

# Team 9 Sprint 3 Planning Document

CS 307 Fall 2022

Purdue Course Finder

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## Sprint Overview

During this sprint, we want to add the finishing touches to our application. Since last sprint we were able to access information regarding courses, buildings, and more, we now want to add more interaction between these features. Having more options to view about classrooms and sections, as well as adding components to the map. We hope to have every key user story we initially planned at the start of this course crossed off and have the app behave in a manner we would professionally expect.

**Scrum Master:** Alex Kobus

**Meeting Plan:** 7 PM – Monday/Wednesday

### **Risks and Challenges:**

In this sprint, many UI changes will be implemented so that the user can perform many key operations. The main challenge will be creating good-looking designs that would be acceptable to a real user. Additionally, our schedule page will be a completely new component that will need many releases, so some time might have to be waited on for prior tasks to be completed before sequential tasks can be worked on.

## 2. Current Sprint Detail

### User story 1

As a User, I would like to be able to click a highlighted building on the map to see more information about it and the rooms in it.

#	Task Description	Estimated Time	Developer
1	Make the building highlights clickable	1 hour	Alex K
2	Make the sidebar update to view the rooms in a selected building	3 hours	Alex K
3	Make the building highlight color change when it has been selected from the map	1 hour	Alex K
4	Test that clicking the building highlights correctly selects the building and updates the sidebar	2 hours	Alex K

### Acceptance Criteria

- Given the building highlights are configured correctly, clicking on a building highlight will cause that building to be selected.
- Given that the sidebar and map components are correctly linked, selecting a building from the map will cause the sidebar to show the classrooms in that building.
- Given that the building highlights update correctly, selecting a building will cause the highlight to change color.

## User story 2

As a User, I would like to create a personal schedule for all my classes in a week.

#	Task Description	Estimated Time	Developer
1	Create layout for schedules page	5 hours	Peter
2	Setup base infrastructure that determines how and where items will be displayed.	3 hours	Peter
3	Fill schedule with user-favorited sections	1 hour	Peter
4	Test the personal schedule page	2 hours	Peter

### Acceptance Criteria

- Given the page layout is setup correctly, when viewing the schedules page, then it should have columns separated by the day of the week and rows separated by hour.
- Given the section meetings are displayed properly, when viewing the meeting items, then the meeting times displayed should match up to the item's column-row location in the schedule.
- Given the section meetings are displayed properly, when viewing the meeting items, then the different section types should be highlighted in different colors.

### User story 3

As a User, I would like to see the estimated time it takes to walk and bike between my classes.

#	Task Description	Estimated Time	Developer
1	Create an API Key for the Google Directions API	2 hours	Alex K
2	Generate building coordinates for start and end of routes	2 hours	Alex P
3	Button that shows a popup to choose 2 buildings	3 hours	Alex P
4	Calculate map routing between chosen buildings.	3 hours	Alex P
5	Display route on map	3 hours	Alex P
6	Test the routing functionality	2 hours	Alex P

### Acceptance Criteria

- Given the 'Route' button works correctly, when it is pressed, a pop-up appears allowing a user to choose 2 buildings.
- Given the map routing functionality works correctly, it generates a route when it is given a start point and end point.
- Given routes can be correctly generated, when a user confirms their start and end locations, a route appears on the map between the two selected buildings.

## User story 4

As a User, I would like to see a suggestion page to request features.

#	Task Description	Estimated Time	Developer
1	Create the layout for the suggestions page	2 hours	Alex K
2	Link the suggestions page to the backend to submit suggestions	2 hours	Alex K
3	Create suggestion endpoint in backend	1 hour	Tommy
4	Write suggestions to file in backend	2 hours	Tommy
5	Test the suggestions page	2 hours	Alex K

## Acceptance Criteria

- Given the suggestion page is implemented correctly, when viewing the page and interacting with it the suggestions should be able to be submitted to the backend.
- Given a suggestion endpoint has been implemented in the backend, when calling the suggestion endpoint, then the suggestion should be appended to a file of suggestions.
- Given the suggestions endpoint is called by an authenticated user, when calling the endpoint with a suggestion, then the suggestion should be added to the file with the user's email associated.
- Given the suggestions endpoint is called by an unauthenticated user, when calling the endpoint with a suggestion, then the suggestion should be added to the file with the user's unauthenticated status associated.

## User story 5

As a User, I would like to search for a specific course or course level under a subject.

#	Task Description	Estimated Time	Developer
1	Allow functionality to search for a specific course in a subject by number	2 hours	Peter
2	Allow functionality to search for all courses in a subject under a specific course level	1 hour	Peter
3	Test the new search functionality	2 hours	Peter

### Acceptance Criteria

- Given the functionality to search for a specific course is implemented correctly, when the user enters a course subject with a course number (ex: CS 307 or CS 30700), then the sidebar should display all courses in the entered subject that contain the number entered.
- Given the functionality to search for all courses in a subject under a specific course level is implemented correctly, when the user enters a course subject with only the level number (ex: CS 1 or CS 3), then all courses with that course level in that subject should be displayed.
- Given both new search features are implemented correctly, then when a user only searches for a course subject, then the existing functionality should still work correctly where all courses in the subject are displayed.

## User story 6

As a User, I would like the sidebar to show classrooms in a building after selecting that building.

#	Task Description	Estimated Time	Developer
1	Add classroom endpoint to the backend	5 hours	Tommy
2	Make building click query the server for classroom information	2 hours	Alex P
3	Display each classroom for a building	3 hours	Alex P

## Acceptance Criteria

- Given the classroom endpoint has been added to the backend, when calling the classroom endpoint, the backend will respond with a list of classrooms in the building sent in the request.
- Given building buttons work correctly, when pressed, it will change the filtering option to classrooms and query the server with a string of that building.
- Given each classroom is returned correctly, when re-rendered on the page, then all classrooms in a building appear in the sidebar.

## User story 7

As a User, I would like to select a classroom from the sidebar to see more information about it and the classes in it.

#	Task Description	Estimated Time	Developer
1	Add room schedule endpoint to backend	5 hours	Tommy
2	Query backend to gather all sections.	3 hours	Alex P
3	Create daily lists depicting room use by section times.	3 hours	Alex P
4	Create a calendar-like pane to show daily lists.	4 hours	Alex P
5	Show professor and time data for each section.	2 hours	Alex P
6	Test the classroom schedule page	2 hours	Alex P

## Acceptance Criteria

- Given the room schedule endpoint has been added, when calling the room schedule endpoint, then the backend will respond with a list of sections which contain times.
- Given sections are filtered correctly, when they are checked for time and day, they will be placed in the correct place on the schedule page.
- Given the schedule page has been linked to the sidebar room list, when accessing the schedule page through the room list, then the selected room in the schedule page will be the one the schedule page was accessed through.
- Given the schedule page has been created, when accessing the schedule page, then the meetings for the selected room will be shown on a grid.



## User story 8

As a User, I would like to filter the map and sidebar to only display my favorites.

#	Task Description	Estimated Time	Developer
1	Add ability to filter buildings, courses, classrooms, or section by the user's favorites on the sidebar	2 hours	Peter
2	Link the sidebar favorites filtering to the map	3 hours	Peter
3	Test the favorites filters	2 hours	Peter

## Acceptance Criteria

- Given that items in the sidebar can be filtered by favorites, when the user selects to only view favorited items in the sidebar, the results of sidebar filters are further filtered to only show the user's favorited items
- Given that the map and sidebar are correctly linked, filtering buildings in the sidebar should cause the map to only display highlights for the filtered list of buildings shown in the sidebar
- Given that the favorite filter is implemented correctly, when the user unchecks the favorite filter option, then non-favorite items should still be displayed.

## User story 9

As a User I would like to filter the buildings that I see highlighted on the map by building name, class location and section location.

#	Task Description	Estimated Time	Developer
1	Link the sidebar filtering for courses, sections, and buildings to the map	5 hours	Alex K
2	When buildings are filtered from the sidebar, only show the building highlights for the results from that filter	2 hours	Alex K
3	When a course is selected from the sidebar, only highlight buildings that sections of that class occur in.	2 hours	Alex K
4	When a section is selected from the sidebar, change the color of the building highlight for the building that section occurs in	2 hours	Alex K
5	Test that the sidebar filtering correctly displays only relevant buildings on the map	4 hours	Alex K

## Acceptance Criteria

- Given the map and sidebar are correctly linked, selecting a course from the sidebar should only cause the map to only display highlights for buildings that sections of that course occur in.
- Given that the map and sidebar are correctly linked, selecting a section from the sidebar should change the highlight color for the building that section occurs in
- Given that the map and sidebar are correctly linked, filtering buildings in the sidebar should cause the map to only display highlights for the filtered list of buildings shown in the sidebar

## User story 10

As a User, I would like to see a schedule page that shows all sections of a selected course each week.

#	Task Description	Estimated Time	Developer
1	Link sidebar course list to schedules page	2 hours	Peter
2	Display section schedules for selected course on the schedule page	2 hours	Peter
3	When clicked, a popup with more detailed information about a course and section should pop out.	3 hours	Peter
4	Test the course schedule page	2 hours	Peter

### Acceptance Criteria

- Given the schedule page has been linked to the sidebar course list, when accessing the schedule page through the course list, the course schedule shown in the schedule page will be for the course selected in the sidebar.
- Given the schedule page has been created correctly, when accessing the schedule page, then all the sections for the selected course will be shown on a grid.
- Given the clicking functionality is implemented correctly, when clicking on a section meeting item, then a pop-out should appear with more details about the section and course.

## User story 11

As a professor, I would like to see statistics that show how often a classroom or building is used.  
(if time allows)

#	Task Description	Estimated Time	Developer
1	Create the layout for the statistics page	4 hours	Tommy
2	Add backend endpoint for statistics	5 hours	Tommy
3	Test the Statistics Page	3 hours	Tommy
4	Update tutorial page	3 hours	Tommy
5	Add floating button to home page to access statistics page and tutorial page	2 hours	Tommy

## Acceptance Criteria

- Given the statistics page has been created correctly, when accessing the statistics page, then all of the relevant statistics for different buildings and classrooms should be accessible.
- Given the statistics endpoint has been created correctly, when accessing the endpoint, relevant statistics for buildings and their classrooms should be returned.
- Given the tutorial page is updated appropriately, when viewing the tutorial page, relevant instructional information about each page including the statistics page should be visible.
- Given the tutorial page button works correctly, when it is pressed, the user is redirected to the tutorial page.

### 3. Backlog

#### 1. Usage

As a User,

- ~~a. I would like to see a tutorial that explains how to use the software.~~
- b. I would like to see an option to select a specific semester to view the courses offered that semester. (if time allows)

#### 2. Map

As a User,

- ~~c. I would like to see a birds-eye view map of Purdue.~~
- ~~d. I would like to search the map for a building's location.~~
- ~~e. I would like to see a sidebar that shows a list of all classes, sections, and buildings.~~
- ~~f. I would like to see campus buildings highlighted on the map.~~
- ~~g. I would like to see campus buildings labeled on the map.~~
- ~~h. I would like to be able to click a highlighted building on the map to see more information about it, and the rooms in it.~~
- ~~i. I would like to filter the buildings that I see highlighted on the map by name, class location, and section location.~~

#### 3. Account

As a User,

- ~~j. I would like a dedicated page for signing up.~~
- ~~k. I would like a dedicated page for logging in.~~
- ~~l. I would like to delete an account.~~
- ~~m. I would like to change my account email and password.~~
- ~~n. I would like to only access pages that require accounts when logged in~~

#### 4. General Filter

As a Student,

- ~~o. I would like to filter the sidebar to show only relevant buildings, classrooms, courses, and sections.~~

~~p. I would like to filter the map to show only relevant buildings, classrooms, courses, and sections.~~

## 5. Favorites

As a User,

- ~~q. I would like to favorite buildings, classrooms, classes, and sections that are saved across sessions~~
- ~~r. I would like to view a list of my favorite buildings, classrooms, classes, and sections~~
- ~~s. I would like to filter the map and sidebar to only display my favorites.~~

## 6. Personal Schedule

As a Student,

- ~~t. I would like to create a personal schedule for all my classes in a week.~~
- ~~u. I would like to see the estimated time it takes to walk between my classes.~~
- ~~v. I would like to see the estimated time it takes to bike between my classes.~~

## 7. Courses and Classrooms

As a User,

- ~~w. I would like to see information about current Purdue courses~~
- ~~x. I would like to see section times, locations, and instructors for courses.~~
- ~~y. I would like the sidebar to show classrooms in a building after selecting that building.~~
- ~~z. I would like to select a classroom from the sidebar to see more information about it and the classes in it.~~

As a Student,

- ~~aa. I would like to see a schedule page that shows all class meetings in a selected room each week.~~
- ~~bb. I would like to see a schedule page that shows all meetings of a selected class in each week.~~

As a Professor,

~~cc. I would like to see statistics that show how often a classroom or building is used.  
(if time allows)~~

## 8. Miscellaneous

As a User,

~~dd. I would like to see a suggestion page to request features.~~

## 9. Developer

As a Developer,

~~ee. I would like to store user account information in a SQL database.~~

~~ff. I would like to save encrypted account login information in a database.~~

~~gg. I would like to save backend logs of what pages are accessed most frequently.~~

~~hh. I would like the application to be hosted on AWS.~~

## Non-Functional Requirements

1. As a User, I would like the application to be easy to understand and intuitive.
2. As a User, I would like the application to be fast.
3. As a User, I would like the application to be secure.
4. As a Developer, I would like to optimize the web application, so that response times are lower than 1 second. (if time allows)
5. As a Developer, I would like to optimize the web application, so that page loading times are lower than 500 ms. (if time allows)
6. As a Developer, I would like to create the application in a way that allows it to be adapted to include other universities. (if time allows)
7. As a Developer, I would like to have developer roles on accounts for testing and any account resolutions (like resetting passwords). (if time allows)