BELLEVUE COLLEGE
COMPUTER SCIENCE

CS 483 SENIOR CAPSTONE I (3 Cr.)
Spring 2021

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COURSE CATALOG DESCRIPTION

This course is the third in a sequence of three senior level capstone courses. This course focuses on implementation, test and presentation of the project. The course includes lectures, reading assignments and guest speakers on poster design, innovation and entrepreneurship, presentation skills and emerging trends in computer science.

COURSE CONTENT OUTLINE

Design and Implementation. Detail Design Document. Test Plan and Test Case Document. Presenting Project. Team Work. Project Management. Software Engineering. Ethical and Legal Issues. Emerging Trends in Computer Science.

LEARNING OUTCOMES

After completing this class, students should be able to:

- Follow a formal software development process to complete the project.
- Write a detailed design description document describing how the project is to be implemented according to the requirements specifications.
- Prepare a test plan and test case document describing relevant testing methods to validate and verify the product.
- Implement the requirements based on detailed design specification using appropriate techniques and tools.
- Make oral presentation.
- Identify ethical and legal issues that might arise in the design and use of the product.
- Perform independent learning of new technologies and concepts.
- Work productively in a team environment communicating appropriately with all team members.

Course Policy:

- The teams of students have one year (three quarters) to develop their projects.
- Throughout the quarters, the teams report on their work through documents (deliverable) submitted to their instructors, end-of-sprints discussions of tasks completed (see Participation bullet point below), and project presentations delivered during regular classes.
- The course instructors are not team members or lecturers. The role of the instructor is to provide guidance and evaluate reports generated by the teams.
- Deliverables:
    - Keep the documents you started in CS-481 and CS-482 up-to-date (Requirements Specification Document (RSD) and Design Document (DD)). As you progress with your projects, you will add new features, may decide to make changes to designs you initially decided on, or might decide to slightly modify the requirements. Make sure that SRS and SDD are up to date and reflect all changes. 10% of the grade is allocated for the proper and full upkeep of the design documents that were started in CS-481 and CS-482
    - Implementation and Testing: continue with the implementation and testing you started in CS-481 and CS-482.
    - GitHub: each team member should check in his/her code into GitHub. We will be using GitHub to check that you are contributing your fair share to the project.

    The table on page 3 titled "Deliverables for Spring Quarter" summarizes all deliverables with due dates.
- Presentations and Publications
    - Tech Presentation.
    - Presentation of your project at the end of the quarter. Your project should now progress from a incomplete features (what you presented in CS-482) to showing major progress with complete functionalities.
- Participation
    - Supervisors, working with their respective teams, will divide the quarter into 4 sprints (each sprint lasting 2 weeks – see table "Deliverables for Spring Quarter" on page 3 for the sprints dates). Each sprint will have well-defined tasks assigned to group team members. How tasks are distributed will be decided on by the supervisor and the team members.
      At the end of each sprint, the group discusses and presents the completion of the sprint tasks to the supervisor (via online meeting). The supervisor grades the team members for each sprint by separately evaluting each student's work . Therefore, not all team members will necessarily get the same grade on a given sprint.
- Late submissions of any material is not accepted. You will lose the credit for any deliverable not submitted on its due date.
- If any student withdraw from the course the rest of the project should be completed by the remaining team members.

Grading:

Development	60%	(Sprints 1,2, 3: 14% each, Sprint4: 18%)
Final demonstration	10%	
Technical Talks	10%	
User poster	10%	
Documentation	10%	

Deliverables for Spring Quarter

Deliverable	**Eval. Type**	**Sprint1**	**Sprint2**	**Sprint3**	**Sprint4**
Development and sprint demo	Individual	Wed 4/14 – Tue 4/27 (Eval: Wed 4/28)	Wed 4/28 - Tue 5/11 (Eval: Wed 5/12)	Wed 5/12 - Tue 5/25 (Eval: Wed 5/26)	Wed 5/26 - Tue 6/15 (Eval: Wed 6/16) (NOTE: last sprint is a 3-weeks sprint)
Documentation	Team	SRS SDD STD (Due: Tue 4/27)	SRS SDD STD (Due: Tue 5/11)	SRS SDD STD (Due: Tue 5/25)	Poster due Wed June 9 SRS SDD STD (Due: Tue 6/15)
Technical Talks	Individual	Techical talk should be no longer than 15 minutes per team. **Wed May 19**: Safe Shop, Expenses Advisor, Code Reviewer, Text Input Spy, Virtual Library, Pi Player, Global Electricity Generation, Expedia Review Trends, Road Lanes Detection, DevOps Pipeline with GitHub, Audit Now			
Final demonstration / Competion (optional)	Individual	Final presentation should be no longer than 15 minutes per team. **Wed June 16**: Safe Shop, Expenses Advisor, Code Reviewer, Text Input Spy, Virtual Library, Pi Player, Global Electricity Generation, Expedia Review Trends, Road Lanes Detection, DevOps Pipeline with GitHub, Audit Now			

Grading System:

930 – 1000	A	4
900 – 929	A-	3.7
870 – 899	B+	3.3
830 – 869	B	3.0
800 – 829	B-	2.7
770 – 799	C+	2.3
730 – 769	C	2.0
700 – 729	C-	1.7
670 – 699	D+	1.3
600 – 669	D	1.0
Below 600	F	0