Center for Instructional Technology Update for ITAC

Lynne O'Brien ~ 3/27/03

CIT Incentive Grants for 2003 – 2004

(Details at: http://cit.duke.edu/funding/initial_proposals.html)

CIT Advisory Board response to initial proposals submitted Oct. 28, 2002

School	# Proposals Reviewed	# Request for Full Proposal	# Proposed Alternative Approach	# No Further Action
Arts & Sciences	4	1	2	1
Medicine	3	0	2	1
Law	1	1	0	0
Engineering	1	1	0	0
Total	9	3	4	2

Final Awards

Three final proposals were submitted Feb. 3, 2003. All three final proposals were funded.

Distinctive Aspects of US Law Video Project. Law School, $38,000
This project will develop web-based, video teaching materials for 15 critical issues in American Law. The materials will be developed in modular format so they can be used by multiple courses.
Metzloff, Tom, Professor, Law
Miller, Wane, Dir. Ed. Tech., Law
Shoemaker, Todd, Media Production Coordinator, Law
Wood, Sarah, Attorney, Law

Use of Web Based Instruction in the Organic and Advanced Chemistry Laboratories.
Chemistry Department, Trinity College of Arts & Sciences, $4,258
This project will develop digital video and web software to help students better understand concepts in lecture and laboratory courses in organic and advanced chemistry.
Roy, Chris, Instructor, Chemistry
Woerner, Todd, Lecturer, Chemistry
Sebahar, Holly, Instructor, Chemistry
Dechand, Billy, Staff, Chemistry
Guest, Christie, Grad. Student, Chemistry

Integrating MATLAB and programming across the Engineering curriculum. Pratt School of Engineering, $17,500
Funded through Faculty IT Fellows program (see next page.)

CIT Fellows for 2003-04

(Details at: http://cit.duke.edu/funding/fellows/fellows.html)

Thirty-one individuals applied to the IT Fellows program this year, double the number who applied last year. This year, there are two different tracks within the program.

Track One: Integrating Online Materials and Activities Into Your Course

Individual faculty will use basic instructional technologies to enhance teaching and learning in at least one class.

Florand, Laura, Coordinator & Instructor of French Language Program, Romance Studies
MacLeod, David, Assistant Clinical Professor, Anesthesia, School of Medicine
Mazuka, Reiko, Associate Professor, Social & Health Sciences, Psychology
McNairy, Bill, Lecturer, Physics
Mitchell, Robert, Assistant Professor, English
Thorne, Susan, Associate Professor, History
Tufts, Clare, Professor of the Practice, Romance Studies and Director, French Language Program, Romance Studies

Track Two: Supporting Curricular Change with Technology

Groups of faculty from one department or one school will use a particular technology strategy in conjunction with planned curricular change.

Nicholas School of the Environment

Faculty in this program are creating a distance-learning program for the Duke Environmental Leadership Program (DEL) and will use the Fellows program to develop a first set of modular courses.

Ashenburg, Sara, Staff, DEL program coordinator, Nicholas School
Christensen, Norman, Professor, Duke Environmental Leadership Program Executive Director, Nicholas School
Halpin, Patrick, Assistant Professor of the Practice, Nicholas School
Healy, Robert G., Professor, Nicholas School
Kramer, Randall, Professor, Nicholas School
Maguire, Lynn, Associate Professor of the Practice, Nicholas School
Urban, Dean, Associate Professor, Nicholas School

Pratt School of Engineering

This faculty group will integrate MATLAB programming into sophomore level courses, reinforcing the MATLAB skills students are taught during their freshman year.

Gavin, Henri, Associate Professor, Civil & Environmental. Engineering
Gustafson, Michael, Assistant Chair, Civil & Envir. Engineering
Hsu, Edward, Assist. Prof., Biomed. Engineering
Laursen, Tod, Assoc. Prof. & DUS, Civil & Envir. Engineering
Myers, Barry, Professor & Chair of Pratt School Curriculum Committee, Biomed. Engineering
Nadeau, Joe, Assist. Prof., Civil & Envir. Engineering
Yuan, Fan, Assist. Prof., Biomed. Engineering
Collins, Leslie, Assoc. Prof., Electrical and Comp. Engineering

Some general trends from this year's 2003-04 Fellows and Grant applications:

1. Many project ideas can be accomplished within Blackboard.
2. Almost all proposals involved developing and using streaming audio and video.
3. Several proposals require file space for ongoing, non-Blackboard course websites.
4. Several faculty want students to do projects involving collaborative web development, use streaming media and publish pages for public view while keeping e-commentary on projects private within the class.
5. A number of faculty have sophisticated ideas for use of technology but low-tech skills.
6. CIT did not accept projects that would have required extended software development because we did not have the staff to support them.

Some observations from last year's 2002-03 Fellows and Grant projects:

7. Projects are more likely to be completed and have a longer "shelf life" if several faculty members work together, or have strong backing from the chair or the department has a stake in the project's implementation.
8. Faculty are more satisfied if they complete a modest project successfully than if they start an ambitious project and don't finish.
9. Proposals that are hard to understand or seem complicated do not usually lead to successful projects.
10. A number of faculty encounter problems in the "last leg" of their projects, e.g., use of classroom AV equipment, hosting of finished websites, copyright issues or student use of new materials in computer labs. Faculty tend to make changes to their teaching plans right up until class time, but support services require longer lead times.

Future directions for faculty use of technology in teaching

- Increased use of technology-based research tools and techniques in course activities
- Sound, video and graphics as common elements in course materials and student assignments
- More "hybrid"courses with mix of in-person class meetings and online activities
- Blurring of classroom walls through expanded use of tools that connect "outsiders" to class experience
- More programs (degree or non-degree) offered almost entirely through online activities

Current CIT working groups & their focus

(Details at: http://cit.duke.edu/about/res-dev.html)

Course Management Systems

Analyze Duke needs and requirements for course management systems
Research current state of CMS products, trends and development in commercial, open source and standards-based arenas
Research and pilot test building blocks, third-party tools and plug-ins
Maintain contacts with professional groups and resources related to the use, implementation and evaluation of CMS.

Recent activities:

- Development of process for pilot testing new software tools
- Development of comparison matrix for web-based assessment tools
- Development of CMS comparison matrix
- Pilot test of Brownstone EDU http://www.brownstone.net/products/edu/ (online assessment and homework management system which may integrate with Bb)

Digital video and audio

Available and emerging software/hardware for creating and using digital audio and video
Best practices in using digital audio and video in teaching

Recent activities:

- Developed consulting guidelines for using pre-existing video in teaching, video-based lectures and demonstrations, creating and using original video material, student video projects
- Developed documentation on working with digital audio and video in CIT project studio http://cit.duke.edu/project-studio/help.html
- Reviewing resources and support for student video projects
- Assembling list of video resources and expertise at Duke University
- Investigating new software packages for use in CIT

Web architecture and interface design

Development of dynamic web sites
Web design and development trends
Usability testing, evaluation of website effectiveness

Recent activities:

- Conducting an extensive investigation of JavaServer Pages and Java servlet technologies as an architecture for building Web sites based on dynamic content
- Redesigning CIT and Blackboard websites using new web architecture
- Compiling a list of Duke resources related to creating and maintaining Web sites
- Compiling a list of Duke Web accessibility resources
- Identifying top Web log analyzers and site / link checkers
- Identifying key print and electronic resources re: Web issues

Instructional Technology Projects, Trends and Software

Exemplary projects in varied disciplines reflecting different technology strategies
Instructional technology use and support at other universities
Trends in projects funded through major agencies and foundations
Emerging software tools and their fit with faculty needs

Recent activities:

- Exploring Scout Portal Database as a repository for information about instructional technology resources http://scout.wisc.edu/research/SPT/
- Pilot test of Webslingerz' smartASK survey software.
- Collaborating with Library on their implementation of Luna's InSight digital image collection software and studying its usefulness as an instructional tool
    - About LUNA http://www.lib.duke.edu/its/diglib/insight/
    - CIT grant to Art & Art History for pilot test of LUNA http://cit.duke.edu/funding/pdf/ArtProposalEx.pdf
- Reviewed AXS Technologies' EyeSpy server for delivering large image files via the Web in a scalable manner http://www.axs-tech.com/html/products/eyespy/index.html
- Reviewed Flashlight tools for technology assessment
- Explored uses of "Virtual Labs" at other universities

Interactive educational technologies

Software tools for animation, modeling, visualization tools
Existing models of interactivity in educational technology projects
Sources of training options for faculty who want to develop interactive exercises

Recent activities:

- Identifying key interactive learning technologies
- Compiling "getting started" guides for various technologies such as Java applets, Flash, Director, DHTML, classroom response systems and online assessment technology.
- Finding interactive learning examples on the web
- Recommending books, articles, websites on interactive learning technologies