# AN APPROACH TO TEACHING A CIS CAPSTONE COURSE

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## ABSTRACT

This study reports on an empirical test of an approach to teaching a "CIS Capstone Course". The relatively new CIS Capstone Course at CSULA had included relative low student scores on the National ICCP Examination used as an assessment tool for the course. The approach tested in the Fall 2005 Term was to review, re-teach, and emphasize, in substantial detail, the basics of IT, rather than assuming that all of the basics had already been learned, understood, and remembered. Multiple reviews and quizzes were assigned, with particular attention given to IT "terminology." The one new area of study taught was Project Management. Results of this approach were successful: average student scores on the ICCP Examination improved 5%. Other interesting demographic data were collected and analyzed.

## INTRODUCTION

A CIS-related capstone course should complete the curriculum's introduction of the IT sub-disciplines and areas of knowledge (DBMS, Networks, and Programming, et al) and the integration of computer-based systems into organizations. Such a course can also be used for program assessment. The key issues facing a CIS Department for such a course are: 1. how to design a useful capstone course experience for the students; 2. how to get a handle on "assessment" of these students and the overall program; and 3. specifically how to organize and teach the course. The ICCP's National IS/IT Exit Examination (IS2002.0.10) was chosen as the assessment vehicle by the CSULA CIS Department. This test is nationally controlled, administered on-line, and consists of 258 Multiple Choice Questions in a 3 hour time limit. The test is based directly on the IS-2002 CIS Model Curriculum and covers multiple areas of the IT field. (see: www.iseducation.org). The course was offered in the Winter and Spring 2005 Terms. The combined average student score for the two quarters was 42%. The national average for these test periods was 48%. The author taught the course in Fall Quarter 2005 and took a different approach to teaching the course. "IT basics" which had been taught in previous CIS courses were not assumed to have been learned in their entirety or in full IT context. In essence, the entire curriculum was, at an accelerated pace than in earlier classes, re-taught.

## RESULTS AND ANALYSIS

Students in the Fall 2005 class that is the point of this research improved their score by **5%** on average.
AGE: Average = 28.3, Median =24. "Older than median students were .2% higher. This is perhaps a surprising result in that the difference was not greater than .2%
IT EXPERIENCE: Perhaps, surprisingly, students who have not had real-life IT experience scored .6% higher. The unexpectedness of this result suggests further research.

## CONCLUSION

The approach of concentrating on reviewing IT basics as the core of the course, plus Project Management, led to improved results. Results of this research can help CIS Departments and other college and university CIS Departments in designing the best ways to teach Capstone Courses.