A. COURSE INFORMATION

Course number/section: COSC-4354.001
Class meeting time: TR 03:30-04:45PM
Class location: CS-112
Course Website: http://sci.tamucc.edu/~asheta

B. INSTRUCTOR INFORMATION

Instructor: Dr. Alaa Sheta
Office location: CI-342
Office hours: TR 1:00 - 3:00PM
M 12:00 - 1:00PM
Telephone: 825-3711
E-mail: alaa.sheta@tamucc.edu
Appointments: Must be scheduled at least a week in advance by email

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 methods 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 useful oral communication skills with a range of audiences
6. Demonstrate useful written communication skills with a variety 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

- Grade Scale: A (90-100%) B (80-89%) C (70-79%) D (60-69%) F (<60%)

The distribution based on deliverable is included in the following two tables:

<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>Attendance</td>
<td>10</td>
</tr>
</tbody>
</table>
## COURSE CONTENT/SCHEDULE

<table>
<thead>
<tr>
<th>Week</th>
<th>TOPIC</th>
<th>Deliverable</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>• Introduction and Overview of the course</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Software Requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• What is a capstone project?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 2</td>
<td>• Read and analyze requirement of a capstone.</td>
<td>Project Summary.</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>• Designing your capstone project goals and objectives.</td>
<td>This is a firm deadline.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Discussion possible project needs and expected outcomes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Submit a summary of the proposal. If you are trying to decide between multiple projects, you may submit more than one abstract.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 3-4</td>
<td>• Introduction to Research Method and Professional writing techniques (LaTeX)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Clients Presentations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 5</td>
<td>• Project management tools and techniques</td>
<td>Project Planning and activity network report</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>• Students have to develop their time plan and task distribution using MS Project</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 6</td>
<td>• Clients Presentations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 7</td>
<td>• <strong>Team Meeting with Dr. Sheta, Discussing progress</strong></td>
<td>SRS report and Progress report due</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>• Progress assessment and delivery of meeting minutes and progress percentage according to the time plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 8</td>
<td>• Submit informal draft bibliography and list of websites with information relevant to your project.</td>
<td>Summary and outlines of the Research paper</td>
<td>5%</td>
</tr>
<tr>
<td>Week 9</td>
<td>• Project management (Risk, People, Teamwork)</td>
<td>Updated SRS report due</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>• Reporting the client feedback.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 10-11-12</td>
<td>Software Project Estimation and Cost Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 13</td>
<td>• Research paper presentation (25 mints for each student)</td>
<td>Research paper due</td>
<td>10%</td>
</tr>
<tr>
<td>Week 14</td>
<td>• <strong>Team Meeting with Dr. Sheta</strong></td>
<td>Final project document due</td>
<td>20%</td>
</tr>
<tr>
<td>Week 15-16</td>
<td>• <strong>Final Project Presentation</strong></td>
<td></td>
<td>20%</td>
</tr>
</tbody>
</table>

**Tuesday, December 11, from 1:45 PM – 4:15 PM Project Presentation**

Note: Due to the nature of this course, mandatory attendance is required for all meetings, presentations, or work sessions as shown above. A grade reduction may be assessed for missing any day for which an authorized absence has not been approved by Dr. Sheta.

Note2: 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.
I. COURSE POLICIES

• Course Syllabus
  We will meet for lecture on Tuesdays and Thursdays, when new material will be presented. We will follow the text generally, but the non-text material may also be included in the lectures. You are responsible for all the material presented during the lecture.

• Readings
  1. The reading assignment will be provided on Bb every week.
  2. It is the student duty to do the reading.
  3. If you have any question about the reading, please let me know as early as possible.
  4. Inability to finish the reading might affect your learning outcomes.

• Homework Assignments and Quizzes:
  1. Approximately 5-6 homework assignments will be given.
  2. The assignment will be given almost every one/two weeks.
  3. You MUST submit your HW on Bb.
  4. Your submitted assignment must be written in word/latex and submitted as pdf. No handwriting is allowed. Failure to do that will lead to zero grade.
  5. Any assignment MUST have a cover page which includes the assignment title, assignment number, the student name or team name for group assignment. 10% will be deducted if guidelines are not followed.
  6. The compressed file is not allowed. You would get zero grade if you submitted a compressed file.
  7. You need to include a description of the process you followed to develop your results in case of coding assignment, any tuning parameters, tables and figures. Submitting the results/work without an explanation/analysis is not accepted (50% will be deducted from your grade)
  8. For late submission, maximum two days after the deadline, 50% will be deducted from your grade.
  9. It is your responsibility to check frequently (i.e. weekly bases) the posted contents, assignments or announcement on Bb.
  10. All assignment are due Saturday at 12:00 PM.

• Team assignment/project
  For team assignment, every team member has to make a submission on Bb. Failure to do that will lead to zero grade for that student.

• Research Paper
  Each student has to work on a research paper based on a selected research topic. The student has to do a literature review along with a list of reference and follow the standard IEEE format using Latex. Each student has to create an account on Overleaf. Overleaf provide an easy use interactive environment for professional research writing style.
• **Project:** The project is a programming project with a final report. An in-class presentation is required. The project should be done in a team of at maximum three students. No more than three students are allowed. All projects must be approved by the instructor. Additional details on the project will be available later on the course website. Each team needs to provide a summary of the project according to the given guidelines by the instructor on/before **Thursday September 13, 2018.** A team will have to provide a short introduction in class after the topic is approved.

• **Proposal Guidelines**
  Template guidelines for the project proposal shall be posted on the Project folder. You must check and follow. Do not delay this task to last mints because you will always have a question.

• **Project deliverables include:**
  - Project proposal
  - Progress presentation
  - Draft report
  - Final report
  - Final presentation

• **Attendance/Tardiness**
  You are expected to be in attendance, punctual, and prepared for class. There are 10 points for class attendance. If you are more than 10 minutes late to class, you will be counted as tardy. Please make sure that you will never be tardy to any of your classes or accept the consequences.

• **Extra Credit**
  There is NO EXTRA CREDIT - don't bother asking.

• **Cell Phone Use**
  You are required to turn off your cell phone in class and pay attention to class discussions.

• **Laptop Use**
  Use of laptops and other electronic devices is restricted to taking notes.

• **Food in Class**
  Eating food in class is Not Allowed.

• **Missed Exam**
  Missed exams will be graded as ‘0’.

• **Others**
  Read Section L!!!
J. COLLEGE AND UNIVERSITY POLICIES

• Academic Integrity (University)
  It is expected that university students will demonstrate a high level of maturity, self-direction, and ability to manage their own affairs. Students are viewed as individuals who possess the qualities of worth, dignity, and the capacity for self-direction in personal behavior.

  See Full University Policy at http://catalog.tamucc.edu/content.php?catoid=10&navoid=313#Academic_Integrity

• 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.

• Deadline for Dropping a Course with a Grade of W (University)
  The grade of W will be assigned to any student officially dropping a course. Please consult with the instructor before you decide to drop to be sure it is the best thing to do. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Should dropping the course be the best course of action, visit the Office of the University Registrar for the Course Drop Form that must be submitted. No student is eligible to receive a W without completing the official drop process by this deadline. 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, and the College of Science and Engineering Grade Appeals webpage at 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/

OTHER INFORMATION

These guidelines are designed to inform scholars of their responsibilities and of the course requirements in order to make this course a positive experience. The instructor is always available for consultation and discussion with students on any aspect of a course and of these general guidelines.

1. Consider yourself as a scholar rather than a student. The term “student” may imply some passivity, whereas the term “scholar” implies active participation, understanding and searching. We will use these terms interchangeably with the meaning of “scholar” implied. Osmosis does not work in a learning environment!

2. Further, define yourself as a “thinking explorer”. You are responsible for your education; an instructor can only be a guide and a facilitator. An instructor cannot learn from you. If you come across something that really interests you, explore it further.

3. Your experience at this University should not consist of passing a series of courses to earn a degree. Your experience should rather be a series of activities that will give you an education.

4. Concentrate on “learning to learn”. You will have to be a life-long learner to survive in your chosen career.

5. There is no such thing as a stupid question; there is such a thing as a stupid answer. So ask questions, the instructor is taking all the risks! Ask questions of your instructor and of your fellow scholars. Many times questions are more important than answers.

6. The Internet is a tremendous resource and also a great danger. When you find information on the Internet, you have no idea if it is correct. View such information with caution. But, use the Internet to explore topics that interest you. Do not only prepare for the exam in a course – learn as much as you can on the topics introduced to you by the course material. You are responsible for the extent of your education! READ MINDFULLY !!!!

7. In addition to details of the syllabus given in class, the syllabus for the course includes all the chapters of the required textbook/s unless indicated otherwise by the instructor.

8. The final letter grade for the class will be based on the raw composite numerical score obtained from the weighted average of the tests, quizzes, exams, labs, etc. as indicated by the instructor. The raw composite numerical score may be adjusted (curved) based on the
highest score, the statistical profile of the scores and other academic standards or other considerations. Generally, the letter grade of A is 90% and over of the adjusted score, a B is between 80% and 89% (inclusive) of the adjusted score, a C is between 70% and 79% (inclusive) of the adjusted score, a D is below 70% of the adjusted score and an F is below 65% of the adjusted score. An incomplete (I) will only be given in very unusual circumstances. The University regulations on incomplete grades state: “An incomplete notation may be given to a student who is passing but has not completed a term paper, examination, or other required work for reasons beyond the student’s control other than the lack of time”. Students are expected to take ALL tests, quizzes, exams, etc., and to complete and hand in all labs and other assignments. There is no provision for “extra credit”. No final grades will be given via the telephone, e-mail, etc.

9. All University rules, regulations and expected student conduct apply to this course. Students are held responsible for the information given in the current Catalog and Student Handbook.

10. All labs, assignments, etc. must be handed in on the assigned due date. Scholars having problems must notify the instructor well before the due date. Marks will be deducted for poor and sloppily presented work.

11. Labs, etc. handed in after the due date may be subject to a penalty of loss of marks. Labs, etc. handed in after the graded labs will get zero marks but must be handed into the instructor.

12. Scholars are asked to take special note of the penalties, which the University attaches to Academic Dishonesty. Consult the Student Handbook.

13. All work handed into the instructor must be the student's own work. Extracts, excerpts, etc. from the work of others must be suitably noted, acknowledged and properly referenced. Any Group Work will be judged in the same way. That is, it is the work of the group and the extracts, excerpts, etc. of others must be acknowledged.

14. All written and graphical work handed in must be presented neatly printed. Student’s written work will be judged on written communication skills, critical thinking and problem-solving ability.

15. There are NO provisions for making up missed exams except in cases where prior arrangements have been made and agreed to by the instructor.

16. Students must keep their given university e-mail address (i.e. firstname.lastname@islander.tamucc.edu ). This will be the means of the instructor communicating with students.

17. All work submitted to the instructor (via e-mail or other means) must be clearly marked with the student’s name and the name and number of the course – this is especially important when work is submitted as an attachment to an e-mail.

18. The instructor reserves the right to make changes to the above with due notice to the students. These changes will be announced to the class (see 16 above) and each student is responsible for keeping herself/himself informed of such changes.

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.