



**2002-03 Vision Plan
College of Liberal Arts**

Executive Summary

The 2002-2003 Vision Plan for The College of Liberal Arts continues the tradition of promoting a broad range of department-centered projects along with proposals for key infrastructure improvements. The IT vision for the College stresses the development and deployment of leading edge technology enhanced learning environments. To this end funding is sought in the key areas of course development, technology classrooms, network infrastructure, and staff support.

The College is fully committed to wide-ranging collaboration with other colleges & schools, the general libraries, and central IT organizations on campus.

Staffing

The College of Liberal Arts, like many other colleges and schools, funds a number of professional IT staff positions with student fees. The current structure of ITAC allocations – heavily weighted toward project rather than infrastructure funds – is no longer tenable. Six years of “one-off” project funding has established an infrastructure of labs, servers, and networks that require long term staffing that project funds are not meant to fund. It is imperative that funding allocations be committed to the long-term support of what is now an extensive and mature set of facilities. This means fewer “one-off” projects and more commitment to the support of the extant physical plant and human resources.

The recent cooling off of the local IT job market has eased immediate concerns about staff recruitment and retention but the College hopes to take advantage of this lull to work with other IT providers on campus to devise longer term strategies for dealing with the inexorable return of market pressures that The University has heretofore not dealt with in particularly creative (successful) ways.

Funding Requests

The 2002-2003 funding request to ITAC for the College of Liberal Arts is detailed below.

Course Development	\$500,000
Classrooms	\$500,000
Specialized computer labs, classrooms and servers	\$500,000
Networks	\$180,000
Total ITAC Request	\$1,680,000

Projects

Course Development	Total Cost:	\$1,523,285
	ITAC Request:	\$500,000

The College of Liberal Arts is dedicated to providing the highest quality educational experience. For us, the highest priority use for technology is delivering more and better course materials to our students. Digital audio and video technology coupled with high capacity networks now make it possible to provide students with large selections of dynamic, media-rich materials in classrooms, campus labs, and at home. To maximize the potential of these advances Liberal Arts formed Liberal Arts Instructional Technology Services (LAITS). Over the past three years LAITS has assembled a team of professional programmers, web developers, and media specialists dedicated to the production of high quality multimedia course materials. The LAITS development staff will grow to nine full time professionals during the 2002-2003 school year.

In 2002-2003, the College of Liberal Arts and LAITS will consolidate all course development efforts into three programs.

Direct Grants to Faculty: Course Development Grants

Course Development Grants are for technically savvy faculty members who have access to some development resources within their department. Grants provide faculty members with the additional resources they need to develop their own course materials. Funding is available for student research assistants, computers, software, and a wide variety of other development costs. Summer salary can also be provided to faculty members to ensure that course development proceeds without interfering with teaching. The College of Liberal Arts has offered similar grants for several years using a variety of selection criteria. Starting in 2002, a new competitive proposal process is being instituted with calls for proposals in late January and final selection to be announced in March. We plan to provide \$500,000 for this program to support 30 to 40 projects. (For examples of projects funded by Liberal Arts, <http://dharma.lamc.utexas.edu/its/course/index.html>)

Strategic Course Development: Departmental Development Programs

During 2001 LAITS decided to refocus its course development efforts on large enrollment courses in order to reach the largest possible number of students. Working with the Liberal Arts Dean's Office, LAITS is selecting specific courses and departments where the College can maximize the per student impact of every dollar spent. Department Development Programs will completely redesign the materials for these courses, providing students with the highest possible degree of access to on-line text books, videos, audio recordings, study aids, quizzes, other materials. (See our highly successful French language site, Francais Interactif – <http://www.lamc.utexas.edu/fi> – for an example.)

Work has recently begun on a Texas Government project and we will begin a Spanish language project during 2002. It is difficult to imagine two subjects of greater importance or interest to a broad range of the people of Texas than Texas Government and the Spanish language. Accordingly, we plan to offer these materials for free over the Internet to other Texas educational institutions and to the citizens of Texas at large. This adds to the prestige of The University by providing highly visible examples of the value UT provides to the state of Texas. As proof of this, LAITS has already received \$100,000 and UT \$750,000 in TIF funding to upgrade our network and servers. The Texas Government and the Spanish language projects justified all of the LAITS funding and part of the UT funding. (See Appendix for more details on these two projects.)

Professional Development Assistance: LAITS Joint Development Projects

LAITS provides professional assistance for a select number of faculty members proposed, course development projects each year. Faculty members are invited to discuss their ideas with LAITS staff and receive assistance in writing proposals. Proposals are then reviewed and selected by the LAITS Advisory Committee, comprised of Liberal Arts faculty members and students. In addition to development assistance, funds are provided for summer support and other development costs. The College of Liberal Arts will commit \$200,000 for these costs during the 2002-2003 school year.

Technology Classrooms	Total Cost:	\$965,512
	ITAC Request:	\$500,000

Soon after embarking on our aggressive course development efforts the College confronted a small lacuna in its infrastructure. Faculty members, with their newly developed digital media, discovered that few of the University's classrooms were equipped for presentation of these materials. This was true of both General Purpose

Classrooms and departmentally controlled classrooms. Much of the investment in course development would be wasted if classrooms could not be brought up to date. Our most innovative faculty would have their plans frustrated and the University would suffer in comparison to its peer institutions. Students, of course, would be the big losers as they sat in aging classrooms while their colleagues at other schools enjoyed the new media.

In 1999, Liberal Arts joined with other colleges and the central administration in an effort to solve this problem. It quickly became clear that central funds and staff were not available. The colleges would have to be heavily involved in both funding and implementing any solution.

The following year, Liberal Arts and the College of Natural Sciences formed a partnership that has revolutionized how classroom technology is implemented on campus. After settling on Natural Sciences' successful classroom design as the new standard, the University's two largest colleges pooled their funds and staffs to create economies in scale and built a purchasing and production system that could mass-produce technology classroom installations at extremely low costs. In 2001, the administration recognized the value of the college alliance and transferred responsibility for all classroom multimedia technology to the colleges. Since then, most other colleges have joined the alliance, adopting the Natural Sciences standard classroom and relying on Liberal Arts for purchasing. This alliance has produced about 45 rooms to date and plans are set in motion to build 50 more during the summer of 2002. The ultimate goal is to install appropriate, standard technology in all classrooms, completely transforming the classroom experience for every student (see <http://classroom.la.utexas.edu/> for links to descriptions and user instructions for existing technology classrooms)

To date, we have upgraded 15 rooms including all of our (more expensive) auditorium-sized rooms. We are upgrading 15 more in the summer of 2002 and plan to convert at least 20 during the summer of 2003. Our goal is to have substantially completed the conversions of all appropriate Liberal Arts classrooms by 2006. See Table 1 for a road map of our five-year upgrade plan. Note that we plan to increase further the efficiency of the 'Alliance' upgrade process by concentrating yearly efforts on individual buildings. This will minimize time wasted moving installation staff and equipment from building to building. Also, electrical upgrades, hazardous materials abatement, painting, security cabling, acoustical paneling, lighting, and other necessary infrastructure work can be carried out building-wide, slashing both the cost and amount of administrative effort required. The resulting clusters of rooms will also improve user support response time while lowering support costs.

In 2002-2003, Liberal Arts estimates that classroom upgrades, maintenance, and support cost will total \$965,512. We request \$500,00 in ITAC funding for the purchase of classroom equipment.

The College is also assisting several smaller colleges with installing and supporting the new classroom standard. During 2002 and 2003, we will build a total of 10 rooms for the colleges of Pharmacy, Education, and Social Work. After the upgrades are completed,

we will provide maintenance support, leveraging our trained staff and relatively larger resource base wasting money and duplicating effort. Under separate cover, these four colleges are submitting a request for special ITAC funding for this joint project.

In the next few years, the College of Liberal Arts plans to introduce two new innovations to its classroom plans: Digital Theaters and Production Classrooms.

Digital Theaters

Theater quality digital projector technology is currently quite expensive - a low-end, 10,000 to 20,000 lumen, three chip projector costs between \$50,000 and \$100,000 - and instructional material requiring this level of projection quality is relatively rare. We believe, however, that this situation will change in the next two or three years. High definition, digital video will become widely adopted as consumers purchase more high definition devices and production equipment and software continue to become both more powerful and less costly. At the same time, the cost of theater quality projection will plummet as manufacturers ramp up production to meet increasing demand. We have prepared for this coming cost point by preparing a select number of auditoriums for future upgrade to Digital Theaters. Sounds systems have been installed that can be easily upgraded to full 5.1 or 7.1 surround sound and provisions have been made for the projection booths and screens required for high quality theater projection. We currently expect to convert three of our larger auditoriums to Digital Theaters in 2004 and three somewhat smaller auditoriums in 2005. These facilities are used heavily for classes by nearly every college in the University and by numerous student groups during evenings and over weekends. Digital theaters will put a fantastic new tool in the hands of this extremely diverse set of users.

Production Classrooms

Perhaps the most discussed topic in technology enhanced course development is the ability to video-record class sessions and make them available for on-demand access over computer networks. This process is currently too labor intensive and the necessary equipment too expensive. We do not feel that at this time the benefit is worth the investment. Advances in production technologies, however, will change this calculation over the next two or three years. Accordingly, the College plans to build two auditorium-style classrooms in 2004 that will have video cameras, microphones, and automated switching and control devices that will permit faculty members to collect lectures and make them available to students on-line. We will follow the next year with two small classrooms and in 2006 we plan to convert two additional auditoriums to production classrooms. We will seek partial, outside funding for this program.

Specialized Computer Labs, Classrooms, and Servers

Total Cost:	\$500,000
ITAC Request:	\$500,000

Many technologically enhanced courses require special labs or servers. The College of Liberal Arts and its departments operate more than fifty computer labs. Examples include the Creative Writing and Research Lab (used by thousands of Rhetoric and Composition students each semester), the GIS instructional classrooms operated by Geography and the Texas Archeological Research Lab, the Physical Anthropology lab with its advanced 3D scanning and viewing equipment, Liberal Arts' 'thin client' classroom for statistics instruction, and the many language instructional labs operated by Spanish and Portuguese, LAITS, French and Italian, and others (see Table 2 for a list of Liberal Arts Labs). New labs are added every year as required by course development activities and existing labs are upgraded or converted to new uses as their equipment, software, or function becomes obsolete. In order to keep up with yearly demand, we must purchase 200-400 computers, hundreds of expensive peripherals and instruments (some, such as microscopes and 3D scanners, costing \$50,000-\$100,000), and tens of thousands of dollars worth of supplies and furniture, as well as renovating several rooms. The College of Liberal Arts relies on ITAC funding for these lab costs.

Dozens of servers are deployed throughout the College to support specialized instructional functions. Examples range from the LAITS's Real Media server used to deliver audio material to thousands of language students (see, <http://www.la.mc.utexas.edu/aud>) to the Economic Department's Unix system used for social science statistics instruction.

During FY 2002-2003, the College of Liberal Arts will provide \$500,000 to departments for specialized labs and servers. New projects and upgrade programs will be selected both by competitive proposal and by special strategic agreements between the College and individual departments.

Network Infrastructure	Total Cost	\$180,000
	ITAC Request:	\$180,000

The campus network infrastructure continues to serve the College well. One concern remains the management of dormitory bandwidth. The College has a very aggressive digital video streaming program and it is imperative that either network management policies or gross bandwidth accommodate student access to these digital assets.

A related network concern is the need for a strategic (campus wide) initiative to expand significantly the use of off campus high bandwidth access to campus by students, faculty, and staff. More than anything this probably requires a business plan that transitions The University to ubiquitous high bandwidth off campus access.

The College of Liberal Arts would also welcome, and be willing to participate in, an initiative to deploy broadly on campus the use wireless data technologies.

The College hopes these issues will be addressed by appropriate IT policymaking bodies in the year to come.

Data networks have rapidly become central to the University's instructional mission. They are used for the delivery of course materials, communication between students and teachers, administration of courses and programs, research, and nearly every other instructional function. To keep up with the demands of new uses and new technologies, these networks are in constant need of upgrade. Unfortunately, central funding for network management and upgrades is in short supply. Recognizing the critical importance of a strong network, the College of Liberal Arts has taken the lead in addressing this problem by assuming management responsibility for its network infrastructure, assisting central IT staff with upgrades by performing most of the patching and equipment installation with our own staff, and contributing hundreds of thousands of dollars for the purchase of core network equipment benefiting the entire University community.

The College has complete financial and management responsibility for the networks in 16 University buildings and for substantial parts of the networks in nine more. We are currently entering the final year of a five year project to convert 'shared' networks segments to 'switched' architectures, dramatically increasing network performance to every one of our thousands of desktops, and hundreds of servers and other networked devices. In 2002-3 we will begin a new five-year plan with the following goals:

- Provide 100MB connections to all desktops by the end of 2005
- Establish GB connections between all buildings and the NOC by the end of 2006
- Where appropriate, install GB to the desktop and 10 GB to the NOC

Table 3 provides a detailed roadmap of this plan. We are requesting \$180,000 in ITAC funding to purchase network electronics and cabling for the FY 2002-2003.

Appendix

Texas Government and Spanish Language Projects

Texas Government

A course in Texas Government is required of all students at public universities in Texas. With approximately 7,000 freshmen entering The University each year, the demand for these courses at UT Austin is huge. To enrich these courses, we propose to develop a web-based, media-enhanced set of instructional modules. The core elements in each module will be a set of produced video clips describing governmental functions through illustrated case studies, interviews with governmental actors, and lectures by academic experts on Texas politics and history. Modules will also include textual content, images, audio materials, and database driven, on-line testing. The modular design will permit instructors to choose the parts they wish to use and the order that they will use them in.

This flexibility will allow the material to be used as supplemental materials at UT and other universities and in high schools without requiring complete redesign of courses. Individual, stand-alone modules will also be more convenient for casual use by the citizens of Texas in general.

LAITS is particularly well suited to undertake this project. Our location only a few blocks from the capitol, combined with UT's status as the state's flagship university, gives us unparalleled access to the subject material.

LAITS will hire a full-time Content Specialist -- a political science post-graduate (Ph.D.) -- to provide content and coordinate the contribution of Government Department faculty, graduate research assistants, and professional scriptwriters and editors. The content team will do research, compose textual materials, and work with LAITS developers to design the web layouts and plan the media for each module. LAITS professionals -- programmers, video specialists, artists, and systems analysts -- will do all technical work, including; video and audio recording, editing, and processing; image collection and processing; web page design, layout, and programming; server-side scripting and programming; and server setup and administration.

The first modules will be rolled out for the fall 2002 semester. Development will continue indefinitely as new technologies and greater bandwidth make media more accessible, and the changes in Texas government and politics make updates of content necessary.

Spanish Second Language Instruction

Audio and video materials are essential in language instruction. LAITS, along with its predecessors, the Liberal Arts Media Center and the Language Lab, has a strong record in producing these media. By building on the traditional lab component in language courses, new technologies have been smoothly and naturally incorporated into language instruction. Recent advances in network technologies make network delivered streaming media particularly compelling.

The UT Austin lower-division Spanish language program is the biggest second language program in the U.S. with about 3,500 students enrolled each semester. We proposed to replicate our extensive effort in French language instruction to serve this large pool of students (for example, see Tex's French Grammar, <http://www.lamc.utexas.edu/tex/>). Elements will include an on-line grammar text, network based audio exercises, extensive use of streaming video to provide examples of natural usage, an interactive 'chat' application for structured practice, and standard, web based, grammar drills.