computers for purposes related to class, i.e. taking notes and following along in examples. Excessive or disruptive use of the computers for non-class-related activities will result in ejection from the class.

*Late assignments.* Assignments will be accepted up to five days after their due date with a penalty of 10% credit for each day.

*Syllabus emendation.* The instructor reserves the right to amend this course syllabus at any time. If this occurs, an announcement will be made and the modified syllabus will be made available to the class.

**Student Rights and Responsibilities**

Please refer to the Casper College Student Conduct and Judicial Code for information concerning your rights and responsibilities as a Casper College student.

**Chain of Command**

If you have any problems with this class, you should first contact the instructor to attempt to solve the problem. If you are not satisfied with the solution offered by the instructor, you should then take the matter through the appropriate chain of command starting with the Department Head, the Dean, and lastly the Vice President for Academic Affairs.

**Academic Dishonesty**

Casper College demands intellectual honesty. Proven plagiarism or any form of dishonesty associated with the academic process can result in the offender failing the course in which the offense was committed or expulsion from school. See
the Casper College Student Code of Conduct for more information on this topic.

**Official Means of Communication**

Casper College faculty and staff will employ the student's assigned Casper College e-mail account as a primary method of communication. **Students are responsible for checking their account regularly.**

The instructor's e-mail address is lenthk@caspercollege.edu and all official communications will be sent from this address.

**ADA Accommodations Policy**

If you need academic accommodations because of a disability, please inform the instructor as soon as possible. See him privately after class or during his office hours. To request academic accommodations, students must first consult with the college's Disability Services Counselor located in the Gateway Building, room 344, (307) 268-2557, bheuer@caspercollege.edu. The Disability Services Counselor is responsible for reviewing documentation provided by students requesting accommodations, determining eligibility for accommodations, and helping students request and use appropriate accommodations.
## Course Calendar

This calendar is very much subject to change.

<table>
<thead>
<tr>
<th>Week(s)</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chapter 1 — Introduction to Python</td>
</tr>
<tr>
<td>2–3</td>
<td>Chapter 2 — Arithmetic and selection</td>
</tr>
<tr>
<td>4–5</td>
<td>Chapter 3 — Strings</td>
</tr>
<tr>
<td>6–7</td>
<td>Chapter 4 — Lists and dictionaries</td>
</tr>
<tr>
<td>8–9</td>
<td>Chapter 5 — I/O and loops</td>
</tr>
<tr>
<td>10</td>
<td>Web application basics</td>
</tr>
<tr>
<td>11</td>
<td>My first web app</td>
</tr>
<tr>
<td>12–13</td>
<td>Data-driven web apps</td>
</tr>
<tr>
<td>14–15</td>
<td>Advanced web apps and client-side scripting</td>
</tr>
</tbody>
</table>