# IT 5413 SOFTWARE DESIGN AND DEVELOPMENT

# **Module 1: Control Structure**

## Overview and learning outcomes

In this module we will be covering decision statements: if, if-else, if-elif-else, along with repetition structures - while and for loops. We will also cover logical operators, and Boolean variables.

COURSE OBJECTIVES

This module contributes to the following course objectives:

1. Analyze, design, develop, and implement programs in an object-oriented language

MODULE OBJECTIVES

Upon the completion of this module, you will be able to:

## Describe what a control structure does in a program

## Describe the “while loop” and the “for loop”

## Use "if", or "if-else", and/or nested structures, and operators in a program

## Use while and/or for loops in a program

## ASSIGNED READINGS

1. Decision Structures and Boolean Logic (Located In D2l In The Module)
2. Repetition Structures (Located In D2l In The Module)
3. Python if-else structure (Video- Located In D2l In The Module)
4. Python While loop structure (Video- Located In D2l In The Module)
5. Python if-else structure. Link: <https://www.w3schools.com/python/python_conditions.asp>
6. Python for loop structure. Link: <https://www.w3schools.com/python/python_for_loops.asp>
7. Python while loop structure. Link: <https://www.w3schools.com/python/python_while_loops.asp>
8. Python for loop structure. Link: <https://www.youtube.com/watch?v=94UHCEmprCY>
9. Python if-else structure. Link: <https://www.youtube.com/watch?v=Zp5MuPOtsSY>

## RECOMMENDED READINGS

1. Introducing Python: Chapters 4, 9 (Link: <https://www.brianheinold.net/python/A_Practical_Introduction_to_Python_Programming_Heinold.pdf>)

## ACTIVITIES AND ASSESSMENTS

1. Module 2 Discussion
2. Assignment 2 (Located In D2l In The Module)