**Integration and Configuration:**

**Requirement Specification:**

* System will allow all students, faculty, and administrators to add courses, search for courses, print schedules, etc...
  + Display the student’s schedules to Admin and Faculty
  + Display to Faculty their class list of students
  + Display all courses offered
* Faculty and Admins can view and update course information
  + Admins can add and remove courses offered
  + Admins can add and remove CRNs
  + Faculty/Admin can access the database of student schedules
  + Admin can view rosters
* Admin can change Student enrollment status
  + Admin can add additional students
  + Admin can remove students
* The system will include multiple semesters
* Display courses that are offered for each semester

**Component Analysis:**

For course registration and scheduling, we can utilize the open-source university time tabling system called Unitime. To fully utilize this open-source repository, we will need to fully analyze the documentation and understand the functionality. According to the website’s homepage,

“UniTime is a comprehensive educational scheduling system that supports developing course and exam timetables, managing changes to these timetables, sharing rooms with other events, and scheduling students to individual classes. It is a distributed system that allows multiple university and departmental schedule managers to coordinate efforts to build and modify a schedule that meets their diverse organizational needs while allowing for minimization of student course conflicts. It can be used alone to create and maintain a school's schedule of classes and/or exams, or interfaced with an existing student information system.

The system was originally developed as a collaborative effort by faculty, students, and staff at universities in North America and Europe. The software is distributed free under an open source license in hopes that other colleges and universities can benefit their students through better scheduling or wish to contribute to ongoing research in this area. The UniTime project has become a sponsored project of the Apereo Foundation in March 2015.”

Link to Github repository: <https://github.com/UniTime/unitime/releases/tag/v4.7.71>

Website: <https://www.unitime.org/unitime_intro.php>

Stage estimated time: ~1.5 weeks

**Requirement Modification:**

The Unitime system meets the system level requirements for Leopardweb. Unitime provides both the database and GUI for an efficient scheduling system. The only revisions that need to be done are GUI related to match the visualization of Leopardweb. We can start by condensing the amount of information displayed on the schedule. As well as removing any unnecessary constraints or events that are included in Unitime.

**System Design (with reuse):** Use the components, modify/add as needed

Stage estimated time: ~3 weeks

**Development and Integration with Leopardweb Website:**

Stage estimated time: ~5 weeks

**System Validation:**

Perform system-level testing acting as the user of the Leopardweb website, testing every functionality according to the requirement specification.

Stage estimated time: ~1-2 weeks