# IT 5413 SOFTWARE DESIGN AND DEVELOPMENT

# **Module 7: Software Development Life Cycle**

## Overview and learning outcomes

Quality software requires that developers follow a process to determine what is needed, the logic and steps to correctly create the solution, and testing to validate that the software meets the business needs and verify that the product meets the design requirements.

The general process for software development follows the Software Development Life Cycle ( SDLC).

The Program Development Cycle described in Module 1 is part of the designing and building steps of the SDLC. The SDLC models have evolved over the years. Initially, developers and business analysts used the waterfall model, which was a linear stepwise model. Currently, other models that are iterative, spiral, or have parallel paths are also used.

Gathering requirements is as much art as science. It can be difficult to communicate with business users to determine what the business needs are. If requirements are not understood, it is difficult to understand what to design and build. Many projects fail to meet deadlines due to a lack of understanding of requirements and having to rework the solution. That makes for unhappy customers and overworked developers.

In this module, we will look at SDLC models and methods to gather requirements.

COURSE OBJECTIVES

This module contributes to the following course objectives:

1. Analyze the needs of an enterprise in relation to programming applications
2. Conduct independent research on a subject related to the course material

MODULE OBJECTIVES

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

## Explain typical good practices for software projects.

## Discuss types of requirements used in the project definition.

## Discuss the choice of programming applications for projects.

## ASSIGNED READINGS

1. SDLC Tutorial (Located In D2l In The Module)
2. Requirement Gathering (Located In D2l In The Module)
3. 10 Steps To Successful Requirements Gathering (Located In D2l In The Module)
4. SDLC. Link: <https://www.synopsys.com/glossary/what-is-sdlc.html>

## RECOMMENDED READINGS

1. Intro to SDLC. Link: <https://www.youtube.com/watch?v=LLvBNnoXtB4>

## ACTIVITIES AND ASSESSMENTS

1. Module 7 Discussion
2. Assignment 7 (Located In D2l In The Module)