HOW TO REDESIGN A COLLEGE COURSE USING NCAT'S METHODOLOGY

Introduction

From working with large numbers of students, faculty, and institutions since 1999, the National Center for Academic Transformation (NCAT) has learned what works and what does not work in improving student achievement while reducing instructional costs in undergraduate college courses. We call that process *course redesign*.

What does NCAT mean by *course redesign*? Course redesign is the process of redesigning whole courses (rather than individual classes or sections) to achieve better learning outcomes at lower costs by taking advantage of the capabilities of information technology.

The pedagogical techniques leading to greater student success and the cost reduction techniques leading to more-productive learning environments are equally applicable to all disciplines (mathematics, social science, humanities, natural science, and professional studies); to both introductory and advanced-level courses; to on-campus and distance-learning courses; to small, medium-size, and large institutions both two year and four year; and to both traditional-age and working-adult students.

This how-to guide is designed for those of you who want to improve learning and reduce costs in a single course. The guide makes three basic assumptions:

- We assume that your course faces:
  - ✓ Some kind of academic problem such as poor student performance, poor completion rates, or lack of consistency among sections of the course
  - ✓ A financial problem such as budget cuts, the need to serve more students on your current resource base, or difficulty in finding qualified full-time and/or adjunct faculty
  - ✓ Perhaps both

- We assume you have chosen to redesign a course wherein improvements would have a high impact on the curriculum and on large numbers of students. For example, undergraduate enrollments in the United States concentrate in only a few academic areas. In fact, just 25 courses generate about 50 percent of student enrollment at the community-college level and about 35 percent of enrollment at the baccalaureate level. These courses include introductory studies in English, mathematics, psychology, sociology, economics, accounting, biology, and chemistry. By making improvements in a restricted number of large-enrollment courses, a college or university can affect literally every student who attends.

- We also assume you have heard about course redesign and its spectacular track record of proven success. NCAT and its partner colleges and universities have initiated 195 redesign projects, 80 percent of which were completed.
  - ✓ Of the 156 completed projects, 72 percent improved student learning outcomes and 28 percent showed learning equivalent to traditional formats.
  - ✓ Of the 156 completed projects, 153 reduced their costs by 34 percent on average (ranging from 4 percent to 81 percent).

- ✓ Institutions participating in Changing the Equation, an NCAT program focused on developmental math at community colleges, reduced their costs by 20 percent on average; all other redesigns reduced their costs by 37 percent on average.
- ✓ Collectively, the 253 courses that have been redesigned enroll about 250,000 students annually.

Other positive outcomes include increased course-completion rates, improved retention, better student attitudes toward the subject matter, and increased student and faculty satisfaction with the new mode of instruction.

This guide focuses on redesigning all sections of a *single* course in any academic area other than mathematics. Two other NCAT how-to guides have been produced: "How to Redesign a Developmental Math Program Using the Emporium Model" describes how to redesign the entire developmental math *sequence* rather than a single course, and "How to Redesign a College-Level or Developmental Math Course Using the Emporium Model" describes how to redesign all sections of a *single* math course at both the developmental and college levels. Although there is substantial overlap between the two guides, there are also substantial differences.

We at NCAT could not have produced this guide by ourselves. It represents a compendium of the good ideas created and actions taken by hundreds of faculty and administrators working on this issue since 1999. In particular, we thank the following colleagues who graciously took the time to review this guide, assuring us where we went right and correcting us where we went wrong: Megan Bradley, Frostburg State University; John Broida, University of Southern Maine; Elizabeth Connor, University of Massachusetts Amherst; Toni Farley, Arizona State University; Ron Gutberlet, Salisbury University, John Harwood, Penn State University; Jennifer Hearne, University of Maryland Eastern Shore; Gordon Hodge, University of New Mexico; Michelle Miller, Northern Arizona University; Eileen O'Brien, University of Maryland, Baltimore County; Sally Search, Tallahassee Community College; and, Jim Wohlpart, Florida Gulf Coast University.

In the coming pages, we tell you how to replicate this success.