*Class Responsibility:*

**Class Course:**

Carries the information to create a course object. Course object contains a course string, department string, id integer and a credit integer.

Courses are the class offered at the university.

**Class CourseCatalog:**

Contains a list of courses. CourseCatalog will keep track of all registered courses available at the university.

These 3 functions are used to aggregate the course catalog list.

**Class Instructor:**

Instructors are supposed to have a composition of Registered Users as they should have all the parameters to enable them to log in. However for demonstration purposes, instructors will represent only a shell and have name and user id. This will allow us to create and assign instructors to sections without having to over complicate the prototype.

**Class RegisteredUser:**

Carries the information to create a RegisteredUser object: name String, email String, password String, and id String.

**Class Restriction:**

Restrictions will have two int that represents the restriction id and the id of the user who has the restriction. Restrictions will have a name title as well as a description.

Restrictions prevent students from signing up for sections.

**Class RestrictionList:**

Is composed of a collection of restrictions and an int that represent the user id whom the list belongs to.

Class Room:

Represent the building that a section is taking place. For the purposes of this demo, the object Room has been stripped of many of its intended feature and only includes and int representing its id and string representing the building name.

**Section:**

Section are the objects used for student course sign ups. They contain a construct of course which allows it to pull out course information, as well as a construct of instructor, room, and a collection of registered users. The collection of registered users is used to determine who is in the course. (though the functionality was not made present in the prototype)

**Class Student**

Has a composition of Registered user to build more information off from it.

Has a list of Restrictions and has a courseCatalog. If the restriction list length is greater than 0 then the student cannot register for courses. There will be a composition of a StudentCourse so the student can record a list of courses he/she has taken or is currently taken. (This is not currently implemented).

**Class StudentCourse**

Student course further extends the section by providing parameters for grade, current activity, and student id. After signing up for a section, the information is used to create a studentcourse where it stores information of enrollment for the student class.

**Class StudentCourseList:**

A collection of studentcourses belonging to the same user.

**Class UserSession:**

Contains a Student object as well as current login status. The session will remain as long as the login status is set to true. When logged out, the session will be set to false. The student object will allow the extraction of the student ID, which will enable the system to search for the student’s information and properly display the information.