**MIS 6308 – Assignment 2.3: Sequence, Communication and State Machine Diagrams (30 points)**

***Assignment:*** Consider the following scenario then complete the exercises below:

You have been hired to upgrade an online university registration system (URS). The system should enable the staff of each academic department to examine the courses offered by their department, add and remove courses, and change the information about them (e.g., the maximum number of students permitted). It should permit students to examine currently available courses, add and drop courses to and from their schedules, and examine the courses for which they are enrolled. Department staff should be able to print a variety of reports about the courses and the students enrolled in them. The system should ensure that no student takes too many courses and that students who have any unpaid fees are not permitted to register (assume that fees data are maintained by the university’s financial office, which the registration system accesses but does not change)

***Exercises:***

1. Using the ***Use Case diagram*** you created for the URS scenario, create a S***equence diagram*** for the “Enroll in Course” use case scenario and the “Print Student Enrollment Report” use case scenario. (10 points)
2. Create a ***Communication diagram*** for the staff to “Add Course” use case scenario. (10 points). Please note that this is “Not a student” adding a course, but a staff adding a course to the catalog. The “Add Course” use case scenario has the following Normal Flow of events:
   1. Staff checks Room Schedule availability.
   2. Staff checks instructor availability.
   3. Staff adds course using date, time, and instructor information.

1. Create a ***State Machine Diagram***for the “Course” class. A course can have the following states – open, full, cancelled, closed. Open courses are available for students to register. Courses become full when the enrollment cap has been met. Courses are cancelled before the start of the term if enrollment is less than 10. A course becomes closed once the enrollment date has past. (10 points)

Submit your completed assignment as an attachment (.doc, .docx, or .pdf) via eLearning.