# Student Outcomes (SO) Assessment Plan

Software Engineering & Information Systems Program  
MUST University

## 1. Purpose and Scope

This document defines the structured process for assessing the six ABET Computing Accreditation Commission (CAC) Student Outcomes (SOs). The plan ensures direct, mastery-level measurement of student achievement by time of graduation and aligns with ABET Criterion 3 (Student Outcomes) and Criterion 4 (Continuous Improvement).

## 2. Assessment Principles

The assessment system follows these principles:

* Only courses marked at Mastery (M) level are used.
* Each SO is assessed in at least two different courses.
* Two different assessment tools are used whenever possible.
* A balanced two-year assessment cycle is implemented.
* Data are used for documented continuous improvement.

## 3. Two-Year Assessment Cycle Overview

### Year A

Fall (Semester 5):

* SO1 – CS 335 (Analytical Modeling Project)
* SO2 – CS 424 (System Design & Implementation Project)
* SO4 – PHIL 222 (Ethics Case Study)

Spring (Semester 6):

* SO1 – ISS 321 (Capstone Architecture Justification)
* SO2 – ISS 321 (Capstone Testing & Validation)
* SO3 – ISS 321 (Oral Capstone Defense)

### Year B

Fall (Semester 5):

* SO5 – MGMT 322 (Team Project + Peer Evaluation)
* SO6 – CS 427 (DevOps Deployment Project)
* SO4 – CS 412 (Security Risk Assessment)

Spring (Semester 6):

* SO5 – ISS 321 (Capstone Team Evaluation)
* SO6 – ISS 321 (Development Methodology Documentation)
* SO3 – MGMT 322 (Written Project Management Report)

## 4. Semester-by-Semester Assessment Calendar

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| --- | --- | --- | --- |
| Academic Year | Semester | SO Assessed | Course & Tool |
| Year A | Fall (Sem 5) | SO1 | CS 335 – Analytical Modeling Project |
| Year A | Fall (Sem 5) | SO2 | CS 424 – Design & Implementation Project |
| Year A | Fall (Sem 5) | SO4 | PHIL 222 – Ethics Case Study |
| Year A | Spring (Sem 6) | SO1 | ISS 321 – Architecture Section |
| Year A | Spring (Sem 6) | SO2 | ISS 321 – Testing & Validation |
| Year A | Spring (Sem 6) | SO3 | ISS 321 – Oral Defense |
| Year B | Fall (Sem 5) | SO5 | MGMT 322 – Peer Evaluation |
| Year B | Fall (Sem 5) | SO6 | CS 427 – DevOps Project |

## 5. Benchmarks and Decision Rules

Mastery Level Definition:

* Rubric Level ≥ 3 (Meets Expectations)
* Equivalent to ≥ 70% performance threshold

Program Benchmark:

* At least 70% of students must achieve mastery per SO.

Decision Rules:

* ≥ 70%: Outcome achieved.
* 60–69%: Monitor and minor corrective action.
* < 60%: Formal improvement plan required.

## 6. Continuous Improvement Workflow

Step 1 – Data Collection

* Instructors enter rubric data in Moodle.

Step 2 – Data Aggregation

* SO Coordinator aggregates results at program level.

Step 3 – Analysis

* Program Committee reviews results and identifies trends.

Step 4 – Action Planning

* Improvement actions are documented (curriculum, pedagogy, tools).

Step 5 – Implementation

* Changes implemented in following semester.

Step 6 – Reassessment

* SO reassessed in next cycle to evaluate effectiveness.

All evidence including raw data, aggregated reports, meeting minutes, and action plans are archived for ABET review.