Aaron Nettles

Due: 1/27/2015

Instructor: Dr. Mike Estep

Capstone Summary Report

Capstone is a powerful way of allowing a student to experience real world problem solving with actual clients. The capstone projects allows students from multiple disciplines of Information Technology (IT), Computer Science (CS), Multimedia (MM), and English (ENG) to work together in teams to develop actual systems software for real clients. Clients benefit in gaining software for their needs and in saving hundreds of thousands of dollars not being paid to industry developers. Each research paper show importance to the capstone & research.

There are three reports that cover information of the importance of the capstone course, *Creating Synergy between Undergraduate Senior Computing Research and Applied Capstone Courses*, *Teaching Software Engineering Through a Real-World Project: A New Approach,* and *Web-Based Database Project for the Lawton, OK Police Department: Interdisciplinary Systems Software Development at Cameron University.* Each research topic involved the development of the capstone course. Each student goes through a process in order to complete the software for the client.

*Creating Synergy between Undergraduate Senior Computing Research and Applied Capstone Courses* is the focus on the importance of researching why the capstone is valuable to the curriculum. The synergy between researching the capstone can be important because you are able to research the process of the course. You are able to see if the student is benefiting from the course & it is something that should be valued. This is beneficial to the capstone professor and student because it give them research on what needs improvement and it give the professor new ideas about the course. Research itself is important for a student because it give a student real world opportunity to find new ideas and ways to organize the paper to be submitted & published to renowned conferences like the World Comp.

*Teaching Software Engineering through a Real-World Project: A New Approach* was a capstone project. In this article, the authors introduce basic concepts and procedures on how this new approach was recently conducted for CETESjobs.com, in the creation of a job search engine designed to bring together a local metropolitan business community with retired veterans seeking employment. This new approach was promoted to be fresh & a creative learning environment for students. What made this approach new was the formation of Software Engineering, Computer Science, and Information Technology. “The 16-week SE class was divided into two 8-week parts: the first 8-week focus was on teaching students’ basic principles, processes, and methods of SE and completing analysis and design of the targeted project; the second 8 week emphasis was on coding, testing, and validation of the project.” The project dealt with a front-end that handled HTML, CSS, and JavaScript. The server side dealt with PHP & SQL for database transferring and form handling.

*Web-Based Database Project for the Lawton, OK Police Department: Interdisciplinary Systems Software Development at Cameron University* was fascinating new method combined with the logic of the Cetes project, previously mentioned. The big difference was the third-party that was being involved, The Lawton Police Department. This gave student the opportunity to work with a direct client, which is the sole purpose of the capstone course. This gave students the opportunity to also work with multiple departments to complete the project.