

# Education

Relevant Courses

# Relevant Courses in Software Engineering

Throughout my studies, I completed 44 diverse courses that enhanced my expertise in software engineering. Here are a few, categorized according to the Software Development Life Cycle.

# Planning & Requirement Analysis

## **SOFE 2720U – Principles of Software and Requirements Engineering**

- Software Life Cycle
- Requirements Engineering

## **ENGR 3490U – Software Project Management**

- Project Planning & Scheduling
- Cost Estimation

## **COMM 1050U - Technical Communications**

- Professions Writing & Presentation Skills
- Technical Report Writing

# Design

## **SOFE 3650U – Software Design and Architectures**

- Software Architectural Styles
- Unified Modelling Language (UML)
- Design Patterns

## **SOFE 4790U – Distributed Systems**

- Consistency & Replication
- Fault Tolerance Algorithms: Bully, Election, and Ring-Based
- Distributed Coordination Systems

## **ELEE 3450U – Microprocessors and Computer Architecture**

- RISC vs. CISC architecture
- Pipelining in RISC
- Associative Mapping in Cache

## **SOFE 4590U – Embedded Systems**

- Scheduling Algorithms: RM, EDF, and Exact Analysis
- Embedded Linux, Free RTOS and QNX
- MARTE vs AADL

# Implementation

## **SOFE 2710U – Object-Oriented Programming and Design**

- Linked Lists, Stacks, and Queues
- Good Programming Techniques

## **SOFE 2800U – Web Programming**

- HTML, JavaScript, PHP
- Event-driven Programming

## **SOFE 3770U – Design and Analysis of Algorithms**

- Asymptotic Notation
- Sort Algorithms

## **SOFE 4640U – Mobile Application Development**

- Android Programming
- Application Development & Structure

# Testing

## **SOFE 3980U – Software Quality**

- Unit and Integration Testing using Maven
- Black Box and White Box Testing
- TDD vs BDD

## **SOFE 3950U – Operating Systems**

- Concurrency
- Deadlocks and Starvation
- I/O Management and Scheduling

# Deployment & Maintenance

## SOFE 4630U – Cloud Computing

- Google Cloud Platform, Docker, Kubernetes, and Redis
- Architectural Styles: EDA, Microservices, Big Data
- Hadoop Distributed File System (HDFS)

## SOFE 4840U – Software and Computer Security

- Denial of Service Attacks
- Cryptographic Tools
- Defensive Programming