

CSI 2330: Immersive Python

Credits Hours: 2 credits, 1.78 contact hours/week.

Instructor: Răzvan Popovici, Ph.D.

Text book: Python Programming: An Introduction to Computer Science 2nd Edition, Franklin, Beedle & Associates Inc. 2010. ISBN 978-1-59028-241-0

Specific course information

This course introduces the fundamentals and applications of Python. The language fundamentals covered are statements, variables, comments, control structures, functions, modules, packages, and objects. The course also includes advanced concepts such as collections (Lists, Arrays and Dictionaries) with their practical use for Data Processing, Systems administration, and Web development applications.

Prerequisites: CSI 1300 or CSI 2300

Elective course

Course Objectives: Upon successful completion of this course, students should be able to

- Describe python language and its capabilities [ABET CS: (i)]
- Describe python string manipulation and data structures [ABET CS: (i)]
- Write python programs to solve a specific problem [ABET CS: (c)]

List of Topics:

- Python Motivation
- Computers & Programs
- Writing the first program
- Computing with Numbers
- Objects & Graphics
- Sequences: Strings, Lists, and Files
- Defining Functions
- Decision Structures
- Web applications in Python
- Loop Structures & Booleans
- Database access with Python
- Defining Classes
- Python in System Administration
- Data Collections
- Algorithm Design & Recursion