# Test Plan for FIT Schedule Planner

## 1. Introduction

This test plan outlines the approach for verifying the functionality and performance of the FIT Schedule Planner, a tool designed to consolidate class registration, degree evaluation, and progress tracking into a single interface. The plan covers the core features and behaviors as described in the requirement document and will ensure the system operates as expected with typical and atypical inputs.

## 2. Test Cases

### 2.1 Feature: Class Scheduling

Verify that users can view, add, and manage classes in their schedule and handle time conflicts appropriately.

Test Case 1.1: Add New Class Successfully
Input: User selects a class (e.g., "Intro to Programming") not already in their schedule and clicks "Add"
Expected Output: A confirmation message, “Intro to Programming was successfully added.” and the schedule updates to show the added class

Test Case 1.2: No Class Selected
Input: User does not select any class and clicks "Add"
Expected Output: Error message “No class was selected, please try again.” The schedule should remain unchanged

Test Case 1.3: Class Already Added
Input: User selects a class that is already in their schedule and clicks "Add"
Expected Output: Message “Intro to Programming has already been added to your schedule.” The schedule remains unchanged
Edge Case: Duplicate class entries with different sections or times

Test Case 1.4: Time Conflict
Input: User selects a class that overlaps with an existing class in their schedule and clicks "Add"
Expected Output: Message “Intro to Programming was successfully added, but there is a time conflict.” The schedule updates to show the new class and highlights the time conflict

## 2.2 Feature: Prerequisite Checking

Ensure that prerequisite requirements are validated correctly and users are prompted accordingly.

Test Case 2.1: Prerequisites Met
Input: User tries to add a class with prerequisites that they have met
Expected Output: Message “Intro to Programming was successfully added.” The schedule updates to include the new class

Test Case 2.2: Prerequisites Not Met
Input: User tries to add a class with unmet prerequisites (e.g., "Data Structures")
Expected Output: A popup displays listing prerequisites and asks, “Would you still like to add Data Structures to your schedule?”
Edge Case: Validate the popup’s behavior under various screen sizes and resolutions

Test Case 2.3: User Selects “No”
Input: User receives the prerequisites popup and clicks “No.”
Expected Output: The popup disappears and the schedule remains unchanged

Test Case 2.4: User Selects “Yes”
Input: User receives the prerequisites popup and clicks “Yes”
Expected Output: Message “Data Structures was successfully added.” The schedule updates and the popup disappears

## 2.3 Feature: Class Filtering

Verify that class filtering functionality works as expected.

Test Case 3.1: No Filters Applied
Input: User selects no filters and clicks “Apply Filters”
Expected Output: Display all classes in alphabetical/chronological order

Test Case 3.2: Professor Filter Applied
Input: User selects a professor filter and clicks “Apply Filters”
Expected Output: Display all classes taught by the selected professor in alphabetical/chronological order

Test Case 3.3: Multiple Filters Applied
Input: User selects 3000+ course number, RateMyProfessor score, and clicks “Apply Filters”
Expected Output: Display classes numbered 3000 or more, sorted by decreasing RateMyProfessor score

Test Case 3.4: Conflicting Criteria
Input: User selects filters that yield no results (e.g., a specific professor teaching no classes with the selected subject)
Expected Output: Display the message “No Classes Available.”
Additional Tests:
Edge Case: Apply filters that might be invalid or incorrectly set.

### 2.4 Feature: Degree Evaluation and Progress Tracking

Ensure degree evaluation and progress tracking functions correctly and displays accurate information.

Test Case 4.1: Successful Degree Evaluation Upload
Input: User selects a program and successfully uploads their CAPP Degree Evaluation
Expected Output: A checklist is displayed with recommended credits and classes

Test Case 4.2: No Program Selected
Input: User does not select a program and uploads their CAPP Degree Evaluation
Expected Output: Error message “A program must be selected.”

Test Case 4.3: Failed Degree Evaluation Upload
Input: User selects a program but the CAPP Degree Evaluation upload fails
Expected Output: Error message “Something went wrong with your CAPP Degree Evaluation, please try again.”

Test Case 4.4: No Program and Failed Upload
Input: User does not select a program, and the CAPP Degree Evaluation upload fails
Expected Output: Error message “A program must be selected.”

## 3. Non-Functional Testing

Ensure the system responds promptly to user actions, efficiently handles data processing, user data is not stored after the session ends, and the user interface is intuitive and easy to navigate.

Test Cases:

- Measure response times for user actions, aiming for responses within a few seconds
- Confirm that closing the system clears all session data
- Assess ease of navigation through different features
- Verify the availability and clarity of contextual help throughout the interface