

# Syllabus for SENG 3020 001

**Course Name:**

Software Verification and Validation

**Course Prefix and Number:**

SENG 3020

**Course Section Number:**

001

**Course Description (from catalog):**

Software quality attainment through software testing and other alternatives to quality assurance, including process improvement, inspection, fault tolerance, and reliability assurance.

**Required Course Materials for Purchase:**

Essentials of Software Testing by Ralf Bierig; Stephen Brown; Edgar Galván; Joe Timoney, ISBN 9781108976480

**Student Learning Outcomes or Objectives:**

This course provides practical and theoretical knowledge of software testing. Students will learn verification and validation strategies and techniques throughout the software life-cycle. Methods of software testing. Students are required to complete a team project over the course of the semester.

Upon completion of this course, each student will be able to:

- Understand the processes, principles, and techniques of software testing, software verification, and validation
- Develop software testing plans and models
- Generate test cases according to various testing criteria
- Apply different types of testing approaches
- Develop and apply continuous verification methods
- Conduct test reviews and formalize documentation

## **Assessment of Student Performance – Grading Scale:**

| Grading |           |
|---------|-----------|
| A       | $\geq 94$ |
| A-      | 90-93     |
| B+      | 87-89     |
| B       | 83-86     |
| B-      | 80-82     |
| C+      | 77-79     |
| C       | 73-76     |
| C-      | 70-72     |
| D+      | 67-69     |
| D       | 63-66     |
| D-      | 60-62     |
| F       | below 60  |

## **Assessment of Student Performance – Major Assignments and percentage of final grade:**

|                        |      |
|------------------------|------|
| Quizzes / Assignments: | 25%  |
| Middle-term test:      | 25%  |
| Project:               | 25%  |
| Final exam:            | 25%  |
| Total:                 | 100% |

## **Assessment of Student Performance – Attendance/participation if portion of final grade:**

This is a face-to-face class, and attendance is expected. You can miss up to three classes without an excused absence. Each class missed beyond the first three will deduct 3 points from your final course grade (e.g., if you have five absences that are not excused, you will lose 6 points from your final grade). Ten unexcused absences will automatically give you an F for this class. This is done to emphasize the importance of attendance.

## **Statement of Engagement with Diverse Scholarly Perspectives**

This course aligns with the intent of the university to engage diverse scholarly perspectives to develop critical thinking, analysis, and debate. The inclusion of a course reading does not imply endorsement.