

APPLICATION GUIDELINES

MISSOURI COURSE REDESIGN INITIATIVE

The Governor of Missouri and Missouri's public four-year institutions invite participation in a new statewide initiative to redesign large-enrollment, multi-section undergraduate courses using technology-supported active learning strategies. The goal is to achieve improvements in learning outcomes as well as reductions in instructional costs. During the 2010-2011 academic year, the program expects to support one project at each participating campus.

The goals of the program are to

- Adopt new ways to improve student learning outcomes
- Demonstrate these improvements through rigorous assessment
- Reduce institutional costs
- Free up instructional resources for other purposes
- Develop the internal capacity of Missouri faculty and staff to continue the redesign process

Missouri's public four-year institutions will partner with the National Center for Academic Transformation (NCAT) and build on the successful models and lessons learned from NCAT's national course redesign programs. The Missouri initiative will engage with NCAT to support an initial course redesign project, which will enable us to develop internal capacity to support this process on an ongoing basis throughout the state.

It is important to remember what NCAT means by course redesign. Course redesign is the process of redesigning whole courses (rather than individual classes or sections) to achieve better learning outcomes at a lower cost by taking advantage of the capabilities of information technology. Course redesign is not just about putting courses online. It is about rethinking the way we deliver instruction, especially large-enrollment core courses, in light of the possibilities that new technology offers.

The high level of success achieved in NCAT's course redesign programs can be attributed to selecting participants who were ready to succeed, teaching them the planning methodology and actively supporting them as they developed their redesign plans. Faculty and administrators involved in NCAT's course redesign programs have repeatedly indicated that understanding the planning methodology is the key to the success of their redesigns. And once learned, the methodology is easily transferable to other courses and disciplines. In the Missouri program, we will replicate this process by engaging with NCAT to provide prospective participants with a variety of planning resources through a series of workshops and consultations. Prospective participants will be supported directly by NCAT staff throughout the process.

Following an orientation workshop on February 18, 2011, described in the [Call to Participate](#), the program will employ a seven-stage application process:

Stage One: Establishing Institutional Teams

Institutions will establish *institutional teams* to undertake large-enrollment course redesigns. These teams should include the following people:

- *Faculty Experts.* Course redesign requires that faculty experts explicitly identify the course's desired learning outcomes and agree on course content. Large-enrollment courses typically include more than one faculty member. To ensure course consistency, these faculty experts must work together on the redesign, resolving any differences in how the course will be offered, and collaboratively plan the most effective way to accomplish the redesign goals.
- *Administrators.* Because these redesigns impact multiple sections, large numbers of students as well as academic policies and practices, it is important to involve academic administrators on the team. The level of these administrators will depend on the organization and size of the institution. For some it will be the Provost/Academic Vice President or designee; for others it will be a dean or department chair. These team members play an important role when institutional issues such as changes in scheduling or the use of classroom space arise. If unexpected implementation issues arise in the process of redesign implementation, administrators can help the team resolve them quickly and effectively across institutional offices.
- *Technology Professionals.* These team members provide expertise so that the redesign goals are accomplished in ways that make the technology as easy for students to use as possible. Technology professionals contribute ideas about how to increase interaction with content as well as with other students. They also suggest design approaches to ensure that the technology does not limit students' learning options.
- *Assessment Experts.* NCAT will suggest straightforward methods to enable student learning in the redesigned course to be compared to that of the traditional course. It is, however, useful to include someone who is knowledgeable about assessment and research design on the team, particularly if the institution seeks to measure additional facets of the redesign such as performance in downstream courses or student satisfaction, to name a few. This expertise may be found in departments of education or psychology or in offices of institutional research.

Stage Two: Identifying the Course

Some courses may be more ready than others to be the focus of a large-scale redesign effort. Because of prior experiences with technology-mediated teaching and learning, and because of numerous attitudinal factors, some faculty members may be more ready to engage in large-scale redesign efforts to achieve the program's goals.

Those interested in participating in the redesign program will be asked to think carefully about which courses are good candidates for redesign at their institution and to respond to the following Course Readiness Criteria.

Completing the readiness criteria also enables each institution to assess collectively its strengths and weaknesses, gaining an understanding of what it needs to do to address gaps in its preparation early in the process. No institution perfectly meets all of the readiness criteria, especially at the beginning of the planning process. Every institution will discover things it needs to work on in order to carry out a successful course redesign. The readiness criteria are designed to help you select the course with the highest chance of success. Answering each as honestly as possible—and providing data to support your answers—will lead to the most positive outcome for your institution.

As noted above, this program will require you to establish a redesign team because of the multiple dimensions involved in large-scale course redesign. The first activity of the team will be to complete the responses to the following readiness criteria. In some cases, you will be asked to read an article, discuss the reading as a team and make a tentative decision, which may change as you learn more about the redesign process.

1. Course Choice

Choosing the right course is the first step in a successful course redesign project. Courses that face academic or resource problems or both are the best targets. What impact will redesigning the course have on the curriculum, on students and on the institution—i.e., why do you want to redesign this course? Please be specific—i.e., provide data on pass rates, enrollment numbers, and so on.

Is there an academic problem in this course such as a high failure rate? Does the course face a resource problem such as how to meet increased enrollment demand with no commensurate increase in resources? Is the redesign linked to some larger institutional goal—e.g., a Quality Enhancement Plan (QEP), campus strategic plan, a re-accreditation process?

2. Redesign Model

When you develop your redesign plan, you will be asked to select a redesign model. Please read “Six Models for Course Redesign,” available at <http://www.thencat.org/R2R/R2R%20PDFs/Six%20Models%20for%20Course%20Redesign.pdf>, which describes six possible models. At this point in the planning process, which redesign model do you think would be most appropriate for your redesign? Why?

When you look at the models chosen by successful redesign projects, you will notice that certain disciplines select particular models—e.g., math uses the emporium model, foreign languages use the replacement model, and so on. What aspects of the model you are thinking about using fit your particular discipline and your particular students? Have other successful course redesign projects in your discipline used this model?

3. Assessment Plan

When you develop your redesign plan, you will be asked to select an assessment model. Please read “Four Models for Assessing Student Learning,” available at

http://www.thencat.org/PlanRes/R2R_ModAssess.htm, which describes four possible models. At this point in the planning process, which assessment model do you think would be most appropriate for your redesign? Why?

Successful large-scale redesign efforts begin by identifying the intended learning outcomes and developing alternative methods other than lecture/presentation for achieving them. Have those responsible for the course identified the course's expected/intended learning outcomes in detail? Do you have baseline data for the course in its traditional format? If so, please describe. If not, how do you plan to collect baseline data and compare it to student learning outcomes after you have redesigned the course?

4. Cost Savings Plan

When you develop your redesign plan, you will be asked to select a cost reduction strategy. Please read "Cost Reduction Strategies," available at http://www.thencat.org/PlanRes/R2R_CostRed.htm, which describes a number of strategies for producing cost savings. At this point in the planning process, which cost savings strategy do you think would be most appropriate for your redesign? Why?

What does cost savings mean in practice? In the past, cost reduction in higher education has meant loss of jobs, but that's not the NCAT approach. In every NCAT course redesign project, the cost savings achieved through the redesigned courses remained in the department that generated them, and the savings achieved were used for instructional purposes. By reducing the cost of offering the redesigned course, institutions have been able to reallocate and do what they would like to do if they had additional resources.

5. Learning Materials

Successful course redesign that improves student learning while reducing instructional costs is heavily dependent upon high-quality, interactive learning materials. Are the participating faculty members able and willing to incorporate existing curricular materials in order to focus work on redesign issues rather than materials creation? What learning materials are you thinking about using in your redesign?

Ideally, one wants the faculty to have a "head start" in the redesign process if possible. Is the discipline one with a comparatively large existing body of technology-based curricular materials and/or assessment instruments? Are the faculty willing to use these materials if they meet course objectives? Will they employ an appropriate blend of using these materials and created "home-grown" materials in a non-dogmatic fashion? Are they willing to partner with other content providers such as commercial software producers or other universities who have developed technology-based materials?

6. Active Learning

Greater student engagement with course content and with one another, supported by information technology, is essential to achieving student success. Do the course faculty members have an understanding of and some experience with integrating elements of computer-based instruction into existing courses to support active learning?

Sound pedagogy is the key to successful redesign projects. When sound pedagogy leads, technology becomes an enabler for good practice rather than the driver. Some faculty may have a great deal of enthusiasm for large-scale redesign but little prior experience in this area. It is difficult to complete a successful project by starting from scratch. Having some experience helps to prepare for large-scale redesign efforts. Have the faculty systematically thought about and investigated alternative methods for empowering students to learn? What evidence can you provide to demonstrate faculty experience with integrating computing into existing courses in order to support active learning?

7. Collective Commitment

A collective commitment is a key factor for the success and the sustainability of redesign projects. As part of the planning process, you have been asked to form an institutional team. Please describe the members of your team, the skills they bring to the project and what their roles will be in both the planning and implementation phases of the project.

Are the faculty ready to collaborate? Have they engaged in joint conversations about the need for change? Are decisions about the course made collectively--in other words, beyond the individual faculty member level? Substantive changes cannot rely on faculty initiative alone because they are systemic and involve changes in such areas as policy (class meeting times, contact-hour requirements, governance approvals); budgeting (planning and processes that support innovation); systems (registration systems, classroom assignments); and, infrastructure (equipment purchase and deployment.) What is the level of support for the project beyond the departmental level?

Institutions wishing to participate in the program should send a narrative addressing each of the course readiness criteria (about one page each) as they apply to the selected course, focusing on evidence that demonstrates the way in which they meet each criterion.

Please include a cover page with your proposal on which you

- List all team members by name including titles, academic affiliation, phone numbers and email addresses;
- Identify the person who is the primary contact for your team project, with the understanding that the primary contact will share communications appropriately with the rest of your team.

Institutional responses to the Course Readiness Criteria should be submitted electronically to Pat Bartscherer, NCAT Program Manager, at patb@theNCAT.org with a copy to your campus provost/chief academic officer.

Deadline for submission: March 15, 2011.

Stage Three: Planning for Redesign

Based on their responses to the Course Readiness Criteria, institutional teams will be invited to participate in a second one-day workshop, "Developing the Proposal," conducted by the National Center for Academic Transformation on April 8, 2011.

This workshop will provide an in-depth understanding of the redesign process with

emphasis on selecting an appropriate redesign model, determining how the redesign model will embody key pedagogical principles, planning for cost savings, assessing student learning outcomes, and developing a budget for the redesign project.

Workshop participants will be the core team members who will implement the redesign project. The workshop will also give participants an opportunity to share ideas, to obtain feedback from program staff, and to assess the quality of their proposal ideas in relation to others.

Prior to the workshop, teams will be asked to complete additional background reading about course redesign and to prepare a five-minute presentation about their tentative course redesign plans.

Stage Four: Developing Final Project Plans

Institutions that participate in the April 8, 2011 workshop will be invited to submit a final project plan according to a specified format, which includes both narrative and forms. Staff from NCAT will provide individualized assistance as prospective participants prepare their plans. Institutions will be encouraged to submit drafts of their plans for review and feedback before the final submission.

Each final plan must include a project budget developed in consultation with your campus provost/chief academic officer. Final proposals should be submitted electronically to Pat Bartscherer, NCAT Program Manager, at patb@theNCAT.org with a copy to your campus provost/chief academic officer.

Deadline for Submission of Final Plans: July 15, 2011.

The provosts/chief academic officers from the Missouri public four-year universities in consultation with NCAT will review the final proposals and make final selections. In addition to selecting projects that are likely to succeed and to have the highest impact, the Missouri program will give priority to working in a variety of academic disciplines.

Projects will be selected to participate in the program by July 30, 2011 so that campuses can begin work in late summer.

Selection Criteria

- Large-enrollment courses may be courses with very large sections (e.g., traditional lecture courses) or courses that offer large numbers of smaller sections. In all cases, more than one person should be involved in teaching the course.
- The course selected to be redesigned should face an academic problem (e.g., low successful completion rates), a resource problem (e.g., an inability to meet demand based on current resources), or a combination of both.
- The course selected must be at the undergraduate level.
- Participants must be fully committed to completely redesigning and delivering a large enrollment course currently offered at a Missouri public four-year institution.

Stage Five: Planning and Developing the Pilot

Participants must plan to conduct a pilot implementation during the spring 2012 term and collect data on comparative student learning outcomes between traditional sections and redesigned sections. Pilot implementations should involve a substantial percentage of students enrolled in the course in order to test the efficacy of the redesign. Pilots do not have to involve all students and sections but should be designed such that they can scale to all sections if they are successful.

Institutional teams will be expected to engage in focused on-campus planning during the summer and fall of 2011. They will complete redesign preparations, finalize project teams, train faculty and staff, complete redesign activities, modify existing course materials when necessary, and incorporate additional content into course materials.

Stage Six: Piloting the Redesign

During spring 2012, campuses will conduct pilot implementations of their course redesigns. Teams will collect initial assessment data that compares student learning outcomes in the traditional course with those in the redesigned format. Teams will make adjustments in the course materials and organization, if needed, in preparation for a full implementation in fall 2012 term.

Stage Seven: Implementing the Full Redesign

In fall 2012, institutional teams will fully implement their course redesigns and collect data on comparative student learning outcomes and on final instructional costs.

TIMELINE

December 2010	Call to Participate issued
February 18, 2011	Workshop #1: Orientation to Course Redesign
March 15, 2011	Course Readiness Instrument submission deadline
April 8, 2011	Workshop #2: Developing the Proposal
May – June 2011	Teams develop project proposals
July 15, 2011	Teams submit final project proposals
July 30, 2011	Projects selected
August – December 2011	Campus planning and development
Spring 2012	Campus course redesign pilots
May/June 2012	Interim campus reports due
May/June 2012	Workshop #3: Mid-Course Sharing
Summer 2012	Campus revisions
Fall 2012	Course redesign full implementations
March 2013	Final campus reports due
March 2013	Workshop #4: Dissemination of Results

More information about the Missouri program can be found at <http://www.theNCAT.org/States/MO.html>. You may also contact:

- Your campus provost/chief academic officer.
- Christa Weisbrook, Faculty Fellow, University of Missouri System, (573) 882-0001, chris@umsystem.edu.
- Carolyn Jarmon, NCAT Vice President, (518) 695-5320, cjarmon@theNCAT.org.