**Requirements Definition: (3-4 days)**

Create a system similar to LeopardWeb that allows students and professors to view courses, schedule, search courses, add/drop courses, etc. The system must include:

* Database of users – the system should work for 100 students, 10 instructors, and 1 admin
* Database of courses – Includes information about courses including name, times, instructor, and CRN code
* The three types of users – Students, Instructors, and Admins
  + Student can see register, search available courses, and see their own schedule
  + Instructors can see available courses and their own course roster
  + Admins – have full access – can see courses, edit courses, edit users, edit schedules, etc…
* Include multiple semesters, schedule print-outs, and scheduling preferences
* All components must be tested thoroughly

**System and Software Design: (3-4 weeks)**

Create a base class for the system: User. Student, Instructor, and Admin will all be derived classes of the base class. Include components in each derived class specific to the class.

* Students – have a major, possibly a minor, etc. Include functions that allow them to search/add/drop courses, and print their schedule.
* Instructors – have a department, etc. Include functions that allow them to print their schedule and class list, and search for courses.
* Admins – may have to enter a password to edit all information. Include functions that allow them to add/remove courses, students, and users. As well as search and print rosters and courses.

The system will use inheritance to determine the functions available to the user, hence the base/derived class(s). In order to efficiently write the code, write the pseudocode or flow chart for each component of the system and its functions necessary.

**Implementation and Unit Testing: (1-2 weeks)**

Write the code and test the components thoroughly.

**Integration and System Testing: (1-2 weeks)**

Put all files, and documents together to form the entire System. Add database of courses, students, instructors, admins, etc. Test the system.

**Operation and Maintenance: (1-2 weeks)**

Install the system, and fix any last bugs and updates. Allow for use.