

CIS 100 Course Redesign Proposal

CIS 100, Introduction to Computers, is a large-enrollment, freshman-level computer literacy course for all majors. The course meets computer literacy requirements at all colleges and universities in the state of Kentucky, excluding the University of Kentucky.

The redesign of this course should improve quality, reduce costs, and increase access.

The goals of this project are:

- to assist students in successfully completing the course with a C or above;
- to develop an accelerated course to allow students with basic computer skills to (a) pass the challenge exam, or (b) to develop needed skills to pass the course; and
- to develop a repository for:
 - pre-test—to be administered on the first day of class to determine student knowledge;
 - post-test—the same test as the pre-test; the post-test will be administered at the end of the semester to determine student outcomes;
 - placement test—to determine if students have sufficient knowledge to enter the course;
 - online accelerated course materials—to allow students to gain the knowledge to pass the challenge exam or to work through the course at their own pace;
 - practice exams—to allow students to become familiar with online testing and concepts;
 - online exams—to provide students the opportunity to take exams once they have mastered the concepts.

On average, 25 sections of CIS 100 are offered fall semester and 27 sections are offered spring semester, with an enrollment of approximately 1,177 students. Because of the extraordinary demand, these sections close quickly. While a few sections are offered with adjunct faculty, the difficulty lies in finding qualified part-time faculty in this area. Of the sections offered during the fall semester 2003, approximately 70 percent of the 553 students enrolled passed this course with a C or better, while 4 percent earned a D. Sixteen percent

failed, and 10 percent withdrew. During spring 2004, 27 sections were offered with an enrollment of 624. Of the 624 students enrolled, 66 percent passed the course with a C or better. Four percent earned a D, 15 percent failed, and 15 percent withdrew from the course. Of the 1,177 total enrolled students in CIS 100 during the academic year 2003-04, 365 students, or 3 percent, earned a D or below in CIS 100. This high percentage is one of the primary reasons for re-designing this course—with the goal of increasing students' learning, while decreasing costs, and providing better opportunities for students to enroll in the course within the first year of their academic study.

The redesign of this course will address the learning environment while utilizing the existing physical space allocated for this course. The redesigned course will achieve the learning outcomes already in place system wide. These learning objectives include:

- using a word processing program;
- using a spreadsheet program;
- using a database management program;
- using an operating system to manipulate files and folders;
- using a World Wide Web browser;
- using an electronic mail program;
- discriminating between ethical and unethical uses of computers and information;
- demonstrating a basic understanding of issues regarding software copyright, licensing, and copying;
- demonstrating an awareness of computer viruses and a basic understanding of way to protect a computer from viruses;
- demonstrating a basic understanding of the impact of computers on society;
- using and understanding basic computer terminology

To meet the course competencies listed above, two textbooks are utilized. One text, *Computer Concepts*, addresses the basic computer terminology, and the second text, *Microsoft Office XP Introductory Concepts and Techniques*, address the word processing, spreadsheet, and database management programs.

The traditional course meets a total of 2.5 hours per week. The class meetings are held in a computer lab, with 24 computers. The limited number of computers restricts class size and allows for no overrides

in these courses. Maintenance and staffing of the labs are included for both the redesigned course and the traditional course.

Seven full-time faculty teach at least one CIS 100 course each semester, with some faculty teaching as many as four sections. In addition, three additional full-time faculty members are qualified to teach at least two sections each semester. Three or four adjunct faculty members are hired each semester to teach the course at various locations. A full-time instructional specialist is employed at the Somerset campus to assist students in the lab. The instructional specialist employs student workers to keep the lab open in the evenings and to help students throughout the day.

Plan for Redesign. CIS 100 meets computer literacy in all programs offered by Somerset Community College. The redesign of this course is challenging because not all students are at the same level of proficiency when entering this course. The goal is to ensure that all students, regardless of the level of preparedness, are successful in the course.

Three full-time IT faculty, Wanda Bolze, Pam Bridgman, and Lois McWhorter, are involved in the course redesign. These three faculty members will either develop the redesigned course materials, work with textbook companies to develop learning materials, or purchase the learning materials. In addition, these faculty members will work with IT faculty in implementing the redesigned course during the spring semester, 2005.

In order to ensure success in the course, the recommendation is made that all students score a minimum on the reading Compass test of 80. This reading score is equivalent to the requirement specified in the English courses. In order to be successful, students must be able to read and comprehend. In addition, the prerequisite for the course, Basic Keyboarding, should be met before students enroll in this course.

Additional plans for redesign include:

Decreasing the number of lectures from three to two per week. This decrease is possible by making the following adjustments:

- Web-based active learning tutorials will provide alternative methods of learning;
- Online practice exams;
- Team work—allowing students to work together on projects to provide collaborative learning;
- Opportunities for practice, feedback, and reinforcement;
- Online exams;
- Online accelerated course materials to allow students to work through the course at their own pace;
- Opportunities for students to utilize the computer lab, increasing individualized assistance, especially for those students who have little or no computer experience;
- Opportunities for web-based materials to replace the traditional lectures, allowing for more formal lab hours at the beginning of the semester, and fewer lab hours at the end of the semester;
- Opportunities to decrease a faculty member's workload through the use of a course management system and online testing.

Project Evaluation. During the spring semester 2005, approximately one-half of the CIS 100 courses offered will be based on the redesign. The remainder of the CIS 100 courses will be offered in the traditional format. At the end of the semester, the redesigned courses and the traditional courses will be compared to determine cost savings, quality improvement and increased access. In addition, students will be surveyed to determine their assessment of the redesigned course. Student learning will be measured by performance on online exams and projects.

Software Applications

Macromedia Authorware 7 will allow production of rich-media courseware for e-learning. Authorware 7 is the leading visual authoring tool for creating rich-media e-learning applications for delivery on corporate networks, CD/DVD, and the Web. Develop accessible applications that comply with learning management system (LMS) standards.

Authorware 7 is AICC compliance certified

The AICC certifies training products that comply with AICC Guidelines and Recommendations (AGR's). Consumers around the world look to the AICC Compliance program to help them identify products that comply with specific AGRs. These AGRs specify minimum levels of functionality and interoperability for a wide variety of CBT products.

Authorware 7 allows for the following components which are critical for course content development:

Microsoft PowerPoint Import

Leverage existing PowerPoint presentations to create rich multimedia e-learning content.

Accessible Content

Generate tab navigation and captions, and turn text into speech.

LMS Knowledge Objects

Take the complexity out of connecting to standards-compliant learning management systems.

Cost \$2999.00

Hardware

In order to produce large quantities of CD's that this project will create; a CD tower Duplicator System is required. This is a system that can produce multiple copies of a CD simultaneously.

CD Tower Duplicator System:	\$1700.00
A labeling system for labeling the CDs:	\$ 300.00
Cases for CD storage	\$ 500.00
Blank CDs	\$1000.00
Miscellaneous Supplies	\$1000.00
Three (3) Dell Laptops @ \$2000.00 each	\$6000.00

Technical Assistance

Our goal of this project will be to create a website that students can use as a resource for CIS 100, not only for students of Somerset Community College, but eventually system wide for the entire Kentucky and Community College System.

Additionally, another goal of this project will be to create a placement test for CIS 100.

This test should be an adaptive type test meaning that the student will proceed based on his/her correct answer to questions: if a student answers a number of questions on the test incorrectly, this will trigger a recommendation for the course that student should take.

The creation of a website and adaptive-type testing, will require a substantial degree of programming expertise and web page development throughout the duration of the project.

Technical assistance for the project: \$10,000

