

Course Planner Test Plan

CSCE 361 Spring 2018

Group 1:

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1. Introduction

The purpose of this document is to outline the testing strategies for the Course Planner website. Testing requirements reference the specification requirements detailed in the SRS document for this website. This document also includes tests for features that were required during implementation but were not specifically covered in the SRS document. The first section details the major components that need to be tested and the subcomponents therein. The third section will detail the various test cases, the steps necessary to configure the system state prior, and the input and expected output for each. Test cases in this document are not written in order of dependency and therefore some test cases may rely on functionalities tested later on in the document.

2. Testing Requirements

2.1. Major Selection

2.1.1. SR 3.2.1.1

Available majors displayed in drop-down.

2.1.2. SR 3.2.1.1.3.1

After major selected, courses associated with designated major in appear in major container widget.

2.1.3. SR 3.2.1.1.3.3

Display a link navigating browser to degree requirements for selected major.

2.2. Minor Selection

2.2.1. SR 3.2.1.1

Available minors displayed in drop-down.

2.2.2. SR 3.2.1.1.3.2

After minor selected, courses associated with designated minor in appear in minor container widget.

2.2.3. SR 3.2.1.1.3.3

Display a link navigating browser to degree requirements for selected minor.

2.3. Course Search

2.3.1. SR 3.2.1.2.3.1

Search for course by title displays courses with title in search container widget.

2.3.2. SR 3.2.1.2.3.1

Search for course by subject prefix displays courses with title in search container widget.

2.3.3. SR 3.2.1.2.3.1

Search for course by subject prefix and course number displays courses with title in search container widget.

2.4. Planning Board

2.4.1. SR 3.2.1.3.3.3

User can add and remove additional years consisting of the three semesters.

2.4.2. SR 3.2.1.3.3.2

Courses will be dragged and dropped into semester container using mouse.

2.4.3. SR 3.2.1.3.3.2

Courses can also be removed and placed in the search course containers.

2.5. Course Information

2.5.1. SR 3.2.1.4.3.(1,2&3)

Course information including prerequisites, description, ACE satisfaction, title and credit hours will be displayed for any course that is selected.

2.6. ACE Fulfillment Tracking

2.6.1. SR 3.2.1.5.3.1

ACE tracker maintains awareness of ACE courses enlisted in the semesters container.

2.6.2. SR 3.2.1.5.3.2

ACE display widget shows which ACE requirements have and have not been met by current plan.

3. Test Cases

3.1. Major Selection

3.1.1. Test 1

Purpose:

Test that the Major drop-down control populates with available options.

Setup:

Navigate to the web page, interact with major drop-down.

Inputs and Expected Outputs:

Input Field	Input Value	Expected Output
Major drop-down	left click	Drop-down list of all UNL majors
Major drop-down	ENTER key	Drop-down list of all UNL majors

Testing requirements covered:

2.1.1

3.1.2. Test 2

Purpose:

Test that the left panel populates with all courses in each subject area associated with an arbitrary Major drop-down selection.

Setup:

Interact with major drop-down, select any option.

Inputs and Expected Outputs:

Input Field	Input Value	Expected Output
Major drop-down	"Agronomy"	AGRO, HORT, and TLMT courses populate major container
Major drop-down	"Architecture"	ARCH courses populate major container

Testing requirements covered:

2.1.2

3.2. Minor Selection

3.2.1. Test 1

Purpose:

Test that the Minor drop-down control populates with available options.

Setup:

Navigate to the web page, interact with minor drop-down.

Inputs and Expected Outputs:

Input Field	Input Value	Expected Output
Minor drop-down	left click	Drop-down list of all UNL minors (including minor-only programs)
Minor drop-down	ENTER key	Drop-down list of all UNL minors (including minor-only programs)

Testing requirements covered:

2.2.1

3.2.2. Test 2

Purpose:

Test that the left panel populates with all courses in each subject area associated with an arbitrary Minor drop-down selection. Test both minors associated with majors and standalone minors.

Setup:

Interact with minor drop-down, select any option.

Inputs and Expected Outputs:

Input Field	Input Value	Expected Output
Minor drop-down	"Czech Minor"	CZEC courses populate minor course container
Minor drop-down	"Accounting"	ACCT and BLAW courses populate minor course container

Testing requirements covered:

2.2.2

3.3. Course Search

3.3.1. Test 1

Purpose:

Test that course searches by title populate the search result panel.

Setup:

Navigate to course planner page and enter a course title in the search field.

Input and Expected Output:

Input Field	Input Value	Information Accepted	Expected Output
Search bar	"cow"	True	ASCI 455 appears in 'other' container
Search bar	"egypt"	True	CLAS 206, CLAS 300B, AHIS 206, and ANTH 206 appears in 'other' container

Testing requirements covered:

2.3.1

3.3.2. Test 2

Purpose:

Test that course searches by subject code (e.g. CSCE) populate the search result panel.

Setup:

Navigate to course planner page and enter a subject code in the search field.

Input and Expected Output:

Input Field	Input Value	Information Accepted	Expected Output
Search bar	"CSCE"	True	CSCE courses, no others
Search bar	"PHYS"	True	PHYS courses, no others

Testing requirements covered:

2.3.2

3.3.3. Test 3

Purpose:

Test that course searches by combined subject code and course number populate the search result panel.

Setup:

Navigate to course planner page and enter a course number in the search field.

Input and Expected Output:

Input Field	Input Value	Information Accepted	Expected Output
Search bar	"CSCE 155"	True	CSCE 155E, 155A, 155H, 155N, 155T
Search bar	"PHYS 451"	True	PHYS 451 only

Testing requirements covered:

2.3.3

3.4. Planning Board

3.4.1. Test 1

Purpose:

To verify that users can add additional semesters labeled by year and term.

Setup:

Navigate to course planner page and locate the add term and remove term.

Input and Expected Output:

Input Field	Input Value	Information Accepted	Expected Output
'Add Year' button widget	Left mouse click	True	New year appears labeled and with each semester

Testing Requirements Covered:

2.4.1

3.4.2. Test 2

Purpose:

To verify that users can remove additional semesters labeled by year and term when last year is empty.

Setup:

Navigate to course planner page and locate the add term and remove term.

Input and Expected Output:

Input Field	Input Value	Information Accepted	Expected Output
'Add Year' button widget	Left mouse click	True	Last year semester windows are removed

Testing requirements covered:

2.4.1

3.4.3. Test 3

Purpose:

To verify that users can remove years when the last year contains courses.

Setup:

Populate any term of a year with at least one class and locate the remove semester button.

Input and Expected Output:

Input Field	Input Value	Information Accepted	Expected Output
'Remove Year" button.	Left mouse click	False	No Output

Requirements Covered:

2.4.1

3.4.4. Test 4

Purpose:

Confirm that courses dragged and dropped by mouse left click from course panel to semester container will fill the container and courses dragged out of semester widget will be removed.

Setup:

Select a major to create course objects that can be dragged into the semester container widget.

Input and Expected Output:

Input Field	Input Value	Information Accepted	Expected Output
Semester Container	Course dragged from major course container to semester container	True	Course will be removed from major container and appear in semester container
Semester container	Course dragged out of semester container to major container	True	Course is removed from semester container and placed in major container

Requirements covered:

2.4.2, 2.4.3

3.5. Course Information**3.5.1. Test 1****Purpose:**

Confirm that upon requesting information from a course by mouse left click of information icon labeled 'i' on course objects, relevant course information will be displayed to the user

Setup:

Navigate to the web page, interact with major drop-down to populate courses, click on the 'info' portion of a course item

Inputs and Expected Outputs:

Input Field	Input Value	Expected Output
'Info' button on course object	Left Click	Detailed course information appears - including information about prerequisites and ACE fulfillment

Testing requirements covered:

2.5.1

3.6. ACE Fulfillment Tracking

3.6.1. Test 1

Purpose:

Confirm that, upon adding courses which satisfy ACE requirements, a tracker will represent the state of the plan's ACE fulfillment for courses that only satisfy 1 ACE requirement.

Setup:

Navigate to the web page, search for course 'ENGR 100' which satisfies only ACE 2. Observe that the ENGR 100 course object appears in the 'other' search results box and click the information button labeled 'i' to verify that it is the correct course and satisfies one and only 1 ACE requirement.

Inputs and Expected Outputs:

Input Field	Input Value	Information Accepted	Expected Output
Semester Container widget.	ENGR 100 course object	True	ACE display changes color on ACE number that has been satisfied by course

Testing requirements covered:

2.6.1, 2.6.2

3.6.2. Test 2

Purpose:

Confirm that, upon adding courses that can satisfy one of two ACE requirements, a dialog is shown that prompts users to select the ACE requirement that they would like the course counted towards.

Setup:

Navigate to the web page, search for 'ENGR 200' course which satisfies two ACE requirements 6 and 9. Observe that the course object appears in the 'other' course results box and click the information icon labeled 'i' to verify that the correct course is selected and satisfies the two mentioned ACE requirements.

Inputs and Expected Outputs:

Input Field	Input Value	Information Accepted	Expected Output
Semester container widget	ENGR 200 course object.	True	User prompted to enter the target ACE.

Testing requirements covered:

2.6.1, 2.6.2

3.6.3. Test 3

Purpose:

Confirm that, upon adding courses that can satisfy one of two ACE requirements, the dialog box that is shown accepts only the ACE requirements that the course satisfies which is the number of ace that it is and rejects any other input.

Setup:

Navigate to the web page, search for course 'ENGR 200'. This course meets only ACE requirements 6 and 9. By dropping the course object in the semester container, the user will be prompted

to enter in the ACE requirement they would like the course to count for. The user will then enter their input in the text box shown.

Inputs and Expected Outputs:

Input Field	Input Value	Information Accepted	Expected Output
ACE selection text box	'6'	True	ACE 6 icon switches from red to green.
ACE selection text box	'5'	False	User is notified of incorrect entry and asked to retype and submit.

Testing requirements covered:

2.6.1, 2.6.2

3.6.4. Test 4

Purpose:

Confirm that, upon removing courses which satisfy ACE requirements, the ACE fulfillment tracker shows that it is now required again.

Setup:

Navigate to the web page, search for the course 'ENGR 100', ensure that there are no other courses that satisfy ACE 2 located in the schedule already and drop the resulting course object into the semester container widget. Observe that the ACE 2 icon changes color from red to green. Do the same for 'ENGR 200' and select either ACE satisfied by the course.

Inputs and Expected Outputs:

Input Field	Input Value	Information Accepted	Expected Output
Semester Container widget	Remove 'ENGR 100' course object from semester container.	True	ACE 2 changes color from green to red.
Semester container widget	Remove 'ENGR 200' course object from semester container	True	Corresponding ACE changes from green to red.

Testing requirements covered:

2.6.1, 2.6.2

3.6.5. Test 5

Purpose:

Confirm that, when two courses satisfying the same ACE requirement are already placed in the semester containers, that by removing only one of the courses that the ACE tracker state does not change.

Setup:

Navigate to the web page, search for the course 'ENGR 100', then place the course object in a semester container. Then search for the course 'ALEC 102' and place the resulting course object in the semester container.

Inputs and Expected Outputs:

Input Field	Input Value	Information Accepted	Expected Output
Semester Container widget	Remove 'ENGR 100' course object from semester container widget	True	ACE 2 icon remains green.
Semester Container widget	Remove 'ENGR 100' and 'ALEC 102' course objects from semester container.	True	ACE 2 icon changes from green to red.

Testing requirements covered:

2.6.1, 2.6.2