





## Course Planning Tool

Instructional Costs per Hour			
<b>Faculty</b>			
Salary			
% devoted to instruction			
% devoted to this course			
\$ devoted to this course	\$0		
Contact hours for course			
Out of class hours			
Total hours	0		
Cost per hour	\$0		
<b>TAs/GAs</b>			
Salary			
% devoted to instruction			
% devoted to this course			
\$ devoted to this course	\$0		
Contact hours for course			
Out of class hours			
Total hours	0		
Cost per hour	\$0		
<b>Support Staff</b>			
<b>Position</b>	<b>\$ per Hour</b>	<b>Total Hours</b>	<b>Total Cost</b>
#1			\$0
#2			\$0
#3			\$0
#4			\$0

Instructional Costs of Traditional Course	FACULTY		TAs/GAs		Professional Staff	
	# of Hours	Total Cost	# of Hours	Total Cost	# of Hours	Total Cost
	Hourly rate =		Hourly rate =		Hourly rate =	
<b>I. Course Preparation</b>						
<b>A. Curriculum Development</b>		\$0		\$0		\$0
<b>B. Materials Acquisition</b>		\$0		\$0		\$0
<b>C. Materials Development</b>		\$0		\$0		\$0
1. Lectures/presentations		\$0		\$0		\$0
2. Learning materials/software		\$0		\$0		\$0
3. Diagnostic assessments		\$0		\$0		\$0
4. Assignments		\$0		\$0		\$0
5. Tests/evaluations		\$0		\$0		\$0
<b>Sub-Total</b>		<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>	<b>0</b>
<b>D. Faculty/TA Devmt/Training</b>						
1. Orientation		\$0		\$0		\$0
2. Staff meetings		\$0		\$0		\$0
3. Attend lectures		\$0		\$0		\$0
<b>Sub-Total</b>		<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>	<b>0</b>
<b>Total Preparation</b>		<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>	<b>0</b>
<b>II. Course Delivery</b>						
<b>A. Instruction</b>						
1. Diagnose skill/knowledge		\$0		\$0		\$0
2. Presentation		\$0		\$0		\$0
3. Interaction		\$0		\$0		\$0
4. Progress monitoring		\$0		\$0		\$0
<b>Sub-Total</b>		<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>	<b>0</b>
<b>B. Evaluation</b>						
1. Test proctoring		\$0		\$0		\$0
2. Tests/evaluation		\$0		\$0		\$0
<b>Sub-Total</b>		<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>	<b>0</b>
<b>Total Delivery</b>		<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>	<b>0</b>
<b>TOTAL</b>		<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>	<b>0</b>
<b>GRAND TOTAL</b>			<b>\$0</b>			
<b>Total # of students</b>						
<b>Cost per student</b>						

Instructional Costs of Redesigned Course	FACULTY		TAs/GAs		Professional Staff	
	# of Hours	Total Cost	# of Hours	Total Cost	# of Hours	Total Cost
	Hourly rate =		Hourly rate =		Hourly rate =	
<b>I. Course Preparation</b>						
<b>A. Curriculum Development</b>		\$0		\$0		\$0
<b>B. Materials Acquisition</b>		\$0		\$0		\$0
<b>C. Materials Development</b>		\$0		\$0		\$0
1. Lectures/presentations		\$0		\$0		\$0
2. Learning materials/software		\$0		\$0		\$0
3. Diagnostic assessments		\$0		\$0		\$0
4. Assignments		\$0		\$0		\$0
5. Tests/evaluations		\$0		\$0		\$0
<b>Sub-Total</b>	<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>
<b>D. Faculty/TA Devmt/Training</b>						
1. Orientation		\$0		\$0		\$0
2. Staff meetings		\$0		\$0		\$0
3. Attend lectures		\$0		\$0		\$0
<b>Sub-Total</b>	<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>
<b>Total Preparation</b>	<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>
<b>II. Course Delivery</b>						
<b>A. Instruction</b>						
1. Diagnose skill/knowledge		\$0		\$0		\$0
2. Presentation		\$0		\$0		\$0
3. Interaction		\$0		\$0		\$0
4. Progress monitoring		\$0		\$0		\$0
<b>Sub-Total</b>	<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>
<b>B. Evaluation</b>						
1. Test proctoring		\$0		\$0		\$0
2. Tests/evaluation		\$0		\$0		\$0
<b>Sub-Total</b>	<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>
<b>Total Delivery</b>	<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>
<b>TOTAL</b>	<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>
<b>GRAND TOTAL</b>		<b>\$0</b>				
<b>Total # of students</b>						
<b>Cost per student</b>						

## **Five Models for Assessing Student Learning**

What follows is a summary of the most effective and efficient ways to assess student learning.

### Improved Learning

The basic assessment question to be answered is the degree to which improved learning has been achieved as a result of the course redesign. Answering this question requires comparisons between the student learning outcomes associated with a given course delivered in its traditional form and in its redesigned form.

#### I. Establish the method of obtaining data

##### A. Pilot Phase

This comparison can be accomplished in one of two ways:

##### 1. Parallel Sections (Traditional and Redesign)

Run parallel sections of the course in traditional and redesigned formats and look at whether there are any differences in outcomes—a classic "quasi-experiment."

##### 2. Baseline "Before" (Traditional) and "After" (Redesign)

Establish baseline information about student learning outcomes from an offering of the traditional format "before" the redesign begins and compare the outcomes achieved in a subsequent ("after") offering of the course in its redesigned format.

##### B. Full Implementation Phase

Since there will not be an opportunity to run parallel sections once the redesign reaches full implementation, use baseline data from a) an offering of the traditional format "before" the redesign began, or b) the parallel sections of the course offered in the traditional format during the pilot phase.

The key to validity in all cases is a) to use the same measures and procedures to collect data in both kinds of sections and, b) to ensure as fully as possible that any differences in the student populations taking each section are minimized (or at least documented so that they can be taken into account.)

#### II. Choose the measurement method

The degree to which students have actually mastered course content appropriately is, of course, the bottom line. Therefore, some kind of credible assessment of student learning is critical to the redesign project.

Five measures that may be used are described below.

#### A. Comparisons of Common Final Exams

Some projects use common final examinations to compare student learning outcomes across traditional and redesigned sections. This approach may include sub-scores or similar indicators of performance in particular content areas as well as simply an overall final score or grade. (Note: If a grade is used, there must be assurance that the basis on which it was awarded is the same under both conditions—e.g., not “curved” or otherwise adjusted.)

##### 1. Internal Examinations (Designed by Faculty)

*Parallel Sections Example:* “During the pilot phase, students will be randomly assigned to either the traditional course or the redesigned course. Student learning will be assessed mostly through examination developed by departmental faculty. Four objectively scored exams will be developed and used commonly in both the traditional and redesigned sections of the course. The exams will assess both knowledge of content and critical thinking skills to determine how well students meet the six general learning objectives of the course. Students will take one site-based final exam as well. Student performance on each learning outcome measure will be compared to determine whether students in the redesigned course are performing differently than students in the traditional course.”

*Before and After Example:* “The specifics of the assessment plan are sound, resting largely on direct comparisons of student exam performance on common instruments in traditional and re-designed sections Sociology faculty have developed a set of common, objective, questions that measure the understanding of key sociological concepts. This examination has been administered across all sections of the course for the past five years. Results obtained from the traditional offering of the course will be compared with those from the redesigned version.”

##### 2. External Examinations (Available from Outside Sources)

*Parallel Sections Example:* “The assessment plan involves random assignment of students to “experimental” (redesign) and “control” (traditional) groups operating in parallel during the pilot phase of implementation. Assessment will measure student success against established national (ACTFL) guidelines, including an Oral Proficiency Interview that has been widely validated and is also in use in K-12 settings. This will allow the university to compare results of the redesign to baseline literature about results of traditional pedagogy, to compare the added effect of use of multimedia to the same material delivered conventionally, and to gauge the effect of new remediation strategies on student performance.”

*Before and After Example:* “The centerpiece of the assessment plan with respect to direct measures of student learning is its proposed use of the ACS Blended Exam in Chemistry in a before/after design—administered to students in both traditional and redesigned course environments. A well-accepted instrument in chemistry, the ACS Exam has the substantial advantage of allowing inter-institutional comparisons according to common standards.”

## B. Comparisons of Common Content Items Selected from Exams

If a common exam cannot be given—or is deemed to be inappropriate—an equally good approach is to embed some common questions or items in the examinations or assignments administered in the redesigned and traditional delivery formats. This design allows common baselines to be established, but still leaves room for individual faculty members to structure the balance of these finals in their own ways where appropriate. For multiple-choice examinations, a minimum of twenty such questions should be included. For other kinds of questions, at least one common essay, or two or three problems should be included.

*Parallel Sections Example:* “The primary technique to be used in assessing content is common-item testing for comparing learning outcomes in the redesigned and traditional formats. Traditional and redesigned sections will use many of the same exam questions. Direct comparisons on learning outcomes are to be obtained on the basis of a subset of 30 test items embedded in all final examinations.”

*Before and After Example:* “The assessment plan must address the need to accommodate a total redesign in which running parallel sections is not contemplated. The plan calls for a “before/after” approach using 30 exam questions from the previously delivered traditionally-configured course and embedding them in exams in the redesigned course to provide some benchmarks for comparison.”

## C. Comparisons of Pre- and Post-tests

A third approach is to administer pre- and post-tests to assess student learning gains within the course in both the traditional and redesigned sections and to compare the results. By using this method, both post-test results and “value-added” can be compared across sections.

*Parallel Sections Example:* “The most important student outcome, substantive knowledge of American Government, will be measured in both redesigned and traditional courses. To assess learning and retention, students will take: a pre-test during the first week of the term and a post-test at the end of the term. The Political Science faculty, working with the evaluation team, will design and validate content-specific examinations that are common across traditional and redesigned courses. The instruments will cover a range of behaviors from recall of knowledge to higher-order thinking skills. The examinations will be content-validated through the curriculum design and course objectives.”

*Before and After Example:* “Student learning in the redesigned environment will be measured against learning in the traditional course through standard pre- and post-tests. The university has been collecting data from students taking Introduction to Statistics, using pre- and post-tests to assess student learning gains within the course. Because the same tests are administered in all semesters, they can be used to compare students in the redesigned course with students who have taken the course for a number of years, forming a baseline about learning outcomes in the traditional course. Thus, the institution can compare the learning gains of students in the newly redesigned learning environment with the baseline measures already collected from students taking the current version of the course.”



#### D. Comparisons of Student Work Using Common Rubrics

Naturally occurring samples of student work (e.g. papers, lab assignments, problems, etc.) can be collected and their outcomes compared—a valid and useful approach if the assignments producing the work to be examined really are quite similar. Faculty must have agreed in advance on *how* student performance is to be judged and on the *standards* for scoring or grading (a clear set of criteria or rubrics to grade assignments.) Faculty members should practice applying these criteria in advance of the actual scoring process to familiarize themselves with it and to align their standards. Ideally, some form of assessment of inter-rater agreement should be undertaken.

*Parallel Sections Example:* “Students complete four in-class impromptu writing assignments. A standard set of topics will be established for the traditional and redesigned sections. A standardized method of evaluating the impromptu essays has already been established and will be used in grading each assignment. The essays are graded by using a six-point scale. The reliability measure for this grading scale has been established at 0.92. Additionally, each paper is read by at least two readers. The grading rubric will be applied to the four standard writing assignment prompts administered in parallel in simultaneously offered redesigned and traditional course sections.”

*Before and After Example:* “The assessment plan is quite sophisticated, involving both “before/after” comparisons of student mastery of statistics concepts in the traditional course and the redesigned course. The design itself involves direct comparisons of performance on common assignments and problem sets using detailed scoring guides (many of which were piloted and tested previously and are thus of proven utility). Because the department has already established and benchmarked learning outcomes for statistics concepts in considerable detail, and uses common exercises to operationalize these concepts, the basis of comparison is clear.”

#### E. Comparisons of Course Grades Using Common Criteria

Course grades may be used as the measure of learning if—and only if—grades are assigned on the basis of comparable performances on common instruments using common grading standards. Faculty must have agreed in advance on standards for scoring or grading.

*Parallel Sections Example:* “The department utilizes common grading criteria that address topic and purpose, organization and coherence, development, style, and grammar and mechanics. Specific descriptions within each of the areas are provided to distinguish between grades of A, B, C, D, and F, and faculty members are trained in the interpretation of the criteria. The criteria were established collectively and are applied across all sections of College Composition.”

*Before and After Example:* “Assessment will use before/after comparisons of student performance in the traditional and redesigned settings. The traditional and redesigned sections of the course will use the same textbook assignments and will pursue the same department learning goals. Quizzes, hour exams, and lab assignments will test student knowledge of the same material, and the final exam will include common multiple choice questions for all course sections. Direct measures of achievement will be based on common final examinations that have been administered for many years in the traditional courses. The team will track the proportion of students who receive a C or better to see if student success rates improve.”

## Tips

- Avoid creating “add-on” assessments to regular course assignments such as specially constructed pre and post-tests. These measures can raise significant problems of student motivation. It is easier to match and compare regular course assignments.
- If parallel sections are formed based on student choice, it would be a good idea to consider whether differences in the characteristics of students taking the course in the two formats might be responsible for differences in results. Final learning outcomes could be regressed on the following: status (full vs. part-time); high-school percentile rank; total SAT score; race; gender; whether or not the student was taught by a full-time or part-time faculty member; and whether or not the student was a beginning freshman.
- In addition to choosing one of the five required measures, the redesign team may want to conduct other comparisons between the traditional and redesigned formats such as:
  1. Performance in follow-on courses
  2. Attitude toward subject matter
  3. Deep vs. superficial learning
  4. Increases in the number of majors in the discipline
  5. Student interest in pursuing further coursework in the discipline
  6. Differences in performance among student subpopulations
  7. Student satisfaction measures

**PILOT ASSESSMENT PLAN**

Institution \_\_\_\_\_

Course Title \_\_\_\_\_

1) Which method of comparing learning outcomes do you intend to use? (check all that apply)

\_\_\_\_\_ Parallel Sections

\_\_\_\_\_ # of traditional sections \_\_\_\_\_ # of students in each section \_\_\_\_\_ total # of students

\_\_\_\_\_ # of redesign sections \_\_\_\_\_ # of students in each section \_\_\_\_\_ total # of students

\_\_\_\_\_ Before and After

Source of baseline information:

Timeframe \_\_\_\_\_  
(e.g., fall 2002 semester, AY 2003-2004, five-year average 1999-2004)

\_\_\_\_\_ # of traditional sections \_\_\_\_\_ # of students in each section \_\_\_\_\_ total # of students

\_\_\_\_\_ # of redesign sections \_\_\_\_\_ # of students in each section \_\_\_\_\_ total # of students

2) Which method of obtaining data do you intend to use? (check all that apply)

\_\_\_\_\_ A - Comparisons of common final exams (internal and external)

\_\_\_\_\_ B - Comparisons of common content items selected from exams

\_\_\_\_\_ C - Comparisons of pre- and post-tests

\_\_\_\_\_ D - Comparisons of student work using common rubrics

\_\_\_\_\_ E - Comparisons of course grades using common criteria

Describe briefly: \_\_\_\_\_  
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**FULL IMPLEMENTATION ASSESSMENT PLAN**

Institution \_\_\_\_\_

Course Title \_\_\_\_\_

1) Which source of baseline information do you intend to use? (check all that apply)

\_\_\_\_\_ an offering “before” the redesign began

\_\_\_\_\_ parallel sections during the pilot phase

Timeframe \_\_\_\_\_  
(e.g., fall 2002 semester, AY 2003-2004, five-year average 1999-2004)

\_\_\_\_\_ # of traditional sections \_\_\_\_\_ # of students in each section \_\_\_\_\_ total # of students

\_\_\_\_\_ # of redesign sections \_\_\_\_\_ # of students in each section \_\_\_\_\_ total # of students

2) Which method of obtaining data do you intend to use? (check all that apply)

\_\_\_\_\_ A - Comparisons of common final exams (internal and external)

\_\_\_\_\_ B - Comparisons of common content items selected from exams

\_\_\_\_\_ C - Comparisons of pre- and post-tests

\_\_\_\_\_ D - Comparisons of student work using common rubrics

\_\_\_\_\_ E - Comparisons of course grades using common criteria

Describe briefly: \_\_\_\_\_

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## Cost Reduction Strategies

The 30 projects involved in the [Program in Course Redesign](#) used a variety of strategies to reduce instructional costs. Here is a summary of those strategies that have proven to be most effective.

Step 1. Identify the enrollment profile of the course

- Stable enrollment
- Growing enrollment

Step 2. Choose the appropriate cost reduction strategy.

Step 3. Choose the labor savings tactic(s) that will allow you to implement the chosen strategy with no diminution in quality.

- Substitute coordinated development and delivery of the whole course and shared instructional tasks for individual development and delivery of each individual course section.
- Substitute interactive tutorial software for face-to-face class meetings.
- Substitute automated grading of homework, quizzes, exams for hand grading.
- Substitute course management software for human monitoring of student performance and course administration.
- Substitute peer interaction or interaction with other personnel for one-to-one faculty/student interaction.
- Substitute online training materials for face-to-face training of GTAs, adjuncts and other personnel.

### Is the course enrollment stable?

If the course enrollment is relatively stable (and accommodating more students is not a goal), you must reduce the number of people involved in teaching the course in order to produce cost savings. There are three strategies that will enable you to do this:

- Reduce the number of sections and increase the section size. This will allow you to reduce the number of people involved in teaching the course.

*Example:* [Fairfield University](#) reduced the number of sections from 7 to 2 and increased the number of students in each section from 35-40 to 130-140. These changes enabled Fairfield to reduce the number of full-time faculty teaching the course from 7 to 4, freeing 3 to teach other courses.

- Reduce the number of graduate teaching assistants (GTAs) involved in the course.

*Examples:* [Penn State](#) reduced the number of GTAs from 12 in the traditional course to 4 in the redesigned course. [The University of Iowa](#) reduced the number of GTAs from 21.5 to 17.5, and [Carnegie Mellon University](#) reduced the number of GTAs from 10 to 5.

NOTE: If you do not have GTAs (or you do not want to reduce the number of GTAs), do not despair. Of the 30 projects in the [Program in Course Redesign](#), only 9 (2 of 10 in Round I, 5 of 10 in Round II, and 2 of 10 in Round III) employed this strategy. The other 21 used other cost-reduction strategies.

- Change the mix of personnel teaching the course.

*Example:* [Tallahassee Community College](#) (TCC) reduced the number of full-time faculty involved in teaching the course from 32 to 8 and substituted less expensive adjunct faculty without sacrificing quality and consistency. In the traditional course, full-time faculty taught 70% of the course, and adjuncts taught 30%. In the redesigned course, full-time faculty teach 33% of the course, and adjuncts teach 67%. Full-time faculty were freed to teach second-level courses where finding adjuncts is much more difficult. By making these changes, TCC reduced the cost-per-student by 43% and produced an annual dollar savings of \$321,000, the highest dollar savings in Round III.

*Examples:* Both the [University at Buffalo \(UB\)](#) and the [University of Colorado-Boulder \(UC\)](#) substituted undergraduate learning assistants (ULAs) for GTAs. At UB, the number of assistants available to help students was doubled. The hourly cost of a GTA was \$39 compared to \$8 for an ULA. ULAs turned out to be better at assisting their peers than GTAs because of the ULAs' better understanding of students' common misconceptions and their superior communication skills. While the employment of ULAs at UC was driven by the need to reduce costs (\$23 vs. \$9 per hour), the ULAs were more effective than most GTAs. ULAs were highly motivated to make the course a success. Because students regarded the ULAs as peers, they were more open about their learning difficulties with them than with GTAs.

By mixing and matching these strategies, you can create opportunities for further cost reduction. If you reduce the number of sections and increase the section size (and reduce the number of people involved in teaching the course), you may also

- Reduce the number of graduate teaching assistants (GTAs); and/or change the mix of personnel teaching the course.

*Example:* [Virginia Tech](#) reduced the number of sections from 38 to 1 and increased the number of students in each section from 40 to 1500. In the traditional format, a mix of tenure-track faculty (10), instructors (13), and GTAs (15) taught the 38 sections. In the redesign, tenure-track faculty members' time declined by 85%, and the time spent by GTAs decreased by 82%. The time for all instructors declined by 77%. The redesign added 1,885 hours of undergraduate peer tutoring. Students now receive greater one-on-one assistance: the total interaction time of all personnel increased from 1,140 hours in the traditional model to 2,305 hours in the redesigned course. Full-time faculty were freed to teach upper division math courses; GTAs were deployed to other departmental assignments. By making these changes, [Virginia Tech](#) reduced the cost-per-student by 77%, the highest percentage in Round I.

*Example:* [The University of Southern Mississippi](#) reduced the number of sections from 30 to 2 and increased the number of students in each section from 65 to 1000. These changes enabled the university to reduce the number of faculty teaching the course from 16 (8 full-time faculty and 8 adjuncts) to the equivalent of 2 full-time faculty and 4 GTAs. Prior to the redesign, 50% of the course was taught by full-time faculty, and 50% was

taught by adjuncts. Southern Mississippi eliminated adjuncts completely. The course is now taught 100% by full-time faculty supported by GTAs for writing assignment grading. By making these changes, six full-time faculty were freed to teach other courses, and the funds previously used to hire adjuncts were made available for a variety of academic enhancements in the department. [The University of Southern Mississippi](#) reduced the cost-per-student by 56%, the highest percentage reduction in Round III.

### **Do you want to accommodate enrollment growth?**

If accommodating more students is a goal, you do not have to reduce the number of people involved in teaching the course in order to produce cost savings, although you can do this. Here are three strategies that will enable you to serve more students:

- Increase the number of sections, keep section size the same, keep personnel the same, and serve additional students.

*Example:* [The University of Illinois at Urbana-Champaign](#) has almost doubled the enrollment in three Spanish courses with no increase in staffing. In the traditional format, instructors met with one group (~24 students) four times per week. In the redesigned format, they meet with two groups (~20 students) two times per week each.

*Example:* [Portland State University](#) maintained section size at 20-24 and doubled the number of sections offered, which supported an increase in the total number of students from 690 to 1270. Because of seat-time reduction, the number of sections can be doubled in the same physical space with a small increase in personnel.

- Reduce the number of sections and increase the section size, change the mix and serve additional students

*Example:* [The University of Tennessee-Knoxville \(UTK\)](#) increased the number of students served from 1500 to 2000. In the traditional format, 16 adjunct instructors and 6 GTAs taught 57 sections (~27 students) each. In the redesigned format, GTAs are paired with experienced instructors as support partners, reducing the number of sections from 57 to 38 and doubling the number of students in each section from 27 to 54 students. UTK reduced the cost-per-student by 74%, the highest percentage in Round II.

*Example:* [Florida Gulf Coast University \(FGCU\)](#) reduced the number of sections from 31 to 2 and increased the number of students served in the first year of the redesign from 800 to 950. Full-time faculty taught 20% of the traditional course, and adjuncts taught 80%. FGCU eliminated adjuncts completely; the course is now taught 100% by full-time faculty supported by a new position called the preceptor. Preceptors, most of whom have a B.A. in English, are responsible for interacting with students via email, monitoring student progress, leading Web Board discussions and grading critical analysis essays. Each preceptor works with 10 peer learning teams or a total of 60 students. Replacing adjuncts independently teaching small sections (\$2,200 per 30-student section) with preceptors assigned a small set of specific responsibilities (\$1,800 per 60-student cohort) in the context of a consistent, faculty-designed course structure will allow FGCU to accommodate ongoing enrollment growth while steadily reducing its cost-per-student.

- Change the mix of personnel teaching the course and serve additional students.

*Example:* [Rio Salado College](#) created a new position called the course assistant to troubleshoot technology questions, monitor student progress, and alert instructors to student difficulties with the material. Approximately 90% of questions students asked were non-instructional in nature. Adding the course assistant @ \$12 per hour allowed Rio to increase the number of students that could be handled by one instructor from 30 to 100.



## Homework for Workshop II

In preparation for the workshop, we would like your team to complete three tasks that will give you a taste of the redesign process and make the workshop a more productive and meaningful experience.

### Required Reading

- [Round I Redesigns: Lessons Learned](#)
- [Round II Redesigns: Lessons Learned](#)
- [Round III Redesigns: Lessons Learned](#)

Analyses of the results of the three rounds of course redesign projects, with a focus on the most important quality improvement and cost reduction techniques used in the redesigns, the implementation issues they encountered, and the projected sustainability of the course redesigns.

- [Increasing Success for Underserved Students: Redesigning Introductory Courses \(July 2005\)](#)

A monograph examining the impact of the redesign techniques developed by the Program in Course Redesign on the success of adult students, students of color, and low-income students.

### Draft of sheets 1 and 2 of the Course Planning Tool (CPT)

The Course Planning Tool (CPT) has proven to be an important part of the course redesign process because it facilitates a team analysis of all of the instructional tasks in both the traditional and redesigned format of the course as well as its associated costs. For the workshop, we would like you to complete a draft of sheets 1 and 2 of the CPT (the summary of personnel costs and the analysis of the course in its traditional format) for the course(s) you intend to redesign. This exercise will help you understand the various components of the course, consider those that can be changed and those that cannot, and analyze the sources of the costs of the course.

A downloadable version of the CPT, instructions for how to complete it and completed examples can be found on the Center's web site at <http://www.thencat.org/PlanRes/CPTdesc.htm>.

If you have difficulty downloading the tool, please contact Pat Bartscherer at [patb@theNCAT.org](mailto:patb@theNCAT.org).

If you have questions about completing the tool, please contact Carolyn Jarmon at [cjarmon@theNCAT.org](mailto:cjarmon@theNCAT.org).

An electronic version of the CPT should be sent to Pat Bartscherer at [patb@theNCAT.org](mailto:patb@theNCAT.org) by April 16, 2007.

## Workshop Presentation

We would like each of your team members to be prepared to present a five-minute summary of your choice of redesign model and how you intend to implement the “Five Principles of Successful Course Redesign” within that model. For one part of the workshop, we intend to divide the large group into groups of 8, breaking up institutional teams, so that you can share your ideas about models and principles and receive feedback on your ideas.

### References

- [Five Models for Course Redesign](#)
- [Five Principles of Successful Course Redesign](#)

We encourage you to consider all five redesign models as you think about your own plans rather than assuming that you should follow the model used by the core institutions in your particular discipline. (If you want to select a model based on what those in your discipline chose, that is, of course, also fine.) Our point is that we want you to make a thoughtful choice.

## Corporate Associates Contact Information

The National Center for Academic Transformation and its Corporate Associates work closely together to ensure that educational institutions participating in cutting-edge course redesigns have knowledge of the best technology and best content to produce the best outcomes. By strengthening the communication between those creating the technology and content and those using it, we can further our shared mission of improved learning at reduced costs.

As project teams consider which tools to use, questions specific to a course redesign project may arise that cannot be answered by the sales representative that is assigned to your institution. If that situation arises, please refer to the contact information below for a person at each of the companies we currently work with that NCAT knows is familiar with the NCAT course redesign program and can help. In addition, teams might be contacted by these companies proactively but are under no obligation to work with them. Please note that NCAT does not endorse any particular company, software or tool but rather all tools that are proven to be effective in improving learning outcomes and reducing instructional costs.

### Company

### Contact(s)

Houghton Mifflin Company  
732-868-1613

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650-637-7656

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**AGENDA**  
**THE REDESIGN ALLIANCE ANNUAL MEETING**  
**THE ROSEN CENTRE**  
**ORLANDO, FLORIDA**

**Sunday, March 18**

4:00 – 5:00 pm                      Orientation for those new to course redesign

**Monday, March 19**

8:30 – 9:30 am                      Opening Keynote: Carol A. Twigg  
*State-of-the-Art Course Redesign: What We've Achieved and  
Where We Need To Go*

9:30 – 10:00 am                      Break

**10:00 – 11:00 am                      Disciplinary Showcase Sessions in Humanities;  
Mathematics, Statistics, Computer Science; Natural  
Sciences; and, Social Sciences**

Session Type:                      Showcase session - a moderator introduces three speakers from  
different institutions/organizations who make separate 10-minute  
presentations. The moderator invites questions from the  
audience.

Description:                      The purpose of these sessions is to enable participants to learn  
about three successful course redesigns so that those new to  
course redesign will be inspired to begin and those experienced  
in course redesign can learn from their colleagues. The goal is to  
achieve a 50/50 split between presentation and interaction with  
the audience.

Speakers:                      Humanities

- Rob Sanders, Portland State University, Spanish
- Sally Search, Tallahassee Community College, English  
Composition
- Jim Wohlpart, Florida Gulf Coast University, Understanding  
the Visual and Performing Arts

Quantitative

- Joe Benson, University of Alabama, Mathematics
- Tristan Denley, University of Mississippi, Mathematics
- Kirk Trigsted, University of Idaho, Mathematics

Natural Sciences

- Elizabeth Connor, University of Massachusetts, Amherst,  
Biology
- Malcolm Hill, University of Richmond, Biology
- Amiee Wagner, Central Ohio Technical College, Anatomy  
and Physiology

### Social Sciences

- Gordon Hodge, University of New Mexico, Psychology
- Mary Jane Pasky, Lorain County Community College, Macro- and Micro-Economics
- Bill Williams, Eastern Washington University, Psychology

**11:00 am – 12:00 pm**

### **Disciplinary Roundtable Discussion Sessions in Humanities; Mathematics, Statistics, Computer Science; Natural Sciences; and, Social Sciences**

Session Type:

Roundtable discussion session - one or two individuals act as the moderator(s). They give a brief introduction to the topic and then facilitate a discussion among the audience members.

Description:

The purpose of this session is to allow participants more time for in-depth discussion of the issues and challenges related to course redesign in general and the disciplines in particular. Moderators will be prepared to lead the discussions by focusing on a series of topics that reflect those issues and challenges.

12:00 – 1:30 pm

Lunch

**1:30 – 2:30 pm**

### **Eight Great Ideas: Successful Redesign Techniques**

Session Type:

Inspirational session - a moderator introduces two to three speakers from different institutions/organizations who make separate 10-minute presentations to stimulate discussion and new ways of thinking.

General Description:

The purpose of these sessions is to enable participants to learn about innovative course redesign techniques that concretely address a particular academic and/or resource problem. The goal is to achieve a 50/50 split between presentation and interaction with the audience.

### Topics and Session Descriptions

#### 1. Creating "Small" within "Large"

Description: One of the key characteristics of many course redesign projects is larger class size leading to reduced cost. Some begin with large lecture sections and retain those large sizes in the redesign; others reduce the number of sections offered and create larger classes; and, still others combine all sections into one large section. Yet these projects also increase student learning. Learn how to create "small" within "large" by using techniques such as peer learning teams and small learning communities that lead to greater student success.

*Presenters:* Malcolm Hill, University of Richmond; TBD, University of Colorado—Boulder; Phil Turner, University of North Texas.

#### 2. Effective Use of Undergraduate Learning Assistants

Description: Using undergraduates as peer tutors or learning assistants can radically increase the amount of personalized assistance available to students and do so cost effectively. When properly trained, undergraduates have turned out to be better at assisting their peers than graduate students because of their better understanding of students' misconceptions and their superior communication skills. Learn how to make effective use of undergraduates in your course

redesign.

*Presenters:* Ray Purdom, University of North Carolina—Greensboro; Kirk Trigsted, University of Idaho; Bill Williams, Eastern Washington University.

### 3. New Instructional Roles

*Description:* Are highly trained faculty members needed to conduct all tasks associated with delivering a course? By constructing an instructional support system that comprises various kinds of personnel, institutions can apply the right level of human intervention to particular kinds of student problems. Large-scale course redesigns have created new kinds of positions such as course assistants, preceptors and course coordinators that have specific roles within the course, leaving faculty free to concentrate on those tasks that require their level of expertise. Learn how to re-think faculty roles within large courses from those who have developed innovative approaches to staffing.

*Presenters:* Chuck Hodges, Virginia Tech; Scott Karakas, Florida Gulf Coast University; Burck Smith, SMARTHINKING.

### 4. Freshmen Don't Do Optional

*Description:* Course redesign always succeeds when we engage students in doing the coursework, yet typically 30% or so may fail to participate in scheduled learning activities. Some institutions have been more successful than others in addressing the issue of “non-participating” students. Learn how to ensure that students spend sufficient time on task by using techniques such as scaffolding, mastery quizzing and giving points for participation that lead to greater course completion rates.

*Presenters:* Joe Benson, University of Alabama; Gordon Hodge, University of New Mexico; Jim Wohlpart, Florida Gulf Coast University.

### 5. Modularization: Greater Flexibility Means Increased Learning Efficiency

*Description:* Many students get to the end of a course having mastered a large percentage of the material but not enough to pass the course. They are then forced to repeat the entire course. Others are required to take a developmental course because of low placement scores when they only lack a small part of the course content. Course modularization offers institutions a way to accommodate “partial” learning by letting students study only what they don't know and make more rapid progress. Learn about different ways to modularize your course and what implementation issues need to be considered in advance.

*Presenters:* Houston Davis, Tennessee Board of Regents; Karen Silverio, Pearson Education; Randy Smith, Ohio State University.

### 6. Avoiding “Either/Or” Choices

*Description:* We know that students bring different backgrounds, interests and abilities to college courses, yet what do we offer them most of the time? A fixed meal! The meals may be different from course to course—some may be lecture-based, others may be fully online—but most courses employ single strategies. Learn how to offer students a buffet of learning opportunities or a menu of choices that offer different paths to achieve the same learning outcomes.

*Presenters:* Dennis Pearl, Ohio State University; Donna Seagle, Chattanooga State and Technical College; Sally Search, Tallahassee Community College.

## 7. Student Readiness for Course Redesign

Description: Making the change from traditional classroom instruction to new ways of learning involves far more than learning to use a computer. Many students are set in their ways after a lifetime (albeit brief) of passive instruction. They need preparation in making the transition to more active learning environments. Learner readiness involves not only access to computers and to the network but also access to technical and other forms of student support (e.g., help in using navigation tools, course management systems, etc.) Learn about different approaches to ensuring that students acquire the skills and attitudes that are required in order to be successful in technology-intensive courses.

*Presenters:* Steve Acker, Ohio State University; Becca Morgan, Wayne State University; Randy Upchurch, University of Central Florida.

## 8. Working with Commercial Software

Description: Incorporating commercial software and other technology-based curricular materials can give faculty a "head start" in the redesign process by enabling them to focus on redesign issues rather than on materials creation. Working with commercial publishers can be challenging and rewarding—challenging because the current state of the market is far from perfect and rewarding because the amount and quality of instructional software is improving every year. Learn from those who have used commercial software in their course redesigns, both the promises and the pitfalls, and how you can build on their success.

*Presenters:* Bob Olin, University of Alabama; Phoebe Rouse, Louisiana State University; Rob Sanders, Portland State University.

2:30 – 3:00 pm

Break

3:00 – 4:00 pm

### **Eight Great Ideas: Successful Redesign Techniques**

Sessions will be repeated so that attendees may participate in a second session.

4:00 – 5:00 pm

### **Plenary Panel Building an Assessment Culture**

Session Type:

Plenary panel session - a moderator introduces two or three speakers who each make a single 10 – 15 minute presentation on the same topic, representing different experiences or points of view.

General Description:

Plenary panels take as their theme one of the Alliance's eight areas of work: Pedagogy, Resources, Assessment, Underserved Students, Technologies, Learning Materials, Learning Space Design and Change. The panel will focus on the relationship of higher education's "big" issues to ways in which course redesign can address them.

Specific Description:

Higher education is well aware of the demands for greater accountability coming from policy makers, accreditation associations, the Spellings Commission, and so on. Most often, this takes the form of improving how well we assess student learning outcomes and reporting those assessments to multiple publics. Student learning can be assessed at the degree level, the program level and the course level, but how do these different levels fit together? This panel will discuss the "whys" and "hows" of the current emphasis on assessment and where

assessment of student learning in redesigned courses fits in the big picture.

Panelists: TBD, US Department of Education; Peter Ewell, National Center for Higher Education Management Systems; Mari Pearlman, Educational Testing Service; *Moderator*: Carol Twigg, NCAT.

5:30 – 7:30 pm Reception

## **Tuesday, March 20**

8:30 – 9:30 am **Hot Topics in Course Redesign**

Session Type: Inspirational session - a moderator introduces two to three speakers from different institutions/organizations who make separate 10-minute presentations to stimulate discussion and new ways of thinking.

General Description: The purpose of these sessions is to enable participants to learn about innovative approaches to each topic and have an opportunity to exchange ideas. The goal is to achieve a 50/50 split between presentation and interaction with the audience.

### Topics and Session Descriptions

#### 1. Feedback Forum

Description: The purpose of the Feedback Forum is to create an opportunity for those who have an idea of what they would like to do in a new course redesign and would like to get feedback on the idea from those who have done it. We anticipate that the Redesign Scholars will moderate the session and, together with the audience, offer feedback. We will require attendees to pre-register for this session in order to organize it appropriately. We anticipate, at a minimum, that the 20 institutional teams selected to participate in Round I of the Colleagues Committed to Redesign (C<sup>2</sup>R) program will take advantage of this session.

*Moderators*: Malcolm Hill, University of Richmond (Natural Sciences); Gordon Hodge, University of New Mexico (Social Sciences); Phoebe Rouse, Louisiana State University (Quantitative); Jim Wohlpart, Florida Gulf Coast University (Humanities).

#### 2. So You Want To Do a Course Redesign? How To Get Started

Description: Course redesign sounds like a great idea—improving learning while reducing costs—who wouldn't want to do that? But how do we get started? What do we do first? Among other things, this session will discuss what it means to be “ready,” initial data collection, generating buy-in, getting the right people on the redesign team and linking the redesign effort to larger institutional initiatives. Learn what to do first and why from those who have been through the experience and get your questions answered.

*Presenters*: Elizabeth Connor, University of Massachusetts, Amherst; Mary Jane Pasky, Lorain County Community College; Phil Turner, University of North Texas.

#### 3. Using Assessment to Achieve Other Goals

Description: Course redesign requires assessing student learning in both traditional and redesigned formats to “prove” that the new way is superior to the old. As such, assessment is a



powerful instrument for change. Disagreements among faculty about the “best” way to teach can often be resolved by collecting data about the “best” way to learn. Because the state-of-the-art in campus assessment is relatively weak, assessments used in course redesign can provide an entre to generating interest among faculty and administrators in assessment in general. Learn from those who have conducted an original assessment of learning outcomes in one course have seen how that can be parleyed into achieving other institutional goals.

*Presenters:* Peter Ewell, National Center for Higher Education Management Systems; Randy Smith, Ohio State University; Candace Thille, Carnegie Mellon University.

#### 4. Redesigning Developmental and Remedial Education

Description: A recent NCES study revealed that 28% of entering freshmen in 2000 were enrolled in one or more remedial reading, writing, or mathematics courses. At public two-year institutions, 42% of freshmen enroll in these courses; at public four-year institutions, 20% enroll. Can course redesign using technology in developmental and remedial courses increase student success and reduce the inordinate amount of time and expense required of students who participate in such courses? Learn from those who have redesigned these courses what works and what does not and add your thoughts and ideas to the discussion.

*Presenters:* Sally Search, Tallahassee Community College; Kirk Trigsted, University of Idaho.

#### 5. Getting Faculty On Board

Description: Faculty support for and participation in course redesign initiatives are crucial to achieving a successful outcome. But frequently administrators may need to generate that support or pioneering faculty may need to win over their colleagues to try something new. How do you overcome resistance to change? How do you deal with differences of opinion about the “best” way to teach? How do you achieve consensus on what the redesign should look like and what it should accomplish? Learn from those who have grappled with these challenges successfully to complete a large-scale course redesign and bring your tough questions for an exchange of ideas.

*Presenters:* Bob Henshaw, University of North Carolina–Chapel Hill; Linda Morris, University of Idaho; Bob Olin, University of Alabama.

#### 6. Increasing Success for Underserved Students

Description: What has been the impact of course redesign on underserved students—students of color, low-income students, first-generation college students and working adults? Does course redesign work as well, better than or less than with them as with more traditional students? Do institutions have to take things like technology anxiety and/or access into account when thinking about redesign for underserved students? Learn about what works and what doesn't work with this target population and contribute your thoughts and experiences to the discussion.

*Presenters:* Joe Benson, University of Alabama; John Broida, University of Southern Maine; Karen Mills, Rio Salado College. *Moderator:*

#### 7. Better Retention through Course Redesign

Description: Course redesign has reduced drop-failure-withdrawal (DFW) rates and increased successful course completion, leading to overall increases in student retention. Learn from three institutions with great track records how they have increased student success and how you replicate what they have done on your own campus.

*Presenters:* Dennis Pearl, Ohio State University; Ray Purdom, University of North Carolina – Greensboro; Amiee Wagner, Central Ohio Technical College.

## 8. Responding to High Enrollment Demand

Description: Are some courses at your institution experiencing greater demand than you can meet with current resources? Do over-enrolled courses increase faculty workload? Are students unable to enroll in certain courses when it fits their schedules, creating “academic bottlenecks” that impede progress to graduation? Is overall enrollment demand at your institution growing but without commensurate growth in resources? Course redesign offers many solutions to these challenges. Learn from those who have increased student enrollments without increasing faculty workload what strategies worked best for them.

*Presenters:* Ben Hambleton, Boise State University; Rob Sanders, Portland State University; Margaret Trim, Central Ohio Technical College.

9:30 – 10:00 am	Break
10:00 – 11:00 am	<b>Hot Topics in Course Redesign</b> Sessions will be repeated so that attendees may participate in a second session.
11:00 am – 12:00 pm	<b>Plenary Panel</b> <b>Change Strategies: Moving Beyond the First Redesign</b>
Session Type:	Plenary panel session - a moderator introduces two or three speakers who each make a single 10 – 15 minute presentation on the same topic, representing different experiences or points of view.
General Description:	Plenary panels take as their theme one of the Alliance’s eight areas of work: Pedagogy, Resources, Assessment, Underserved Students, Technologies, Learning Materials, Learning Space Design and Change. The panel will focus on the relationship of higher education’s “big” issues to ways in which course redesign can address them.
Specific Description:	Course redesign that improves learning while reducing costs has tremendous promise for making substantial change in the ways that all of us in higher education teach and learn. But one course is just a good start. How do we sustain what we’ve started? How do we scale what we learn in one course redesign beyond that one course? How do we have an impact on other courses within the department? On other departments? On the entire institution?
Panelists:	Malcolm Hill, University of Richmond; Bob Olin, University of Alabama; Nancy Shapiro, University System of Maryland; <i>Moderator:</i> Carolyn Jarmon, NCAT.
12:00 – 1:00 pm	Lunch

## ABOUT THE NATIONAL CENTER FOR ACADEMIC TRANSFORMATION

### Who We Are

The National Center for Academic Transformation (NCAT) is an independent, not-for-profit organization that provides leadership in using information technology to redesign learning environments to produce better learning outcomes for students at a reduced cost to the institution. The NCAT staff has extensive experience in higher education as faculty members, administrators and researchers in both traditional and non-traditional higher education environments.

### What We Do

NCAT works through a four-stage iterative process to advance the use of information technology in improving student learning and reducing instructional costs:

#### 1. Proof of Concept

NCAT creates and conducts innovative programs that use technology to improve learning and reduce costs in partnership with colleges and universities. The outcome of each effort is a proof of concept. For example:

- Program in Course Redesign (PCR), funded by the Pew Charitable Trusts, 1999 – 2003
- Roadmap to Redesign (R2R), funded by FIPSE, 2003 – 2006
- Colleagues Committed to Redesign (C2R), funded by FIPSE, 2006 – 2009

#### 2. Analysis

NCAT analyzes the results of these programs to identify and document specific techniques and practices that lead to success, to develop models for future practice and to learn what next steps are needed to scale the proof of concept. For example:

- PCR Outcomes Analyses
- Increasing Success for Underserved Students, a Lumina-funded study
- R2R Outcomes Analyses

#### 3. Communication

NCAT communicates these lessons learned by writing and speaking for professional and general audiences about successful patterns and practices that lead to improved student learning and reduced instructional costs. For example:

- *The Learning MarketSpace*, a quarterly electronic newsletter
- Articles and Monographs, available on the NCAT web site
- The Redesign Alliance, a national membership organization

#### 4. Scale

NCAT works with institutions, systems, districts and states to scale the proof of concept to impact greater numbers of students, faculty members and institutions and achieve significant educational change. For example:

- Arizona Board of Regents (2006 – 2009)
- Tennessee Board of Regents (2006 – 2009)
- University System of Maryland (2006 – 2009)

NCAT then uses the feedback and experience gained in each stage of the process to create and conduct additional programs in partnership with colleges and universities that demonstrate new ways to achieve improved student learning and reduced instructional cost.

For more information about NCAT and its programs, see [www.theNCAT.org](http://www.theNCAT.org).