**Tentative Project Title**

Establishing a College Timetable

**Team Member Names**

• Evelyn Yeh (eyeh6@wisc.edu)

• Yi-Chun Chen (chen2524@wisc.edu)

• Student 3 (email address)

**Brief Description of the Problem**

Mr. Miller is responsible for creating a weekly timetable for two final-year classes in a college. The goal is to schedule all necessary lessons for the students and teachers while adhering to certain constraints, such as specific time slots and lesson durations. Each lesson is two hours long, and the timetable must be organized to prevent conflicts and ensure efficient use of resources.

Data for this project will be synthetically generated to represent the teachers’ requirements and available time slots. The data will include the number of lessons each teacher needs to conduct and the subjects they teach. We will ensure the dataset is comprehensive enough to provide a realistic challenge without being overly complex.

**Type of Model**

We will use an Integer Programming (IP) model for this project. The approximate count of the number of variables and constraints in the model is as follows:

* Variables: Approximately 100-200
* Constraints: Approximately 10-50

This estimation may change as we refine our approach and gain a better understanding of the problem's intricacies.

This model will help us efficiently allocate time slots and resources to minimize conflicts and maximize the effective use of teachers' and students' time.