SYLLABUS
Capstone Project CS 49999-001/002-30960/31251
Software Development Project CS 44901-001-23021

Fall 2020

Lecture Classroom: **Tues & Thurs (9:15 – 10:30 AM)**
Virtual Labs: **Wed's Session (4:25 PM – 6:20 PM) | Friday's Session (9:55 AM – 11:50 AM)**

Instructor: **Dr. Augustine Samba**
Email: **asamba@kent.edu (tel: 330-672-9868)**
Virtual Office: **10:30 – 1:00 PM on Tue & Thur**
Other times by appointment

Teaching Assistants: Safa Shubbar, **sshubbar@kent.edu**
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Course Description:

This course is an integrative experience that brings together all components of the undergraduate computer science curriculum in an applied, hands on real world setting. The students work together to complete a computer project under the supervision of the instructor. The course is a writing intensive class in which the student writes regular reports describing his/her progress toward completing the project. The course is three credits lecture and one credit lab.

Course Prerequisites:

CS 35201, CS 33901, CS 33007.

Course Requirements:

Students will work in groups of 5 team members. Each group will select a semester project, design, implement and demonstrate the project software.

The project teams will produce an initial report describing their project, its goals, use cases and a timeline for its implementation. This will be the initial deliverable for the semester project. Over the course of the rest of the semester that report will be updated with completed software and documentation.

After the initial design phase, approximately every two or three weeks each team will present a progress report (i.e, additional deliverables) to the class discussing what they have accomplished and discussing any revisions in project timelines and goals. The class time and lab time are for planning, trouble shooting, and problem solving, not for project coding. Students are expected to do most of their development work outside of classes and lab. When project development has started evidence of weekly code development is required.

Course Learning Outcomes

Demonstrate the ability to work in teams to analyze a problem, produce a development plan, and implement a computer solution for the problem. Develop the system software documentation to illustrate the elicitation techniques, use case scenarios, timeline, software architecture and design. Presentation and demo of the project

Assessment of Learning Outcomes

- **Group Project**

Each student is required to participate in a Group Project with other classmates. Each group will comprise of 5 students. One group will likely have 6 students. Each group will develop functional requirements, document, design, implement and demonstrate the project software.
There will be a Group basic grade that will form the basis from which individual grades for the project will be determined. Individual grades within a project may vary if a person's contributions to the project are deemed to have been significantly more or less than the group's grade. **The group project is comprised of a final technical report (25%) and the final software system (40%)**

Final Project Presentation

Students are required to make presentations of their software project to the class. The Final Project presentation will consist of PowerPoint slides to illustrate the goals and use cases of the software project; users' guide and a demonstration of the software project. The Final Project **Presentation will account for 20% of the overall grade. The individual grades will be determined based on each student's participation and performance in the presentation**

- **Homework on Software Engineering Ethics**
  There will be one assignment on software engineering ethics. The assignment will be completed individually (not group based). It will account for 5% of the overall grade

- **Peer Evaluations**

Each student is required to complete and submit the mid-semester and the end-of-semester Peer Evaluations via the assignment folder on Blackboard Learn. **The peer evaluation assignments will account for 10% of the overall grade**

Please use the following criteria to rate yourself and each member in your Team:

1. **Effort / Active Participation:** Following through on the project and being accountable to group members.
2. **Contribution:** Improving quality of work, being creative, bringing unique skills and abilities that aid in the quality of the final product, and providing leadership.
3. **Attendance:** Attending team meetings and or group activities.
4. **Supported Group Process:** Eliciting and valuing input of others, mediating arguments and relieving tension, lending a positive attitude, and other maintenance roles that enhance group social climate.
5. **Communication:** Checking in with the Group before missing a meeting, clarifying expectations, keeping communication channels open, facilitating others' participation, and "speaking" and "listening" effectively.
   The Peer Evaluation will account for 10% of the overall grade

Grading Scale

Grades will be assigned based on the range of percentages indicated below:

Grade Level	Percentage
A	93% < score <= 100%
A-	90% <= score <= 93
B+	86% <= score < 90%
B	83% <= score < 86%
B-	80% <= score < 83%
C+	76% <= score < 80%
C	73% <= score < 76%
C-	70% <= score < 73%
D+	66% <= score < 70%
D	63% <= score < 66%
F	score < 63%

Attendance:

Students are expected to attend every session. In the event that a student misses a class it is the responsibility of the student to get any notes/assignments or other information. For students who misses an exam because of an excused absence (in accordance with KSU policy), and who provide a written excuse to the instructor, a make-up time will be arranged. For unexcused absences, no make-up exam will be given.

Other Policies:

No food or beverages (except bottled water) are allowed in the computer labs. Tobacco, etc. is not allowed in class at any time. Please do not modify computer settings (desktop, screen saver, etc.) unless instructed to do so. Please turn off cell phones prior to the beginning of class. The use of cell phones, iPods, MP3 players, etc. is prohibited during lecture.

Academic Honesty:

Cheating means to misrepresent the source, nature, or other conditions of your academic work (e.g., tests, papers, projects, assignments) so as to get underserved credit. The use of the intellectual property of others without giving them appropriate credit is a serious academic offense. The University considers cheating and plagiarism very serious offenses and provides for sanctions up to and including dismissal from the University or revocation of a degree. The University's administrative policy and procedures regarding student cheating and plagiarism can be found in the Administrative Policy, 3-01.8. By submitting any material in this (or any other class) you are certifying that it is free of plagiarism.

Withdrawal Deadline:

Withdrawal from any or all courses is permitted through the 10th week of the semester:

Students with Disabilities:

University policy 3342-3-01.3 requires that students with disabilities be provided reasonable accommodations to ensure their equal access to course content. If you have a documented disability and require accommodations, please contact the instructor at the beginning of the semester to make arrangements for necessary classroom adjustments. Please note, you must first verify your eligibility for these through the Student Accessibility Services (contact 330-672-3391 or visit www.kent.edu/sas for more information on registration procedures).

Proper Enrollment:

Students have responsibility to ensure they are properly enrolled in classes. You are advised to review your official class schedule (using Student Tools in FlashLine) during the first two weeks of the semester to ensure you are properly

enrolled in this class and section. Should you find an error in your class schedule, you have until cut-off date provided by the Undergraduate Office to correct the error with your advising office. If registration errors are not corrected by the cut-off date and you continue to attend and participate in classes for which you are not officially enrolled, you are advised now that you will not receive a grade at the conclusion of the semester for any class in which you are not properly registered.

Course Schedule

All items in this syllabus are subject to change at the discretion of the Instructor and the Office of Academic Affairs.

Week	Topics	Remarks/Due Dates
#1, #2 & #3	**Introduction to Capstone Project**	
	▪ Getting Started: a. Problem Definition: Importance of Requirements b. Definition of Functional/Non-functional Requirements c. Software Development Life Cycle Overview d. Use Cases ▪ Join a Group of your choice and submit a group project for review and approval	**Submit the Group's Project Description** (**9/12/20**)
#4	**Submit the Group's Project Elicitations and updated Project Description** on **9/19/20**	**9/19/20**
#5	**Submit Functional Requirements and project timeline on 9/26/20**	**9/26/20**
#6	**Start Systems Architecture and Software Design** **Present progress reports in class on 9/29/20 & 10/1/20**	
#7	**Submit Systems Architecture & Software Design via Black Board Learn on 10/10/20** **Submit mid-semester Peer Evaluations via Black Board Learn on 10/10/20**	Systems Architecture: **10/10/20** Mid-semester Peer Evaluation: **10/10/20**
#8-to- #11	**Continue working on implementing your software project.** **Present progress reports in class on 10/15/20 & 10/20/20**	
#12	**Continue working on implementing your software project** **Present progress reports in class on 11/10/20 & 11/12/20**	

#13	**Continue working on implementing your software project** **1. Submit End of Semester Peer Evaluations via Black Board Learn (11/19/20)** **2. Submit draft technical report – user guide via Black Board Learn (11/19/20)** **3. Submit draft software project via SVN (11/19/20)**	**Peer Evals: 11/19/20** **Draft Technical Report: 11/19/20** **Draft Software Project via SVN: 11/19/20**
#14	**No class**	Thanksgiving Break **11/23/20 – 11/29/20**
#15	**1. Submit final technical report for your group project via Black Board on 12/1/20** **2. Submit final software group project and user guide via Black Board and SVN (12/1/20)** **3. Software System Group Project Evaluations** **4. (Lab Attendance is mandatory) 12/2 and 12/4** **5. Conduct dry runs for your group project final presentations (Attendance is mandatory for all]**	Software System Group Project Evaluations **(Wed 12/2/20 and Fri 12/4/20)** Practice/Rehearse Presentations: **Tue, 12/1//20** **Wed 12/2/20** **Thur 12/3/20**
#15	**Group Presentations** ▪ **PPT slides (between 15 and 20 slides) of the project** ▪ **Demo software project**	**Final Presentations:** **12/8/20** **12/9/20** **12/10/20**