



Program Learning Outcomes (PLO)

Upon successful completion of this course, students will meet the student learning outcomes that support the following program learning outcomes of the BS Data Science Program:

Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements.

Communicate effectively in a variety of professional contexts.

Apply theory, techniques, and tools throughout the data lifecycle and employ the resulting knowledge to satisfy stakeholders' needs.

Course Materials

Required Texts/Readings Textbooks:

- *Biological data exploration with Python, pandas and seaborn* by Martin Jones. June, 2020. (<https://pythonforbiologists.com/biological-data-exploration-book>) ISBN-13: 979-8612757238 Additional course readings, examples, exercises, etc. will be assigned and provided by the instructor.

Other Readings:

- *Hands-On Data Visualization: Interactive Storytelling From Spreadsheets to Code* by Jack Dougherty and Ilya Iliev. ISBN-13: 978-1492086000. Free open-access web edition at <https://hands-on-data.com/#/on>
- Additional course readings, examples, exercises, etc. will be assigned and provided by the instructor.

1.
 - Quizzes will take place once a week at the end of class to assess students' knowledge of the course materials from the week prior. A unique password will be provided for each quiz during lecture.
 2.
 - The purpose of the hands-on lab is to develop students' understanding of the material and the skills in problem-solving. Students will work on the hands-on exercise with a group partner assigned by the instructor. Each student must deg
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5	9/17	Representing Categorical Data
5	9/19	Reshaping Data
6		9/20/2023 CONSTRUCTING DATA
6		9/20/2023 CONSTRUCTING 0 Duplicate Data Files
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14	11/19	Integrating Data Visualization in Web App
14	11/21	Deploying Data Visualization Web App to the Cloud
15	11/26	Deploying Data Visualization Web App to the Cloud
15	11/28	
16	12/3	
16	12/5	