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## Objective

The objection of this project is to design a graduate course scheduler that can be used to determine valid combinations of courses a student may enroll in the next semester.

## Summary

This course scheduler shall do the following:

* Place eligible courses the student has chosen to enroll in on a student’s schedule planner
* Determine whether a student is eligible to take a course based on the student meeting the course’s prerequisites
* Ensure there are no scheduling conflicts with courses that are already entered into the schedule planner
  + If there are conflicts, provide an interface for resolving such conflicts
* Warn student if the number of credits enrolled in exceeds a set number
* Show student credits remaining to fulfill their graduation requirements for their course of study.

## Classes

1. Courses (including any prerequisites and class size limitations)
2. Students (including class history)
3. Instructors
4. Schedule
5. Degree requirements

## Use cases

* Add course
  + Resolve schedule conflicts
* Drop course
  + Update course availability if class was full
* Verify eligibility for course
  + Verify against academic history
* Show remaining credits for graduation requirements
  + Determine if classes enrolling in match the remaining requirements

## Database

The database will require the following tables:

* Student information
* Student academic history
* Department course schedule listing (with prerequisites)
* Student’s proposed schedule

## Other Features

* If time, addition of a graduate project interface for students to find/match with instructors/professors. The interface would show allow students to search for by either professors/instructors or a specific research area that interests them and would display the professor/instructors availability to take on new students.
  + An additional class for Instructor would possibly be required
  + This may also require additional database tables for Instructor information as well as Research areas and availability information