

Sisi Virasak
CS161 – Introduction to Computer Science
Spring 2022 Syllabus

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| Email: virasas@linnbenton.edu | Class Day/Time: Online |
| Office: MKH-108 | Discord Link: https://discord.gg/wzQ32uaFyR |
| Best way to contact me: email | Office Hours: By Appt. |

Course Description and Objectives:

As the name implies, CS 161 is the computer science department's introductory course. While it is the first course in the programming sequence for majors it is appropriate for non-majors and it does NOT assume that you have programming experience. This course has two primary goals:

- First, to introduce the general field of computer science. We hope that you will leave this course with a sense of what computer science is and what computer scientists do.
- Second, to introduce the concept of programming. Programming is the way that computer scientists express their ideas and implement solutions to problems. Even if you never "program for a living", you will need to know how to program in order to appreciate the ideas you learn and to work in the industry.

Prerequisites

- CS160 Orientation to Computer Science, with a 'C' or better
- MTH95 Intermediate Algebra or equivalent with a 'C' or better

Required Materials:

- *The Practice of Computing Using Python, 2nd edition*, by William Punch and Richard Enbody. ISBN-13: 978-0132805575. (Provided in Moodle)
- Will be using Moodle in this course. You are not required to visit your Moodle shell before our first class, but please make sure that you are able to log in to identity.linnbenton.edu. Before logging in for the first time, you will have to claim your account, also at identity.linnbenton.edu. If you have any problems claiming your account or logging into Moodle, please let the Student Help Desk know (541-917-4630, student.helpdesk@linnbenton.edu).
- Python 3.9+ (<https://www.python.org/>). A well-written guide for installing Python on Windows, Mac, and Linux can be found at <https://realpython.com/installing-python/>.
- A text editor of your choice. Thonny (<https://thonny.org/>) is an excellent beginner's editor for Python. Visual Studio Code (<https://code.visualstudio.com/>) or other good,

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Python-oriented options include PyCharm (<https://www.jetbrains.com/pycharm/>, available with a free license for students) and Spyder (<https://www.spyder-ide.org/>).

- A USB thumb drive with a minimum capacity of 4GB.
- Internet access.

Learner Outcomes:

While a major goal of this course is to provide a good start to the development of programming skills, the course is not solely about programming. Upon successful completion of the course students should have gained the following skills and proficiencies:

- Demonstrate an understanding of the difference between primitive data types and objects and their representation using an object-oriented approach.
- Demonstrate the use of good program development, debugging techniques and documentation. Write object-oriented code that includes control statements, while loops, for loops, output to the screen and input from the keyboard and from a file.
- Write, compile and run simple web-based and desktop-based GUI applications using components and containers.
- Write simple, user-designed classes that demonstrate an understanding of encapsulation.
- Write object-oriented code that includes the use of single-dimensional arrays.

Additionally, you should develop skills and understanding that will ultimately allow you to analyze complex problems and apply your knowledge and experience to developing good solutions to them. Programming is a creative process. However, to exercise that creativity, one must learn basic tools and principles. That is the purpose of this course.

Course Structure and Grading Policies

Grade Determination

The final grade you earn in this course will be based on the points accumulated over the activities as described below.

Grades Table:

| Assignments/Exams | Weight |
|-------------------|--------|
| Chapter Exercises | 25% |
| Labs | 25% |
| Midterm Exam | 20% |
| Final Project | 30% |

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| TOTAL | 100% |
| Grades: IMPORTANT: A grade of “C” or higher is considered passing. | A: 90-100% B: 80-89% C: 70-79% D: 60-69% F: < 60% P: >= 70% NP: < 70% |

Late submission policy:

I will allow 3 opportunities to submit late work (Chapter Exercises/Labs) without penalty. After you have exhausted the 3 no penalty late submission. It is allowed up to 2 days late, with a late penalty associated. One-day late submissions (i.e. within 24 hours after due date) will get a 2 point deduction, and two-days late submissions (i.e. 24-48 hours after due date) will get a 4 point deduction. After two days of the due date, a late assignment will not be accepted and will receive a grade of zero.

Class Website:

Most course materials will be made available on the course web page during the term. You are responsible for checking this site frequently for reading assignments, prep activities, lecture notes, announcements, and supplemental class materials.

Guidelines for Communication

The best way to reach your instructor is by email. I check my email regularly throughout the day and your message will receive a prompt reply. While they need not be strictly formal your emails should be concise, list necessary details (course name/number), and written in a manner that would be appropriate for communicating with your boss.

Email Etiquette for Grade Dispute:

Chapter Exercises/Labs Grade:

- Put [CS161] Chapter Exercises/Labs Grade Dispute in the email title
- State which assignment grade is incorrect and why you believe it to be incorrect ○ assignments are considered final one week after the assignment occurred, regardless of a

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numeric grade being present in the grade book. If a numeric grade is missing, it will be interpreted as a zero. You have one week from the grade being considered final. Disputes after this time will not be considered.

Academic Honesty:

Helping, or being helped by, another student during an exam will be considered a breach of academic honesty and is grounds for receiving a zero grade and/or failing the course among other possible remedies.

Basic Needs:

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Roadrunner Resource Center for support via email at resources@linnbenton.edu or visit us on the web at www.linnbenton.edu/RRC. Our office can help students get connected to resources to help. Furthermore, please notify the professor if you are comfortable in doing so. This will enable them to provide any resources that they may possess.

LBCC Center for Accessibility Resources:

Students who may need accommodations due to documented disabilities, or who have medical information which the instructor should know, or who need special arrangements in an emergency, should speak with the instructor during the first week of class. If you believe you may need accommodations, but are not yet registered with CFAR, please go to <http://linnbenton.edu/cfar> for steps on how to apply for services or call 541-917-4789.

LBCC Comprehensive Statement of Nondiscrimination:

LBCC prohibits unlawful discrimination based on race, color, religion, ethnicity, use of native language, national origin, sex, sexual orientation, marital status, disability, veteran status, age, or any other status protected under applicable federal, state, or local laws.

LBCC Statement of Inclusion:

The LBCC community is enriched by diversity. Each individual has worth and makes contributions to create that diversity at the college. Everyone has the right to think, learn, and work together in an environment of respect, tolerance, and goodwill (related to Board Policy #1015).

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| Week | Activity | Due |
|------------------|---|-------------------------|
| Week-1 Mar 28 | Welcome, introductions, syllabus, Moodle, scope & set clear expectations Topics: What is CS?, Why Python?, Operations, Functions Reading Assignment: 0.1-0.5, 1.1-1.5, 1.6-1.10 Chapter Exercises #1 Lab #1 | Apr 3 @ 11:59 pm |
| Week-2 Apr 4 | Topics: Conditional statements, loops Reading Assignment: 2.1,2.2.1-2.2.9 Chapter Exercises #2 Lab #2 | Apr 10 @ 11:59 pm |
| Week-3 Apr 11 | Topics: read-eval-print loops, what makes for a good program Reading Assignment: 2.2.10-2.3, 3.1-3.5 Chapter Exercises #3 Lab #3 | Apr 17 @ 11:59 pm |
| Week-4 Apr 18 | Topics: strings: working with text, iterating over strings Reading Assignment: 4.1-4.3, 4.4-4.8 Chapter Exercises #4 Lab #4 | Apr 24 @ 11:59 pm |
| Week-5 Apr 25 | Topics: files and exceptions, functional abstraction Reading Assignment: 5.1–5.7, 6.1–6.4 Chapter Exercises #5 Lab #5 Final Project Overview | May 1 @ 11:59 pm |
| Week-6 May 2 | Topics: lists and mutable data, tuples (and more lists) Reading Assignment: 7.1-7.3, 7.4-7.6 Chapter Exercises #6 Lab #6 Midterm open all week | May 8 @ 11:59 pm |

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| Week-7 May 9 | Topics: dictionaries, sets Reading Assignment: 9.1-9.3,9.4-9.5 Chapter Exercises #7 Lab #7 | May 15 @ 11:59 pm |
| Week-8 May 16 | Topics: recursion Reading Assignment: 16.1-16.5 Chapter Exercises #8 Lab #8 | May 22 @ 11:59 pm |
| Week-9 May 23 | Topics: objects and classes, Reading Assignment: 11.1-11.4, 12.1-12.6 Chapter Exercises #9 Lab #9 | May 29 @ 11:59 pm |
| Week-10 May 30 | Work on Final Project | Final Project Due Monday June 6 @ 11:59 PM |

Important Dates:

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| First Day of Spring Term | March 28 |
| College Closed Until Noon for Faculty/Staff Spring Inservice | April 1 |
| Last Day to Add/Drop | April 4 |
| Last Day to Withdraw with “W” | May 15 |
| College Closed for Memorial Day | May 30 |
| Balance Due in Full to Avoid Late Fees and Registration Hold | May 30 |
| Last Day of Term | June 10 |