Course Code	Course Title
COMP 1029P	**Python Programming Bridging Course**

Course Description

This course introduces the Python programming language. It is intended for students who already have some experience in computer programming but wish to learn how to apply those programming skills to the Python language. The course covers basic programming topics, such as variables, functions and loops, to more advanced topics. Students explore these by self-learning of course materials together with guided programming exercises. Students without the prerequisites but possess relevant programming knowledge may seek instructor's approval for enrolling in the course. Graded P or F. *Exclusion(s):* COMP 1021. *Prerequisite(s):* COMP 1022P OR COMP 1022Q (prior to 2020-21) OR ISOM 3230 OR ISOM 3320

List of Topics

Introduction to Python
- Variables
- Strings and Lists
- Booleans

Essential Programming in Python
- Functions and Making Decisions
- Variable Scope
- For Loops
- While Loops

2D Arrays and the Game of Life
- Two Dimensional Arrays
- Conway's Game of Life
- Print, Clear Screen and Delay

Advanced Features
- Dictionaries
- User Input and Dealing with Errors
- File I/O
- Object-Oriented Programming

Recursion and Turtle Graphics
- Recursion
- Turtle Graphics

Textbook(s):

N/A

Reference Book:

N/A

Grading Scheme

Online Exercises	50%
Exam	50%
Total	100%

Intended Learning Outcomes (ILOs)

1. Define basic programming elements such as variables, loops and functions in Python
2. Describe data structures and data abstraction in Python
3. Implement advanced programming concepts in Python
4. Design, write and debug computer programs in Python

Assessment Rubric

Course Learning Outcome	Exemplary	Competent	Needs Work	Unsatisfactory