TIM-8190: Computer Science Policy and Strategy

(3 credits)

## Course Description:

This course is an advanced examination of the theories, concepts, and strategies for managing technology policies while developing and implementing computer science projects. During this final course in the PhD-CS program, before starting the dissertation sequence, you will research and design an information technology policy strategy for software development and implementation. You will also evaluate ways to improve the competitive position of an organization, recommend coding control structures for data integrity and security, and plan ways to address business concerns regarding the adoption of new technologies.

## Number of Activities: 8

## Learning Outcomes:

1. Evaluate organizational potential for improving the competitive position through strategic deployment of technology solutions.
2. Assess the impact of information technology functional requirements on organizational structure in different competitive environments.
3. Recommend solutions to address the gaps between theory and practice during software development and implementation.
4. Plan for legal, ethical, and regulatory concerns regarding the adoption of new technologies.
5. Design an information technology policy strategy for software development that adheres to legal and ethical standards.

## Course Concepts:

1. Solution Selection for a Policy Strategy
2. Project Idea and Roadmap for IT Policies
3. Ethics and Intellectual Property Protections
4. Project Development Methodology
5. Metrics
6. Risk and Contingencies
7. IT Policy Strategy

## Primary Resource/textbook: None

## Course Overview

### Section 1: IT Project Initiation and Planning Phase

#### Week 1: IT Solution and Design Policies

##### Week 1 Assignment: Recommend a Policy Strategy (10 Points)

#### Week 2: Requirements and Impact Assessment

##### Week 2 Assignment: Conduct a Business Needs Assessment (10 Points)

#### Week 3: Policy Strategy Schedule

##### Week 3 Assignment: Present a Milestones, Benchmarks, and Deliverables Roadmap (10 Points)

### Section 2: IT Implementation Plan Design Phase

#### Week 4: Compliance, Quality Assurance, and Performance Management Metrics

##### Week 4 Assignment: Design an IT Policy Control Framework (10 Points)

#### Week 5: Risk and Quality Management

##### Week 5 Assignment: Create an IT Policy Management Framework (10 Points)

#### Week 6: Support, Training, and Contingency Planning

##### Week 6 Assignment: Develop a Knowledge Transfer Program (10 Points)

### Section 3: IT Policy and Procedures Implementation

#### Week 7: IT Implementation Planning

##### Week 7 Signature Assignment: Design an IT Policy Implementation Plan (25 Points)

#### Week 8: IT Strategic Planning

##### Week 8 Assignment: Present Your IT Policy Implementation Plan (15 Points)