CompST 702 (G) / CompSci 290 (U): Python Programming

Course Instructor
Luke Spychalla
Email: lds4@uwm.edu
Office hours: Monday 2 – 4 pm, EMS 280, and by appointment (use email)

Class Meeting Times / Locations:
4:00 pm – 5:20 pm, Mondays, 1/23/17 – 5/11/17
LOCATION TBA

Requirements
QL A and/or Math Placement Level B (30 minimum)

1. Desired Outcomes
   1. Students will be able to program in Python using recursion, classes, and object features
   2. Students will be able to create, test, and debug single-programmer programs using basic and library data types
   3. Students will be able to solve problems involving textual input and output

2. Required Materials
      1. Please attain a text by the first class
      2. Standard text or e-text purchase options exist, and differ greatly in price:
   2. Writing utensil and notebook with folder or binder, dedicated to this course only
   3. Optional: Wi-fi equipped laptop; must have an HDMI port to share the screen with the class (required for group presentations); laptop workstations will otherwise be provided in NWQ 1961
   4. Applications
      1. Python 3.x package (download from Python.org; free)

3. Assignments / Assessments
   1. Tests (25% of overall grade)
      1. Format:
         1. Multiple choice and true/false questions
         2. Fill-in-the-blank questions
         3. Open response questions
         4. 50 - 100 – questions
      2. Will consist of one midterm and one final exam
         1. Each is worth 12.5% of the overall grade
         2. Dates and topics listed in the class schedule below
         3. The final exam is cumulative
         4. Must be completed individually without peer assistance
         5. MUST BE TAKEN IN PERSON ON THE UWM CAMPUS; SEE SCHEDULE FOR DATES
   2. Pre-Class Quizzes (20% of overall grade)
      1. Found under the “Quizzes” tab of D2L
      2. All quizzes, regardless of question number, have the same weight
      3. See the second column of the schedule found in this syllabus to see due dates
      4. Quizzes may be timed
      5. Must be completed individually without peer assistance
      6. Two types:
         (i) Reading quiz
1. Format:
   a. Typically true/false; may include open response questions
   b. Approximately 10 - 20 questions
2. Addresses the big ideas of a chapter
3. Serves as a check of reading completion and comprehension
4. Reading must be done before the day it is covered in class; see the schedule page of this syllabus for dates when individual chapters will be covered

(ii) Review quiz
1. May be selected from the chapter exercises at the end of each chapter
2. Addresses the material covered during the prior class
3. Assesses at a greater level of detail than a reading quiz

3. Discussion (5% of overall grade)
   1. Conducted on D2L using the ‘Discussions’ tab
   2. Requires a unique, individual response to a post, and responses to the posts of TWO classmates

4. Programming Assignments (50% of overall grade)
   i) 3 types:
      (1) **Group programming assignments**
          - Students will submit individual attempts at a program to a D2L dropbox, which may be incomplete or flawed, by a due date
          - Contingent on an initial submission, students will be able to view the attempts of group members and will discuss strategy via a D2L discussion board
          - Concurrently, group members will update a group-edited script on Office 365 Word Online (using the edit function to allow multi-user, live updating of a single document)
          - A final version of the group-edited script will uploaded to a D2L dropbox by a due date
          - An example code will be provided by the instructor for reference after the final due date, and the final scripts of all groups will be shared
          - Students will engage in a follow-up discussion to evaluate their approach in comparison to other groups and the instructor-provided example; students will receive and provide feedback between groups in this discussion
      (2) **Individual programming assignment**
          - Completed by each student without help from peers. Violations of this rule are subject to UWM’s academic dishonesty procedures (see “Class Policies” section below.)
      (3) **Final project (grad students only)**
          - Graduate students must also complete a programming project of their own choosing
          - The project should relate to some part of your graduate program, current employment, or career aspirations, and should preferably involve outside research (e.g. into new modules or functionality)
          - A summary of the project is required (see “Schedule” for date) which outlines the relevancy as described above, with additional sections on the problem, problem analysis, and program design as explained in 1.7.1 - 1.7.3 of page 30 of the text (Word format; upload to relevant D2L dropbox). Plan to also give an overview of your planning document to the class on 7/14.
          - The finished project is due (see “Schedule” for date) with all revisions to the above summary, as well as the addition of the program implementation and testing sections (1.7.4 - 1.7.5, pages 30-32) (upload to D2L dropbox in Word format), the script you’ve written (upload to D2L in .py format with explanatory comments included), and a brief presentation to the class on the entire project (approximately 10 - 15 minutes in length, may include a slideshow and must include an analysis of the script)
   ii) Other information
      (1) **Format requirements**: see pages 539 – 543 of the course text. **Coding that does not adhere to this format will be subject to a grade reduction. Descriptive, explanatory comments must be included for all sections of code after a # character.**
      (2) Graded for functional correctness, suitability, style (e.g. avoid repetition), clarity, and practicality
      (3) While one example answer may be released after grading of an assignment as feedback, often there are a variety of possible responses that could result in full credit

4. Grading Policies
   1. **All online work is due by 4:00 pm on the date provided by the instructor; late work will not be accepted.** It is the student’s responsibility to be aware of due dates; note that changes to the schedule provided in this syllabus are possible, and will be communicated via UWM email with a minimum of 72 hours advanced notice.
   2. Grades are weighted by category; categories and their weights can be found in the list above (“Assignments / Assessments” section)
   3. Grading scale by percentage of total points:
      - A+ = 100 - 98; A = <98 - 92; A- = 92 - 90
      - B+ = <90 - 88; B = <88 - 82; B- = 82 - 80
      - C+ = <80 - 78; C = <78 - 72; C- = 72 - 70
      - D+ = <70 - 68; D = <68 - 62; D- = 62 - 60
5. **Resources**
   1. “Content” tab of D2L: chapter slideshows, assessment and programming answers, course syllabus
   2. “Links” tab of D2L: optional outside resources that may be of use
   3. Lynda.com: video training courses free to UWM students; search “Python” for relevant materials

6. **Class Policies**
   1) Online and in-person classes
      a) All components of course may be implemented online with the exception of exams (in order to ensure academic integrity for individual work)
      b) In-person meetings may be used to replace some online elements, at the student’s discretion, and may include:
         i) Group work on formative programming assignments in live groups with instructor available for consultation in lieu of Office 365 interaction
         ii) Additional full-group, small-group, and individual student/instructor discussion; Q&A
         iii) Can be held in an active learning classroom to facilitate live group collaboration, computer access, and presentations by instructor and students
   2) Students are expected to check their UWM email daily
   3) In order to succeed in this course, students are expected to interact with instructional content online (45 hours total), do the programming assignments requiring approximately 8 hours each (100 hours total), do the reading assignments (40 hours total assuming a reading speed of 12 pages per hour), for a grand total of 185 hours of work.
   4) Grade clarifications must be done within one week of the time the grade is posted.
   5) Academic dishonesty will not be tolerated and is subject to review and failure. A more detailed description of Student Academic Disciplinary Procedures may be found at http://uwm.edu/academicaffairs/wp-content/uploads/sites/32/2015/02/uws14facdoc1686.pdf
   6) Students with disabilities must contact the instructor well ahead of time if special accommodations are needed.
   7) No eating or drinking (including water) is allowed in any computer lab.
   8) Weapons on Campus: Current Wisconsin “concealed carry” law and the Second Amendment to the US Constitution notwithstanding, we have been informed that no weapons are permitted in any building on the UWM campus. For more information, please consult the Concealed Carry Memorandum and FAQs issued by the Office of General Council for the UW System Administration. http://www.wisconsin.edu/gc-off/news/concealed-carry.htm
   9) This course will be conducted in accordance with University of Wisconsin–Milwaukee policies on sexual harassment, grade appeal procedures, military leave, and religious observances, and general complaints.
   10) Do not use cell phones in class.
   11) The instructor reserves the right to make alterations to this syllabus during the semester.
   12) Please be aware of the standard University policies: http://www4.uwm.edu/secu/news_events/upload/Syllabus-Links.pdf
7. Course Schedule (TBA = to be announced by instructor during the course)

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<thead>
<tr>
<th>Date</th>
<th>Reading Due (chapters from text)</th>
<th>Assessments</th>
<th>Topics</th>
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<tbody>
<tr>
<td>1/23</td>
<td>None</td>
<td>None</td>
<td>Syllabus / intro to the course; Python overview</td>
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<tr>
<td>1/30</td>
<td>1</td>
<td>Pre-class quiz: chap 1 reading, syllabus review</td>
<td>Data and expressions</td>
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<td>2/6</td>
<td>2</td>
<td>Pre-class quiz: chap 2 reading, chap 1 review</td>
<td>Control structures</td>
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<td>Pre-class quiz: chap 3 reading, chap 2 review</td>
<td>Lists</td>
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<td>4</td>
<td>Pre-class quiz: chap 4 reading, chap 3 review</td>
<td>Functions</td>
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<td>2/27</td>
<td>5</td>
<td>Pre-class quiz: chap 5 reading, chap 4 review</td>
<td>Objects</td>
</tr>
<tr>
<td>3/6</td>
<td>6</td>
<td>Pre-class quiz: chap 6 reading, chap 5 review</td>
<td>Grad project planning document and presentations due; exam review</td>
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<tr>
<td>3/13</td>
<td>None</td>
<td>MIDTERM EXAM</td>
<td>Exam</td>
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<tr>
<td>3/20</td>
<td>- SPRING BREAK -</td>
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<td>3/27</td>
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<td>4/3</td>
<td>7</td>
<td>Pre-class quiz: chap 7 reading</td>
<td>Modular design</td>
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<td>4/10</td>
<td>8</td>
<td>Pre-class quiz: chap 8 reading, chap 7 review</td>
<td>Text files</td>
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<td>4/17</td>
<td>9</td>
<td>Pre-class quiz: chap 9 reading, chap 8 review</td>
<td>Dictionaries and sets</td>
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<td>10</td>
<td>Pre-class quiz: chap 10 reading, chap 9 review</td>
<td>Object-orientated programming</td>
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<td>5/1</td>
<td>11</td>
<td>Pre-class quiz: chap 11 reading, chap 10 review</td>
<td>Recursion</td>
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<tr>
<td>5/8</td>
<td>TBA</td>
<td>Pre-class quiz: chap 11 review</td>
<td>Grad projects and presentations due; exam review</td>
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<tr>
<td>TBA</td>
<td>None</td>
<td>FINAL EXAM</td>
<td>Exam</td>
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I have read, understand, and will abide by the conditions listed in this COMPSCI 290 / COMPST 702 syllabus.

Student name (print legibly): _____________________________________________________________

Student signature: _____________________________________________________________________

Date: __________________

Return to your instructor at the start of the next class period.