



# Engaging Students in their Learning

## **Top 25 Newsletters**

This is the first in a series of newsletters designed to acquaint the university community with the exciting and innovative work now underway in a number of Miami's large enrollment courses. The creative approaches to teaching taking place in Top 25 courses can serve as models for course development across the university. This first newsletter introduces the Top 25 project. Subsequent newsletters will provide more detailed examples of redesigned courses.

## **What is the Top 25 Project?**

A key element of Miami's new Mission and Goals Statement is a learner-centered approach to education. The first strategic goal speaks to "implementing developmentally-appropriate learning and a discovery-based curriculum that focuses on inquiry-driven, active forms of education." Inquiry-driven learning refers to student investigation of problems and issues through active exploration of content. The Top 25 Project implements the goal of inquiry-driven learning in large enrollment courses. The program is designed to influence large numbers of students by focusing on the courses with the highest enrollments – the "Top 25." These courses account for over 20% of undergraduate credit and a sizeable portion of the first year student's curriculum.

## **Who is participating?**

Although the Top 25 Project began with 25 courses (hence the name), it has grown to include 31 courses in 21 departments: Accountancy, Art, Botany, Chemistry, Communication, Computer Science and Systems Analysis, Decision Sciences and Management Information Systems, Economics, Educational Psychology, English, Finance, Geography, Geology, Management, Marketing, Mathematics and Statistics, Microbiology, Political Science, Psychology, Theatre and Zoology.

## **What is the proposal process?**

Two years ago all departments housing Top 25 courses were invited to submit pre-proposals for up to \$35,000 of funding for redesign.

Departments choosing to apply formed teams of faculty to write proposals and implement the project. Pre-proposals addressed active learning, engaging students, critical thinking, learning outside of the classroom, assessment, use of resources, and cost-effectiveness. A selection committee representing all academic divisions evaluated pre-proposals and requested full proposals from those they found most promising. A consultative process that included Liberal Education and Assessment, Advanced Learning Technologies, and the departmental team was used for the development of the full proposal.

## **Where are we?**

To date, 12 proposals from four divisions have been funded in two rounds. Teams are currently at various stages of course redesign. A few teams have piloted new courses and conducted assessments. Some teams have instituted portions of their new designs. Others are still in the development stage. For all, redesign has meant rethinking pedagogy, implementing new technology, and collaborating with the graduate assistants, temporary faculty or undergraduate teaching associates that might be involved in teaching a course. Most have encountered bumps along the road, but have also felt the stimulation of new approaches to teaching. Teams are meeting with other teams and with Liberal Education and Assessment, Advanced Learning Technologies, and Center for the Enhancement of Learning and Teaching staff to share information and garner support. Assessment has been an integral part of the process, with data collection and analysis well underway.

## **What's next?**

October 1 is the deadline for the third round of pre-proposals. All Top 25 courses will have submitted proposals by 2009-10. The level of change required in moving courses to an inquiry-guided model has meant a great deal of hard work. Within the next several years, however, revolutionary new approaches to large enrollment courses will transform the manner in which a significant proportion of Miami students learn.



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## **What is Inquiry-Guided Learning?**

At the heart of the Top 25 course redesign project is inquiry-guided learning. Inquiry-guided learning has been defined as “an array of classroom practices that promote student learning through guided and, increasingly, independent investigation of complex questions and problems, often for which there is no single answer.”<sup>1</sup> Inquiry learning emphasizes active engagement with the subject matter in a way that challenges students to seek answers on their own or with their peers. Teaching using an inquiry approach requires a scaffolding that provides ample support for students at the beginning stages of exploration, then gradually removes support as students become more adept at independent discovery.

## **Thoughts about Inquiry Learning at Miami**

Top 25 team leaders have discussed inquiry learning at some length and have offered their own perspectives:

“It switches the educational focus from looking at what teachers are doing *to* students to what teachers are doing *with* students and what students are doing with each other and the world around them.” *Marjorie Nadler, COM 135*

“Viewing the landscape of knowledge as a series of problems to be solved or questions to be answered or meanings to be deciphered, rather than simply responding to the landscape as recorders of information (the old paradigm) seems to be central to inquiry-based learning.” *Liz Mullenix, THE 191*

“Implementation of the learning/discovery paradigm should be grounded in our understanding of students’ intellectual development in order that students are prepared for the types of activities in which they will be engaged...” *Len Mark, PSY 111*

“Inquiry to me is simply instilling in our students the desire to know more and to gain this ‘more’ through experiential based exercises.” *Skip Benamati, MIS 235*

## **Why is Inquiry-Guided Learning the Model for Top 25 Courses?**

Inquiry learning encourages students to learn at deeper levels, to begin to develop skills for life-long learning, and to retain knowledge more effectively. Research indicates that after two weeks, students tend to remember 20% of what they hear, 70% of what they say, and 90% of what they say and do.<sup>2</sup>

## **Operationalizing Inquiry-Guided Learning in Top 25 Courses**

How have Top 25 teams revised their large enrollment courses to put students at the center of their own learning? Marketing 291, traditionally a lecture course, has been redesigned to put the initial content learning outside of the classroom. Online lectures by Marketing faculty are accompanied by PowerPoints highlighting the lecture content. Questions, problem sets and cases allow students additional interaction with the material outside of class. Students are asked to generate questions based on these activities. In-class time is spent discussing student questions, analyzing the cases read outside of class and working in teams on marketing simulations and major papers such as corporate audits or marketing plans. Students in MKT 291 now spend more time outside of class learning background material and more time in class applying what they have learned in real life case discussions and simulations with their peers. The discussion of questions in class provides the support students need to address the challenges presented in the simulations and major papers. *Team members: David Rosenthal, Donald Hoffer, Maria Cronley*

The Theatre 191 team has implemented inquiry learning using approaches more relevant to their discipline. A once-a-week master class is taught by a lead professor. Breakout sessions give students the opportunity to apply lecture material by writing, producing and performing their own 10-minute play. The third component of the class allows students to have direct contact with theatre through a shadowing experience. Students have a variety of shadowing options, including attending a rehearsal, following a stage manager or sitting in on a production meeting. As in MKT 291, class time is no longer the first encounter with material, but is devoted to student exploration and application of course concepts. The course is designed to provide the needed support through the lead professor and breakout instructors, while allowing for discovery learning by creating an original work. *Team members: Liz Mullenix, Julia Guichard, Bill Doan, Steve Pauna, Gion DeFrancesco, Mike McVey, Bekka Eaton*

<sup>1</sup>Lee, Virginia S. (ed.) *Teaching and Learning Through Inquiry: A Guidebook for Institutions and Instructors*. Stylus Publishing, Sterling, VA, 2004

<sup>2</sup>[http://courses.science.fau.edu/~rjordan/active\\_learning.htm](http://courses.science.fau.edu/~rjordan/active_learning.htm)



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## Redesigning COM 135, Public Expression and Critical Inquiry

COM 135 provides an excellent example of how a large enrollment course can be revised to enhance student learning by employing technology and encouraging student initiative. The department had been thinking about changes in the course for some time. When the first Top 25 call for proposals was announced, team members Marjorie Nadler (team leader), James Cherney, Carol Shulman and Janet Sauter saw a perfect opportunity to institute the changes in the course they had already been considering.

### **COM 135 Before Redesign**

Approximately 40-45 sections of COM 135 with enrollments of about 25 each are taught every semester. Full-time faculty, part-time faculty, and graduate assistants on all three of Miami's campuses teach the course. As described in the Miami Bulletin, COM 135 focuses on developing the "...fundamentals of analyzing, organizing, adapting, and delivering ideas effectively in public contexts." Writing and delivering speeches are central to the application of course concepts. Prior to course redesign, students sometimes, but not always, had the opportunity to videotape their speeches and review them. Faculty graded speeches both during and after class. In addition to student speeches, class time was devoted to reviewing concepts introduced in the text.

### **COM 135 Redesign**

The Top 25 team elected to phase in the many changes they proposed rather than roll out a completely redesigned class in a single semester. The most important change was the digital recording of speeches that allowed for student review on Blackboard. Students in the redesigned sections can readily access their speeches, then self-evaluate using a rubric designed by the department. Faculty provide feedback using speech critique software that speeds the grading process and provides a printout for students. A Blackboard site for

faculty allows for sharing of materials and enhances consistency across redesigned course sections. Modules that allow students to access course material online are in the process of development. The modules will be phased in as they are developed.

### **Challenges**

The technology involved in recording speeches and posting on Blackboard has proven to be a challenge on occasion. Security issues regarding access to each student's speeches have been difficult to address. It is critical that classmates are not able to copy and post speeches elsewhere. Server space will be an ongoing concern as more sections employ the redesigned model.

Student survey results point to a need for increased interaction in class and more student preparation outside of class. It is anticipated that the online modules will increase the amount of time students spend outside of class, leaving more in-class time for student interaction.

### **Benefits**

Faculty involved in the redesigned courses agree that student learning has improved. Assessment of student learning outcomes that would document enhanced learning is still in progress. In response to surveys, students indicate that they "often" completed course assignments that required critical thinking, worked on a paper or project that required integrating ideas or information, and supported their ideas with evidence. These results point to both faculty and student perceptions of enhanced critical thinking.

A more serendipitous benefit has been the faculty communication resulting from the proposal writing, planning and implementation of the Top 25 project. Faculty participation in re-conceptualizing the course has led to a sense of ownership, stimulating a new enthusiasm for teaching the redesigned COM 135 course.

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## Using Technology: Marketing 291

As is the case with many large enrollment classes, Marketing 291 (Principles of Marketing) has traditionally been taught using a lecture format. Multiple sections with varying enrollments were staffed by a variety of instructors. The Top 25 team from Marketing chose to use technology to transform the classroom from one in which students are passive listeners to one in which they are actively engaged with course content.

### **Redesigned Marketing 291**

The initial task of the Top 25 team was to reconsider how and when students first engage with course material. The team established the goal of taking lower-level learning outside of the classroom to allow for more hands-on application of material during class time. To do this, the team identified fourteen key topics they considered essential to an introductory marketing class, then created one-hour videos around those themes. The videos incorporate PowerPoints, interviews with experts in the field, clips provided by the textbook publisher, and lectures by Miami Marketing faculty. An audience interacts with the lecturer on occasion. Dave Rosenthal, Top 25 team leader and Marketing professor, provides a consistent framework across all videos by introducing the concepts. Top 25 funds and money generated from external sources made possible the production of the high quality, professional videos. Students study the videos before class. Regular quizzes cover information from the videos and the textbook assignments.

Preparation of the videos required a significant amount of time and money. Over a nine-month period, Marketing faculty prepared PowerPoints and lectures, drafted marketing professionals to provide presentations, and filmed the videos. Dave Rosenthal estimates a three to five-year life span before a full overhaul of the videos will be required. Within that time, updates will occur on a regular basis.

The point of the redesign was to move the student's first encounter with the material from the classroom to the student's room and to make the student responsible for initial learning. This approach frees classroom time for more

advanced interaction with the material. In Marketing 291, students now spend about a third of their classroom time discussing cases, a third working on a simulation project and a third developing a marketing plan. For the simulation, students develop a marketing strategy for a defined firm in a selected city using a particular product. All of these in-class activities allow students to spend class time applying marketing information learned in the videos and text to real-life situations.

### **Evaluating the Redesign**

Don Hoffer, Marketing professor, was, and continues to be, a key player in the preparation and implementation of the technology component of the redesigned Marketing 291. It has become clear to the Top 25 team that a member who can work with IT Services in resolving inevitable technology glitches is critical. For example, downloading the large video files and incompatible browsers were sometimes problems for students. Students are now given the videos in DVD format during the first class period. Don also learned that technology was not the answer in testing student mastery of the video information. Cheating on the online quizzes could not be controlled and quizzes are now administered during class.

Maintaining the videos and training faculty new to the redesigned course are looming issues. At the same time, the Top 25 team feels strongly that student learning has been enhanced. Those teaching more advanced courses see the enhanced level of preparation in students who have taken the redesigned class. Student perception assessment data indicates that students were generally pleased with their experiences in the redesigned course. Students recognized that lower level learning took place outside of class and that higher levels of interaction with other students were possible in the redesigned classroom. Learning outcomes data is currently being collected and will provide an additional perspective on the success of the redesigned MKT 291.