**Course Material**

* Lecture notes (posted on the class Web site)
* Required textbooks: *The Practice of Computing Using Python (2nd edition)*, by William Punch and Richard Enbody

**Course Schedule**

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| **Date** | **Readings and pre-class assignments** | **Sessions** |
| 1/13 |  | Session One - Course Introductions |
| 1/14 | Read section 0.8 | Lab One - Getting Started in the lab |
| 1/15 | Read sections 0.1-0.7 | Session Two - Understanding the history and basics of computers |
| 1/17 |  | Session Three - Problem solving and computational thinking |
| 1/20 | MLK, Jr. Day - NO CLASSES |  |
| 1/21 | Read 1.1-1.8 | [Lab Two – IDLE and Basics of Python Programming](https://www.engage-csedu.org/find-resources/idle-and-basics-python-programming) |
| 1/22 | Read 1.9 | Session Four - Lab Debrief and Chapter 1 review  [Homework 1- First Program](https://www.engage-csedu.org/find-resources/first-program) |
| 1/24 |  | Session Five - Basic problem solving in python |
| 1/27 |  | Snow Day |
| 1/28 | Start section 2.1 (pp 81-90) | [Lab Three - Conditionals and Selection Statements](https://www.engage-csedu.org/find-resources/conditionals-and-selection-statements) |
| 1/29 |  | Session Six - More with data and types  Session Seven - Debrief Lab Three  [Homework 2- Selection Statements- Responding to Customer Requests](https://www.engage-csedu.org/find-resources/selection-statements-responding-customer-requests) |
| 1/31 | Read section 2.2 (pp 103- top 113, and 114-120) | Session Eight - Multi-way conditionals |
| 2/3 | Finish section 2.1 (pp 90-103) Finish section 2.2 (pp113 and 121-137) | Session Nine - Introducing Repetition |
| 2/4 |  | [Lab Four - Exploring Repetition](https://www.engage-csedu.org/find-resources/exploring-repetition) |
| 2/5 |  | Session Ten - Debrief and Practice  [Homework 3- Iteration](https://www.engage-csedu.org/find-resources/iteration) |
| 2/7 |  | Session Eleven - More loop practice |
| 2/10 |  | Session Twelve - Nested looping |
| 2/11 |  | [Lab Five- Stars and Triangles](https://www.engage-csedu.org/find-resources/stars-and-triangles) |
| 2/12 | Sections 3.1-3.5 | Session Thirteen - Lab Debrief  Homework 4: Additive and Multiplicative Persistence |
| 2/14 |  | Session Fourteen- Algorithms and Program Development |
| 2/17 | Read 4.1 and 4.2 | Session Fifteen - Introduction to Strings |
| 2/18 | Read 4.3 and 4.4 | [Lab Six - Strings](https://www.engage-csedu.org/find-resources/strings) |
| 2/19 | Read 4.5 and 4.6 | Session Sixteen - Working with Strings  [Homework 5- A Game!](https://www.engage-csedu.org/find-resources/game) |
| 2/21 | Read 4.7 | Session Seventeen - More with Strings - Methods |
| 2/24 |  | Session Eighteen - More with Strings - Penny Math |
| 2/25 |  | [Lab Seven - Caesar Cypher- Strings, Conditionals, Loops](https://www.engage-csedu.org/find-resources/caesar-cipher-strings-conditionals-loops) |
| 2/26 |  | Session Nineteen - Lab Debrief |
| 2/28 |  | Session Twenty- Exam prep, various examples, and wrap up |
| 3/3 |  | In-class Exam #1 (Chapter 1-4) |
| 3/4 |  | In-lab Exam #1 (Chapters 1-4) |
| 3/5 | Read 5.1-5.6 | Session Twenty One- Introduction to Files |
| 3/7 | Read 5.7 | Session Twenty Two - More with Files |
| 3/10 | Read Chapter 6 | Session Twenty Three - Defining your own functions  [Homework 6- Examining Olympic Medal Counts](https://www.engage-csedu.org/find-resources/examining-olympic-medal-counts) |
| 3/11 |  | [Lab Nine- Functions](https://www.engage-csedu.org/find-resources/functions-0) |
| 3/12 |  | Session Twenty Four - Lab09 Debrief, more on functions |
| 3/14 |  | Session Twenty Five - Function wrap up, new design docs and comments |
| 3/24 | Read 7.1-7.5 | Session Twenty Six - Introducing Lists  [Homework 7- Pig Latin](https://www.engage-csedu.org/find-resources/pig-latin) |
| 3/25 | Read 7.6-7.9 | Lab Ten - List Lab |
| 3/26 | Finish Chapter 7 | Session Twenty Seven - Lists and Tuples |
| 3/28 | Chapter 8 | Session Twenty Eight - More Lists and Tuples |
| 3/31 | See class handouts | Session Twenty Nine – Intro to Functional Decomposition  [Homework 8- Tracking the Greats of the NBA (Design Version)](https://www.engage-csedu.org/find-resources/hw-8-tracking-greats-nba-design-version) |
| 4/1 |  | Lab Eleven – Design Lab |
| 4/2 |  | Session Thirty – More Design |
| 4/4 |  | Session Thirty One – Design Wrap-Up |
| 4/7 | Read Chapter 9.1-9.3 | Session Thirty Two - Introduction to Dictionaries  [Homework 9- Tracking the Greats of the NBA](https://www.engage-csedu.org/find-resources/hw9tracking-greats-nba) |
| 4/8 |  | [Lab Twelve – “Green Eggs and Ham”- Using Lists for Text Analysis](https://www.engage-csedu.org/find-resources/green-eggs-and-ham-using-lists-text-analysis) |
| 4/9 |  | Session Thirty Three - Debrief Lab and Memory |
| 4/11 | Read 9.4-9.6 | Session Thirty Four - Memory |
| 4/14 |  | Session Thirty Five - Sets |
| 4/15 |  | [Lab Thirteen – Sets and Dictionaries to Analyze Movies](https://www.engage-csedu.org/find-resources/sets-and-dictionaries-analyze-movies) |
| 4/16 | Read 11.5-11.9 | Review of Lab Thirteen  [Homework 10: Analyzing Debates- Creating Word Tags/ Clouds of a Speech](https://www.engage-csedu.org/find-resources/analyzing-debates-creating-word-tagsclouds-speech) |
| 4/18 |  | Session Thirty Six - Intro to Searching |
| 4/21 |  | Session Thirty Seven - Intro to Sorting |
| 4/22 |  | [Lab Fourteen - Analyze Customer Data](https://www.engage-csedu.org/find-resources/analyze-customer-data) |
| 4/23 |  | Session Thirty Eight - More with Sorting |
| 4/25 | Read Chapter 16 | Session Thirty Nine - Intro to Recursion |
| 4/28 |  | Session Forty - More with Recursion |
| 4/29 | Study Guide | In-Lab Exam #2 |
| 4/30 |  | Session Forty One - Finishing up Recursion |
| 5/2 |  | Session Forty Two – Final Review |
| 5/6 | Final Exam, Tuesday 10:00-11:50am |  |