

# Working Prototype BSOE Course Scheduler

**Product Name:** BSOE Course Scheduler WebApp

**Team Name:** TEAM TEAM

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## Introduction

This Web application provides students at UCSC an easier way to track and plan the courses they have taken or need to take for their graduation requirement in Computer Science. Many times, the student is left to figure out what classes they need to take, or what classes to choose for the next quarter in their major. With our web application, it provides the tools necessary to make this endeavor easier for the students. It provides a table for the first four years as well as an extra year for special case students in which they can select the classes they have taken for that quarter and year. It keeps track of the classes the student has selected and allows them to generate course recommendations based on the requirements listed.

## About This Release

This is the first release, 1.0, of BSOE Course Scheduler. All the features and functionalities are discussed in the next section.

## Features

- Users are able to sign up and log in, so that the data selected can be saved and is unique to them.
- Students are able to select, edit and delete classes when putting information into the table.
- Students can press the “About” button at the bottom of the page to read about the application and understand how to use it. Provides general information about our application to the user.
- Students are also able to press the “Generate Schedule” button located at the bottom of the page to generate a recommendation of 3 classes for the next quarter based on what classes they have already selected for previous quarters.
- Students are able to select the “CS Requirements” button located at the bottom of the page to redirect to a different page listing all the CS requirements needed to graduate. This allows them the ability to cross reference with the classes they’ve already selected so that they don’t have to take time searching for it on the UCSC web page.
- Added Administrator functionality that allows special users like counselors/advisors to add classes and requirements to the database. They can edit courses in the database

by naming the class, listing the units, as well as adding a description for the class. They can select what quarters the classes are offered as well as giving them requirement names so that they can list the prerequisites as well.

- Added feature to include units when selecting classes so students can see how many units it is. Made it so that it also shows the units in the table when selected.
- Added feature to include detailed description when selecting classes so students can understand what the class entails.
- Added feature to show whether the student has already selected the class or whether it is not offered for that quarter.
- Added feature on main page to keep track of running total of units from all classes selected.

## Limitations

The biggest limitation is that this web application does not support other majors other than computer science. This was because we took into account that we only wanted it to service computer science majors for the minimum viable product. We wanted a working solution for one major before considering adding other majors. The prototype has been built with other majors in mind, however, so they could be implemented given a bit more time.

As a team, we discussed whether or not to allow users(students) the ability to select a class if it was not offered in that quarter or if they have already taken the course. Because of the lack of knowledge of whether the classes offered way back when, we decided to allow the users to be able to select the class even if it states that it isn't offered that quarter. This was also based on the fact that we used the current year as the default for whether a course was offered in those quarters or not. For example, CSE 103 three years ago could have been offered in summer, but as of the current year it is not. As a team we decided to allow users the ability to select the course even if it states it wasn't offered in that quarter because we have no way of knowing if this was the case or not. Another concern that came up was the ability to allow users to select the class even if they had already taken it. We allowed it just because when registering at UCSC, a student is able to take the class again, regardless of whether they passed it or not.

Another limitation is that over the past few years, the names of certain courses have been changed at UCSC and we did not take this into account. So a student could be potentially confused when they don't see a course that they took because it changed names and they are unaware.

The admin functionality was preset in the code and database with 2 accounts and passwords. We do not have a feature where you can add admin accounts from the site, they are registered offline as is often done with admin accounts for security purposes. To access the admin accounts, read the user guide below.

We used py4web for the framework, however, it is still experimental and any limitations, known or unknown, are subsumed by our web application as well.

An important limitation to mention lies within the course suggestion feature. While it does what it was programmed to do, we didn't get to implement the "smart" algorithm which could in theory check the student's progress against the requirements and suggest the most important classes based on what was already taken. Instead it simply offers the next course in the database that hasn't been taken and will be available next season.