OVERVIEW

This module, we begin with an introduction to the course, develop a working definition of Data Science, and explore the main tools you will need for your data scientist’s toolbox. We will learn and practice the basics of the Python programming language and Jupyter Notebooks to get kick started and comfortable working with and organizing data.

LEARNING OUTCOMES

This module will support the following course level learning outcome(s):

Acquire, clean, and organize data from a variety of sources, including raw data files, SQL databases, and online repositories using the Python programming language.

ASSIGNMENTS

This is an approximation of the amount of time each activity will take the average student. If you find you are taking more time than suggested, please contact me for help.

| ASSIGNMENT ORGANIZER | |
| --- | --- |
| **Activity** | **Time (Hrs)** |
| Study/Reflect Time | 1:00 |
| Participate in [Introduce Yourself](https://elearning.mines.edu/courses/52392/discussion_topics/256388) | 1:00 |
| Complete [Installing and Using Jupyter Notebooks](https://elearning.mines.edu/courses/52392/pages/installing-and-using-jupyter-notebooks) | 1:00 |
| Participate in [Reading & Discussion: What is Data Science and Why Python](https://elearning.mines.edu/courses/52392/discussion_topics/256389) | 1:00 |
| Watch & Study [Instructional Videos & Materials: Introduction to Data Science](https://elearning.mines.edu/courses/52392/pages/instructional-videos-and-materials-introduction-to-data-science) | 0:30 |
| Submit [Activity: Definition of Data Science](https://elearning.mines.edu/courses/52392/assignments/354733) | 0:30 |
| Participate in [Reading & Discussion: IPython: Beyond Normal Python](https://elearning.mines.edu/courses/52392/discussion_topics/256390) | 1:00 |
| Watch & Study [Instructional Videos & Materials: Python Basics](https://elearning.mines.edu/courses/52392/pages/instructional-videos-and-materials-python-basics) | 0:30 |
| Submit [Activity: Python Practice](https://elearning.mines.edu/courses/52392/assignments/354736) | 1:00 |
| Watch & Study [Instructional Videos & Materials: Python Sequences](https://elearning.mines.edu/courses/52392/pages/instructional-videos-and-materials-python-sequences) | 0:30 |
| Watch & Study [Instructional Videos & Materials: Python Dictionaries](https://elearning.mines.edu/courses/52392/pages/instructional-videos-and-materials-python-dictionaries) | 0:30 |
| Submit [Activity: Python Practice - Dictionaries](https://elearning.mines.edu/courses/52392/assignments/354737) | 1:00 |
| Submit [Project 1: Python](https://elearning.mines.edu/courses/52392/assignments/354741) | 6:00 |
| **Total Hours:** | **15:30** |