

# PROJECT REQUIREMENTS

## Project Name

Visual Schedule Builder Plus (VSB\_Plus)

## Functional Requirements

### 1. Home Page:

- Students can choice to sign in to their account with
  - ✧ student name
  - ✧ student ID
- According to their name and SID to determine what faculty they are register in

### 2. Academic Page (3 views):

- Default linear term registration views
  - ✧ Plan out the courses list that the students require to take in different semester/term
  - ✧ Recommend the courses according to the faculty requirements
  - ✧ Visualize the different limitations of each course (the prerequisites, when it offers, or the credit hours requires)
  - ✧ Display the course that were completed
- Kanban-style
  - ✧ Separating three parts to show the courses (Already Done, Registered Now, Future will Take)
- Calendar view
  - ✧ Terms as the column, 1<sup>st</sup> row as course supposed to take, 2<sup>nd</sup> row as courses chosen to register.
  - ✧ Using the arrowed line to show relationship of courses
  - ✧ Able to drag and put the course in Taking selection
  - ✧ For the elective course, fetch the available elective courses from a file, and put the courses in the corresponding term.

### 3. Semester Schedule Page:

- Courses list that are available for the students to take in different semester/term
- Course details(will be link to Course Details Page)
- Building up of time schedule as the students have select a course
- Search bar to search for other course

### 4. Courses List Page:

- List out all the courses that are offers in U of R along with the filter functionality.
  - ✧ Selecting different faculty buttons to show the relative faculty courses on the list.
  - ✧ Able to filter the different year courses and show the relative selected year courses on the list.
  - ✧ If there is no courses that meeting the filter condition, showing up the word "No course are found!" to remind the user.
  - ✧ One button that allow user to change the course arrangement.
    - One course arrangement is one class per row with course details (short name, credit and full name and description)
    - One course arrangement is two class per row with less course details (short name and full name)
- User can search the specific course with short name of course.
  - ✧ Allow user to input short name of course, according to the first few characters to prompt course short name.
  - ✧ Allow user to select the input course and show up the course details.
  - ✧ elective classes

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- Show up details for the selected course.
    - ✧ Show short name, full course name, prerequisites and description of course.
    - ✧ Show up the chart that about course section information.

## Technical/Performance Requirements

Technical requirements:

1. Run the back-end server
2. Using JSON to get the course information database
3. Create machine learning model to recommend the course

Performance requirements:

1. Show the course schedule for several semesters.
  2. Show up the course details in multiple way
  3. Visualize the limitation of course
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