

**DIVISION OF INSTRUCTIONAL INNOVATION AND ASSESSMENT
ITAC VISION PLAN
2009–2010**

SUMMARY OF REQUESTS

DIIA is requesting \$1,296,500 for the 2009-2010 ITAC Vision Plan. A total of \$455,500 will be used to fund the costs for DIIA's One-time Projects and Innovative Support of Student Learning. The proposed projects include the following in priority order:

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| 1. <i>Second Life, Wonderland, Croquet, Gaming, Simulations</i> | <i>\$127,500</i> |
| 2. <i>Application Development for Mobile Devices</i> | <i>\$105,000</i> |
| 3. <i>Learning Management Systems Evaluation</i> | <i>\$65,000</i> |
| 4. <i>E-space Learning and Teaching Lab</i> | <i>\$158,000</i> |

<i>Total Request for One-time and Innovative 2009–2010</i>	<i>\$455,500</i>
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NEEDS AND PROPOSED USE OF FUNDS

INFRASTRUCTURE TOTAL	\$841,000
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~FAST Tex program	\$236,000
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<http://www.utexas.edu/academic/cit/fasttex/>

For 2008-09, the Faculty And Student Teams for Technology (~FAST Tex) grant program is supporting 23 projects benefiting 84 courses taught by 131 faculty in 19 departments in 8 colleges. ~FAST Tex employs tech-savvy students to work with faculty to build engaging instructional technologies that enhance student learning in UT Austin courses. Projects are selected based on their potential to reach a large audience, to promote relevance in coursework, to improve the effectiveness and efficiency of teaching and learning, and to transform pedagogy in innovative and engaging ways. These projects - ranging from Web-based interactive tools, instructional repositories and resources, to online tutorials, simulations and visualizations - will impact over 12,500 students.

As the trend towards increased sophistication in faculty's use of technology in the classroom continues, funds are needed to support and maintain larger and more complex projects requiring robust infrastructure, longer development times, more production hours, and additional student staff. Attention to infrastructure includes file serving and storage, lifecycle replacement of equipment, hardware and software upgrades and replacement of failed components. Funds will also provide for better-trained and more experienced students to streamline and increase quality to support more faculty technology projects impacting an additional 20,000 students.

Multimedia e-space learning and teaching lab	\$111,000
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<http://www.utexas.edu/academic/diia/lab/>

The DIIA lab provides services to more than 1200 students from 44 departments in 14 colleges, and 19 UT administrative groups. In addition the lab hosts faculty-supported student computer groups for interdisciplinary initiatives such as game development. The lab is the only high-end video editing and multimedia production facility available to all UT Austin faculty and students for class projects. Open 64 hours per week, its services and facilities include large-format color plotter printing and space for group work, peer-to-peer collaboration, and team projects. Continuing funds are needed for proctor workstation and software upgrades, and salaries for a lab manager and part-time proctors to manage and operate the lab.

Digital Media Services

\$100,000

<http://www.utexas.edu/academic/diia/dms/>

DMS presented 42 workshops and developed 18 online tutorials in support of nearly 500 students in 27 courses doing over 400 video projects from 19 departments in 10 colleges in 2007-08. To increase digital media fluency and enhance learning outcomes among students and faculty, highly skilled graduate student assistants must be hired to consult with faculty and to assist in developing additional workshops, tutorials, and online learning resources. Undergraduate student assistants will provide training, consulting, and guidance to support students learning to use digital media tools. DIIA will also organize and host events providing opportunities for students and faculty to practice emerging technologies and techniques.

Blackboard support, development, and training

\$160,000

<https://courses.utexas.edu/webapps/portal/frameset.jsp>

With the significant rise in Blackboard use (53,094 in fall 2007 with a record-breaking 28,562 people accessing the system on one day), continuing funds are needed to retain two training specialists to support faculty using Blackboard and one Java/JSP-skilled programmer to support the integration and creation of new features and functions in Blackboard (such as an office hours scheduler for student-use, final grades submission upload tool, scantron results integration, etc.).

Course-Instructor Survey development and support

\$45,000

<https://web.austin.utexas.edu/diia/cis/results/>

Continuing funds are needed for one systems analyst to support the CIS process, from distribution of paper forms to data-gathering and generation of results. In addition, new features and functions are needed to support the new eCIS version of the CIS. This system will continue to enable automatic creation of results on the Web by deans, chairs, and faculty. This effort will impact student learning by allowing faculty to use students' feedback to make meaningful and prompt adjustments to their courses before the beginning of the next semester.

Assessment of effectiveness of teaching with technology

\$54,000

Continuing funds are needed for an evaluation specialist to provide assessment-specific support for faculty who integrate technology in their teaching. The duties will include evaluating the effectiveness of several technologies: online courses and lectures, new and existing online resources, new multimedia instructional materials, technological innovations such as virtual worlds, simulations,

blogs/wikis, and mobile devices. The outcomes of these evaluations will be published in research studies to report the effective use of technological resources to enhance teaching and student learning. Staff services and the related evaluations will help faculty across all colleges who use these technologies in their teaching, and they will assist students with access to these tools as a part of their classroom instruction.

Centralized Courseware Grouping Software **\$22,500**

Continuing funds are needed for one-half of a systems analyst salary to affect enhancement of all centrally supported courseware systems at UT Austin, which allow faculty to group their classes in more efficient, effective, and meaningful ways by providing a central architecture. Services such as Blackboard, Ongoing Course Assessment, eGradebook, CLIPS, eCIS, the Digital Archive Services (DASE) and other systems will be able to use this software solution.

TA/GSI Teaching with Technology certification **\$112,500**

DIIA, in collaboration with the Office of the Provost, the Office of Graduate Studies, and the International Office, has developed a series of workshops focused on teaching with instructional technologies. The series, which will lead to a certificate in technology-enhanced teaching methods, will create a pool of qualified graduate student instructors for large classes, and it will produce faculty skilled in using technological innovations in teaching and student learning. Two graduate student instructional designers will be hired to provide development and training.

ONE-TIME PROJECT TOTAL **\$158,000**

E-space learning and teaching lab (F, S, H) **\$158,000**

Funds are needed to upgrade existing video capturing and editing stations, software, storage and transfer equipment, and accessories. In addition, funds are needed to install new lighting and purchase mobile and modular lab furniture for flexible physical settings so the lab can be adapted to facilitate group work, peer-to-peer collaboration, presentations, training, or traditional lectures. These funds are used to support a three-year life cycle.

INNOVATIVE SUPPORT OF STUDENT LEARNING TOTAL **\$297,500**

Second Life, Wonderland, Croquet, Gaming, Simulations **\$127,500**

As the use of virtual worlds, simulations, and gaming technologies begin to be adopted by a variety of disciplines to support teaching and research, it is critical that we evaluate the technology, benchmark the media, assess the instructional uses and the potential student learning outcomes, and plan for the use of these new technologies to support our 21st century students.

Currently, DIIA collaborates with and provides support to seven schools and colleges (Education, Business, Natural Sciences, Pharmacy, Fine Arts, Liberal Arts, Communications) in the use of Second Life in their classes, which has impacted nearly 1000 students. These pilots have shown great innovative uses of this technology and have engaged students. Evaluations demonstrate potential for these technologies to impact the classroom and student learning outcomes. These evaluations can be found at <http://web.austin.utexas.edu/diia/sl/reports/>.

Funds are needed for two high-end computers to support gaming technologies and to enable bandwidth and processor exploration for research in this frontier area. This will also create the

capability to better collaborate and participate in events focused on gaming, simulations, and virtual worlds to support a variety of disciplines across campus. In addition, funding is needed for:

- one GRA to research, evaluate, and assess the use of these technologies for instructional uses,
- two student developers to develop, enhance, and implement these technologies, and
- one systems administrator to provide the infrastructure support for these services.

This will support our ongoing efforts with Second Life and enable UT Austin to remain in the forefront of these innovative teaching and research tools.

Application Development for Mobile Devices

\$105,000

New technologies in mobile computing are being adopted to help transform teaching and instruction by increasing flexibility and providing new methods for visualizing content in a variety of disciplines. Specifically, the adoption of the iPhone and iPod touch by students and the flexibility of delivery on these devices suggest that there may be new, innovative ways to impact student learning. DIIA is already investigating ways to make our existing systems readily available on mobile devices. In addition, funds are needed:

- for one GRA to perform benchmarks of existing mobile applications used at our peer institutions,
- to coordinate focus groups of faculty and students to solicit input,
- to provide needs assessments of potential instructional services to be delivered,
- to purchase 70 iPod touch devices, and
- for one senior systems analyst to develop software for instructional applications.

Research and pilot projects will be conducted in selected classrooms to provide the basis for recommendations concerning the software, hardware, and techniques that work best to make this type of device accessible and flexible enough for educational purposes.

Learning Management System Evaluation

\$65,000

Funds are needed for two GRAs to provide assistance in the evaluation of a broad range of learning management systems to ensure that the needs at UT Austin continue to be met. This evaluation would:

- benchmark our peer institutions
- enlist faculty and students to provide input on needs via surveys, focus groups, and interviews
- compare features and functions
- determine technical support needs
- determine training needs
- evaluate the instructional uses of the features and functions
- determine the return on investment of moving to another system
- recommend next steps for UT Austin

OVERVIEW OF CURRENT IT PROGRAMS AND INFRASTRUCTURE

VISION/MISSION/GOALS

DIIA's vision is to provide instructional services that improve teaching to transform learning. DIIA's mission is to integrate pedagogy, instructional technology, and assessment to promote effective and innovative instructional and evaluation practices in support of the university's core purpose and values. As a central division, DIIA's collaborative programs and services are designed to support all colleges and schools and thus impact all students and faculty. All ongoing, new innovative proposed projects align with DIIA's mission.

IT ORGANIZATION

DIIA's IT organization supports infrastructure, core university services, and innovative faculty and student services. Committees that DIIA is involved with that suggest IT policies include the following:

- Faculty Council's Faculty IT Committee
- Tech Deans
- Presidential Strategic IT Committee
- Educational Policy Committee
- Student Deans Committee
- Administrative IT Leaders
- Copyright Clearance Center Committee
- ITS Training Committee
- ITS Apprenticeship Committee
- ITS Administrative Scripting Language Committee
- ITS Central Wiki/Blog Committee
- Blackboard Policy Committee
- UT System Serious Gaming Committee

INFRASTRUCTURE SUPPORTED BY ITAC FUNDS

DIIA works collaboratively with ITS to provide servers needed to support campus-wide IT systems provided by DIIA. In addition, DIIA maintains its own network: servers, hardware, software, computers, and lab equipment that support these programs and services. In 2007-2008, approximately **\$503,750** was spent to support DIIA's infrastructure.

• Servers	\$4,800
• Hardware	\$1,200
• Software	\$3,400
• Computers and monitors	\$17,000
• Staff FTE	\$258,600
• Graduate Research Assistants	\$122,900
• Student Developers	\$95,850

IT PROGRAMS AND SERVICES SUPPORTED BY ITAC FUNDS

~FAST Tex

Administer and monitor faculty IT projects and employ 20-30 students annually. Twenty-three projects are in progress that will impact over 12,500 students.

Multimedia lab

Provide the only high-end production facility open to all UT Austin faculty and students for class projects. The lab is open 64 hours per week, staffed by a manager, technicians, and part-time proctors.

Digital Media Services

Prepare students to be 21st Century professionals by assisting faculty in incorporating digital media in their courses and by providing students with training, consulting, and access to high-quality digital media equipment, software, and facilities.

Courseware

Provide training, second-tier expert consulting, programming support and integration, and administration for Blackboard and other Web courseware tools.

Technical evaluation

Conduct exploration, development, and assessment of new and emerging technologies.

Database production and support

Develop and maintain systems that support student learning, such as the Blackboard building blocks and other in-house databases and systems.

Resource development

Create, develop, and support Web site resources, tutorials, lab guides, journal submissions, and conference presentations for students, graduate research assistants, and faculty.

Training

Conduct individual and class workshops as well as on-site and lab-based training sessions for faculty, graduate student instructors, and undergraduates

Ongoing Course Assessment system

Allow faculty to solicit anonymous, secure student feedback online throughout the semester.

eGradebook

Enable faculty to maintain course assignments with related grades and to calculate final grades in a secure online environment.

CIS/eCIS

Allow students at the end of each semester to give feedback to faculty about instructors' courses and teaching.

Digital Archive Services (DASE)

Support integration with DASE and Blackboard.

Gaming, Simulations, Virtual Worlds

Support the use of these emerging tools into the classroom.

Assessment

Conduct classroom assessments, program evaluation, and research on technology to support student learning.

Research

Provide expertise on instructional use of technology to forward the university's goals to focus on teaching and student learning outcomes.

CURRENT AND PROPOSED FUNDING SOURCES FOR IT PROGRAMS AND INFRASTRUCTURE

DIIA receives student testing fees and state-appropriated funds to support its charge to develop policy for technology-enhanced learning and to support DIIA's mission-critical operations: credit-by-exam testing and petitioning, management of student credit-by-exam tests, test administration, computer testing labs, classroom scanning services, administration of the course instructor survey, and online services for integrating student information.

DIIA relies on ITAC funding to support these key operations:

- provide students and faculty reliable instructional technology services
- enable direct access to online and multimedia technologies for learning and teaching
- support and compliment departments and colleges in their endeavors to promote innovation in instruction
- partner with colleges in research and development of instructional technologies
- collaborate with other campus entities in implementing technology grants

BEST PRACTICES

DIIA's services and resources support best practices by modeling the following:

- streamline existing processes,
- facilitate better communication and collaboration between faculty and students,
- train faculty in the effective use of technologies for their classrooms,
- engage faculty to utilize more media and resources in their teaching to better impact student learning,
- research, evaluate, and implement emerging technologies,
- disseminate research findings,
- provide ongoing assessments for instruction and programs,
- utilize centrally supported resources to ensure scalability, security, and support for services, and
- collaborate and work with other colleges, schools, and units to best support the University.

USE OF PREVIOUS ACADEMIC YEAR ALLOCATIONS

DIIA relies largely on the infrastructure allocation to fund instructional activities, support the multimedia lab, and fund a significant portion of additional recurring expenses. Listed is the ITAC funding received from 2004-2005 through 2008-2009.

- **2004-2005: \$715,621** (\$405,671 for ongoing operations and \$309,950 for one-time projects)
- **2005-2006: \$650,426** (\$360,426 for ongoing operations and \$290,000 for one-time projects)
- **2006-2007: \$597,436** (\$369,947 for ongoing operations and \$227,489 for one-time projects)
- **2007-2008: \$598, 497** (\$376,389 for ongoing operations and \$222,108 for one-time projects)
- **2008-2009: \$462,389** (\$376,389 for ongoing infrastructure and \$86,000 for one-time projects)

See detailed information in **DIIA 2009-2010 Appendix A.xls** for use of 2007-2008 ITAC funds received.

JOINT PROPOSALS

Online Recorded Answer Assessment Learning and Commentary System

DIIA, the College of Education (TLC) and the College of Liberal Arts (TLTC) propose to support the further development and expansion of the online Spanish Oral Proficiency Exam tool for use by the College of Education in the Bilingual and Spanish Certification Program, video case-based teaching, and the College of Liberal Arts in various language courses. This tool can be generalized for use by other

disciplines. Funds will support salary for 1.5 FTE programmers, server hardware, software and administration, and database services.

Neogeography Research

DIIA, the Department of Geography and the Environment, and the Study Abroad Program propose to explore the potential instructional applications of neogeography mapping and geospatial technologies. These tools allow students to visualize and interact with spatial data in ways that add new layers of meaning and enhance communication, collaboration and learning in a variety of disciplines and inter-disciplines. Funds will support the development of neogeography and geospatial workshops for students and the subsequent presentation of data captured during their experiences in the field and abroad.

Digital Media Internship Program

DIIA and the School of Undergraduate Studies request funding to support ongoing costs and expansion efforts related to the Digital Media Internship program, a six-week (120 hour) paid multimedia training program in June and July. Through the program, students receive instruction and project-based professional experience on multiple aspects of digital media production, including digital graphics, audio, video, animation, and Web development. These funds will support stipends for student interns, cover expenses related to training materials, and provide an honorarium to guest instructors and industry mentors who support the program with their knowledge and expertise.

The Texas TEI Audiotext Project

COLA and DIIA request funds to create a prototype re-useable shell Audio-text tool that incorporates and synchronizes text, annotations, and human voice recorded MP3 audio performances in a Flash/Flex interface, conforming to standards of The Text Encoding Initiative (TEI). Designed to aid in comprehension of difficult texts for the student user, this tool delivers any text encoded in TEI as an interactive listening/reading experience easily and efficiently. Funds will support the salary for .5 FTE programmer, server hardware and software, and summer support for a faculty developer.

The Multi-Language Video Player

COLA and DIIA request funds to develop a flexible video/audio-based application that will be easily adapted for a variety of languages and pedagogical contexts. The primary application is for disciplines that use specific, detailed source video for instructional purposes, integrating high-quality multi-speed video playback with synchronized transcripts and interactive exercises keyed to specific targeted locations that force users to attend to visual and auditory information in innovative ways. Flash technology is at the core of all these functions, integrating these components in one smooth interface for optimal student learning. Funds will support the salary for .5 FTE programmer, server hardware and software, and summer support for a faculty developer.