Executive Summary

The MyCourses is an autonomous scheduling system for universities to streamline and simplify the course scheduling system. The MyCourses system is designed to schedule an entire quarter (or semesters) worth of classes with a variety of constraints such as class size, class location, professor preferences, professor availability, etc.

Inspiration for this project came primarily from the various complaints students and professors alike about the current scheduling system at UC Santa Cruz. Many of the complaints were the user interface was confusing and there were too many steps involved when signing up for classes and a lot of the classes most students needed were not offered or the class already filled up. Other complaints were that professors did not have a choice of when or where or what classes they wanted to teach and most of everything is completely out of their hands.

The system itself will require the following tasks: a program administrator to populate the database with a list of courses and locations available in the entire university. Program managers that manage each subject department and modifying the available classes. The lecturers provide constraints to their teaching schedule; such as, their preference for class location, class topics, and times. Once the courses have been decided and the constraints in place, the program administrator runs the MyCourses engine to populate and schedule all the courses. The MyCourses engine will be the core that will make MyCourses a unique and powerful tool for universities and employers to simplify and easily manage the process. After running the MyCourses engine, students will be able to sign up for courses and manage their courses.

With this system, we hope to lower administrative costs, provide students with more classes to take and improve the ease of use of signing up for classes, and finally give the professors the ability to make their own schedule. Although we have hopes that this system can achieve, there are huge obstacles with this project. One of the major problems is the MyCourses engine is a NP complete problem and is can never be technically “optimized”. The MyCourses Team is looking at a variety of computer algorithms that can solve our algorithmic problem to come up with the best possible solution. This solution is not only applicable in universities and schools, but can be used by employers to figure out schedules for employees, thus reducing the overall administrative cost of scheduling with employees.

If this system is a success, we hope to allow better functionality and integration with multiple systems like email, mobile devices, and other technologies. The MyCourses system could potentially be a powerful system that can greatly solve some of the budget difficulties at universities and provide greater value to students and professors.