

Capstone Project Assignment (M. Choudhary)

I have been involved in two different projects: (1) Introducing the research based genetics laboratory, and examining its impacts on students learning, and (2) developing genetics instrument to test the conceptual learning in genetics.

(1) I have taken the IRB approval just after coming back from Biology Scholar Program meeting in Washington. I have been conducting this study since fall 2011, and I extended this study for the next semester, and completed this study. The data was gathered for the last four semesters and pre-test and post test data were analyzed for different learning outcomes. We have shown that different types of learning skills, collaborative as well as critical thinking skills were enhanced when we employed the research based laboratory. We presented a poster during the spring 2013 meeting of Texas Branch ASM meeting. I submitted the abstract for the ASMCue-2013 meeting, and the abstract is accepted. I will be presenting this poster during the ASMCue meeting on May 18, 2013. I am looking forward getting feedback on the poster, so that I can submit the manuscript to JMBE or any other journal.

(2) Conceptual learning is the key to students' success. I have some test instruments for testing the genetic concepts, but I have not used this in the classroom. During this semester, I was aligning my teaching material to incorporate exercises as well as illustrations to enhance conceptual understanding. I will be using then pre and post-test instrument to measure the conceptual learning by students. I will be conducting this study during the fall 2013 semester after taking approval from IRB.

(3) I will be presenting a poster in ASMCue meeting.