Senior Capstone Project COSC 4354
Department of Computing Sciences
Fall 2019

A. COURSE INFORMATION
   Course number/section: COSC-4354.001
   Class meeting time: TR 03:30 - 04:45 PM
   Class location: OCNR-145
   Course Website: Blackboard

B. INSTRUCTOR INFORMATION
   Instructor: Dr. Mohammed Yassine Belkhouche
   Office location: CI 305
   Office hours: TR 01:30 - 03:00 PM
                MW 02:00 - 03:00 PM
   Telephone: 361-825-3492
   e-mail: mohammed dot belkhouche at tamucc dot edu
   Appointments: By e-mail

C. COURSE DESCRIPTION
   Teamwork and formal methods of systems analysis and design are emphasized. Students will
develop a major software system for a real-life problem.

D. PREREQUISITES AND COREQUISITES
   Prerequisites
   COSC 3370 and COSC 3336
   Corequisites
   None

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES
   Recommended Textbook(s)

   Supplies
   Some way to archive your documents (Flash drive, Dropbox/Cloud, etc)

F. STUDENT LEARNING OUTCOMES AND ASSESSMENT
   Assessment is a process used by instructors to help improve learning. Assessment is essential
   for effective learning because it provides feedback to both students and instructors. A critical
   step in this process is making clear the course’s student learning outcomes that describe what
   students are expected to learn to be successful in the course. The student learning outcomes
for this course are listed below. By collecting data and sharing it with students on how well they are accomplishing these learning outcomes students can more efficiently and effectively focus their learning efforts. This information can also help instructors identify challenging areas for students and adjust their teaching approach to facilitate learning.

- Develop a large software project for a community, university, or private enterprise
- Understand the significance of teamwork in building software systems
- Apply effective project management techniques
- Utilize a variety of techniques to capture and understand user requirements
- Utilize design techniques appropriate to project assigned
- Develop and implement strategic test plans
- Develop user and system documentation
- Conduct formal project presentations with users and peers

By the end of this course, students should be able to:

1. Achieve team-assigned tasks
2. Listen and communicate in team settings
3. Meet deadlines and team duties
4. Can recognize and describe social issues related to computing
5. Demonstrate effective oral communication skills with a range of audiences
6. Demonstrate effective written communication skills with a range of audiences

G. INSTRUCTIONAL METHODS AND ACTIVITIES

This class will mostly employ interactive and independent learning strategies. Students will be engaged in frequent class discussions led by the instructor. Independent study will include researching state-of-the-art topics in computer science. The student is also expected to do outside work on assignments and reading.

H. MAJOR COURSE REQUIREMENTS AND GRADING

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Presentations</td>
<td>10</td>
</tr>
<tr>
<td>Activity Reports and Development Deliverables</td>
<td>25</td>
</tr>
<tr>
<td>Project Documentation</td>
<td>25</td>
</tr>
<tr>
<td>Final Product Delivery and Presentations</td>
<td>25</td>
</tr>
<tr>
<td>Poster presentation</td>
<td>5</td>
</tr>
<tr>
<td>Individual Research Paper</td>
<td>10</td>
</tr>
</tbody>
</table>

Grade Scale: A (90-100%)  B (80-89%)  C (70-79%)  D (60-69%)  F (<60%)
Poster presentation: The date/time of the presentation will be provided.

I. COURSE CONTENT/SCHEDULE

<table>
<thead>
<tr>
<th>DATE</th>
<th>TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Introduction and Overview. Discussion about possible project needs and expected outcomes.</td>
</tr>
<tr>
<td>Week 2</td>
<td>Short Class presentations Outlines of the project and deliverables</td>
</tr>
<tr>
<td>Week 3</td>
<td>Short Class presentations Outlines of the project and deliverables</td>
</tr>
<tr>
<td>Week 4</td>
<td>Projects and Teams Discussion Short Class presentations Developed analysis and design of the software systems</td>
</tr>
<tr>
<td>Week 5</td>
<td>Short Class presentations Developed analysis and design of the software systems</td>
</tr>
<tr>
<td>Week 6</td>
<td>Team Meeting Discussing progress and problems Initial project documentations</td>
</tr>
<tr>
<td>Week 7</td>
<td>Reporting the results of client feedback so far.</td>
</tr>
<tr>
<td>Week 8</td>
<td>Team Meeting &amp; Individual Status Reports</td>
</tr>
<tr>
<td>Week 9</td>
<td>Spring Break – No classes</td>
</tr>
<tr>
<td>Week 10</td>
<td>Requirements/Analysis Presentations &amp; Draft Documents</td>
</tr>
<tr>
<td>Week 11</td>
<td>Detailed Design Presentations, Preliminary documentation and Individual Status Reports</td>
</tr>
<tr>
<td>Week 12</td>
<td>Detailed Design Presentations, Preliminary documentation and Individual Status Reports</td>
</tr>
<tr>
<td>Week 13</td>
<td>Discussion on team’s adopted testing strategies and testing data</td>
</tr>
<tr>
<td>Week 14</td>
<td>Reliability and Usability Evaluations</td>
</tr>
<tr>
<td>Week 15</td>
<td>Final Product Presentations Acceptance Testing and Delivery to Client</td>
</tr>
</tbody>
</table>

Thursday, December 12, 2019, 01:45 PM - 4:15 PM Final project presentation.

Note: Changes in this course schedule may be necessary and will be announced to the class by the Instructor. The assignments and exams shown are directly related to the Student Learning Outcomes described in Section F.

A. COURSE POLICIES

Attendance/Tardiness:
You must attend all classes and labs. While in class or lab attendance will not directly affect the grade, you are responsible for any materials covered or handed out or announcements made for the tests and assignments in your absence. Records of your attendance will be maintained and reported to the university. Students found missing
classes without the instructor's permission will be automatically withdrawn from the course.

**Late Work and Make-up Exams:**
There is a penalty for late submissions. Late assignments will be counted 20% off for each day after the due time. 100% penalty (i.e. no credit) if submitted after 5 days. If you have not completed your assignment by the due date, you should submit the work you have done for partial credit. No work will be accepted once the graded work has been returned or the solution has been disclosed to the class, except for unusual circumstances which the instructor feels reasonable. Note that any kind of hardware or software failure or machine unavailability in the lab does not merit an extension on the assignment.

**Extra Credit**
If any extra-credit work is assigned, it will be discussed in class.

**Cell Phone Use:**
Please refrain from using electronic devices during class, as it is distracting to not only you, but also to your instructor and peers. Silence your phones and put them away so you are not tempted to stray off task.

**Laptop Use:**
Laptops, Tablets cannot be used in the class.

**Food in Class:**
No food in the class or labs.

**Missed Exam:**
In the event, if you cannot attend the class to take the exam due to some emergency or some unavoidable situation (such as serious illness, death in the family, participation in university sports, religious observations, and so on) you must notify me as soon as possible before the exam and also you must validate your absence by providing me a document (e.g., with a letter from your doctor). Once your cause is validated a make-up exam will be given

**Participation:**
Active involvement in class activities and discussions is strongly encouraged.

**Others:**
You are expected to avoid all forms of academic dishonesty as defined in Catalog. In addition, students are expected to behave in an ethical manner in all class activities. If you feel uncertain about a particular activity, please speak to me BEFORE problems arise. Ethical behavior is a requirement for passing this course. All work submitted for grading must be the student's own work. Plagiarism will result in a score of 0 (zero) for the work or dismissal from the course and the Dean of Students office will be notified. No copying
from another student's work, of any class, is allowed. It is the student's duty to allow no one to copy his or her work. Anyone found cheating and/or copying, in the exams or assignments, in the instructor's opinion, will receive an automatic F for the course.

B. COLLEGE AND UNIVERSITY POLICIES

- **Academic Integrity (University)**
  University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in a failing grade.

- **Classroom/Professional Behavior**
  Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

- **Statement of Civility**
  Texas A&M University-Corpus Christi has a diverse student population that represents the population of the state. Our goal is to provide you with a high quality educational experience that is free from repression. You are responsible for following the rules of the University, city, state and federal government. We expect that you will behave in a manner that is dignified, respectful and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

- **Deadline for Dropping a Course with a Grade of W (University)**
  I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with your academic advisor, the Financial Aid Office, and me, before you decide to drop this course. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Please consult the Academic Calendar (http://www.tamucc.edu/academics/calendar/) for the last day to drop a course.
• **Grade Appeals (College of Science and Engineering)**
  As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at [http://www.tamucc.edu/provost/university_rules/index.html](http://www.tamucc.edu/provost/university_rules/index.html), and the College of Science and Engineering Grade Appeals webpage at [http://sci.tamucc.edu/students/GradeAppeal.html](http://sci.tamucc.edu/students/GradeAppeal.html). For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

• **Disability Services**
  The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call (361) 825-5816 or visit Disability Services in Corpus Christi Hall 116. If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816. [http://disabilityservices.tamucc.edu/](http://disabilityservices.tamucc.edu/)

• **Statement of Academic Continuity**
  In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.

C. **OTHER INFORMATION**
• **Academic Advising**
The College of Science & Engineering requires that students meet with an Academic Advisor as soon as they are ready to declare a major. The Academic Advisor will set up a degree plan, which must be signed by the student, a faculty mentor, and the department chair. Meetings are by appointment only; advisors do not take walk-ins. Please call or stop by the Advising Center to check availability and schedule an appointment. The College’s Academic Advising Center is located in Center for Instruction 350 or can be reached at (361) 825-3928.

GENERAL DISCLAIMER

I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus if and when necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.