COP4710/5716 **Data Modeling** **Fall 2014**

Team Project: Course Scheduling System

Your data modeling team has been assigned to design a course scheduling system for students and faculty members to help with decisions about courses that need to be taken or offered for a particular degree in the School of Computing (SoC) at the University of North Florida (UNF). The designed system should support a java program with a back-end database for information retrieval and analysis of data for decision making about the course schedule. Your system will be used as a starting point in course scheduling for students as well as the SoC faculty.

The course scheduling system should have various menus for input and output displays that will be used by different types of users. The prototype system should support course scheduling for the undergraduate Computer Science (CS), Information Systems/Science (IS) or Information Technology (IT) degree programs. At a minimum, the system will include a menu for a 1- Student menu option, 2- Faculty menu option , 3- Reporting menu option and **4- Administrative menu option**. The plans and ideas for the design need to be discussed between the team members and the instructor/manager/stakeholder.

1. The Student menu option should provide a menu to capture a student's information including N-number, name, undergraduate degree program, semester (fall, spring, summer) with year, courses (required or elective) needed by the student and offered by SoC, the preferred days of the week, the preferred times during the day, and any other information which could help the student in his/her course scheduling.

Currently, the SoC web site for "School of Computing Course Scheduling Tools & Resources" at
http://www.unf.edu/ccec/computing/Academics/advising/Course_Scheduling_Tools.aspx
provides the following data but not a course scheduling selection.

- Schedule for specific term course listings
- School of Computing course sequence and their relationships in different undergraduate degrees
- The UNF Catalog
- School of Computing undergraduate academic road map for a four year plan

2. For the Faculty menu option, a user (faculty, instructor, director) should be able to **logon to the system** and fill in his/her own **Course Preference Form** (form provided as a separate file). The preference form can be completed using the **Course Offering Pattern** that is designed for odd and even years (form provided as a separate file). Summer courses are offered based on student demand and faculty available to teach during the summer. When **logged into his/her account**, a user (faculty, instructor, director) may review his/her past forms from the database, edit the current form, or request a printout of forms for courses. A faculty will only see his/her own information unless provided with a special privilege to see additional information, such as student requested courses.

3. The Reporting menu option should provide a special feature for information retrieval to create reports. The reports should include independent listings of information based on the following titles.

a. Course Listing - The listing includes course information, information for students who request to take course, student days and times, information for faculty who request to teach course, faculty days and times, any additional information as decided on by the team.

b. Day Listing - The same as course listing except the listing is based on the day and includes the following order of information: day, the course information, times with related student information, and times with related faculty information.

c. Time Listing - The same as course listing except the listing is based on the time and includes the following order of information: time, the course information, days with related student information, and days with related faculty information.

d. Student Listing - The listing includes the information entered by the students on the form from area 1 including all student courses and matches the list with any courses, days, times in the faculty information.

e. Faculty Listing - The listing includes the information entered by the faculty on the form from area 3 including all student courses and matches the list with any courses, days, times in the student information.

f. Any other reports that the team elects to discuss with instructor/manager/stakeholder

4. The **Administrative menu option** should provide system administration level capability for creating different user accounts, such as administrator, faculty, instructor, director, secretary, and etc. The administrator could create general reports as described in option 3.

The team needs to study available documentation (faculty preference form, course offerings, project requirements) on Blackboard and related SoC documentation regarding the courses and patterns. Based on the findings, the team should develop appropriate questions and then meet with instructor with the majority of team members present to discuss the specific requirements and scope necessary for the design and development of the course scheduling system. The instructor will be available for meetings starting on November 5 before or after the class, or other times by scheduled appointment.

The time line for deliverables in Phases 1 and 2 are listed below. More information on how to submit the contents for each phase will be discussed in class and posted on Blackboard.

Deliverables

Phase 1 - Due 11/17/14 (Early submissions are welcomed.)
Project Scope and Requirement Documentation
ERwin Entity Relationships Diagram

Phase 2 - Due 12/03/14
Software Prototype
All Documentation
Final Presentation