

# 1999-2000 College of Pharmacy Vision Plan

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## Table of Contents

Executive Summary 3

Vision Plan Status Report for 1997-98 4

Facilities and Staffing 6

1999-00 Proposed Projects 7

Funding Overview 9

Appendices 10

## Vision Plan 1999-00 - Executive Summary

The College of Pharmacy has been engaged in writing comprehensive technology Vision Plans since the idea was first promoted at UT-Austin in 1991. In that year, two faculty members proposed an ambitious plan to bring four new computing facilities to the College of Pharmacy. The Vision Plan produced enough university and matching funds to bring Pharmacy into state-of-the-art computing for research and curriculum support.

## **Funding, Facilities and Staffing**

The challenge for the College of Pharmacy has been to maintain, upgrade and expand our facilities and services at this high level *at two locations* while assessing ITAC and other fees from one of the smallest College student populations on campus. Regular, recurring ITAC fees are so meager (approximately \$27,000) that it mainly covers hardware maintenance. The Pharmacy-assessed LRC fees cover personnel and office administration (including paper and toner for the computer lab). All other expenses for upgrades, new hardware and software, maintenance agreements, network improvement and expansion, room renovation, expansion of services and support, new staff, student labor, distance learning support, etc. must come from non-fee and College-specific fee sources. Occasionally, the College receives a lump sum of capital equipment support from the ITAC committee. This support, when received, has been a critical element in the quest to meet our annual technology goals. Other revenue sources required to implement our technology plan include University funds, College funds, external funds and equipment grants, and allowable revenue-generating endeavors.

In 1995 a second three-year technology plan was formulated by an ad hoc committee on Instructional Technology. The plan identified several sweeping renovations as well as hardware upgrades. New technology staff positions were created, funded and staffed including the positions of network manager, a web-master and multimedia lab manager, administrative associate position and a part-time development associate exclusively devoted to technology grants and projects. During the course of the three years, adjustments were made to account for an accelerated technology curve and a smaller budget than needed.

The College supports eight technology-related staff positions, and houses four computer labs and two distance learning classrooms. Three additional classrooms in the College are general purpose classrooms.

## **Vision Plan Status Report**

Major projects accomplished during this three year time frame include twice upgrading the hardware and software of three computer labs, upgrading critical multimedia equipment such as scanners, color copier, film recorder, digital cameras, etc., renovating a large 136-seat distance learning classroom to state-of-the-art, renovating the TV control room, renovating the LRC administrative offices, wiring the two-building College of Pharmacy for ethernet, introducing high-end PCs to the all-Macintosh student lab in Austin and in the UTHSC-SA computer laboratory, upgrading student printers in Austin and San Antonio, redesigning and equipping mobile multimedia carts, converting microcomputer labs to operate with Labman, developing a comprehensive College web site, and assisting faculty with making their courses accessible via the web.

The projects proposed for 1999-00 in summary form are the following:

- A. Classroom renovations \$200,000
- B. Network expansion \$20,000
- C. Computer hardware and software upgrades \$100,000
- D. Upgrade of mobile multimedia carts \$40,000
- E. Web-based courses material support \$20,000
- F. Training for distance learning faculty \$5,000
- G. Staff expansion for computing, web and network support \$40,000
- H. Video-on-demand access of pre-recorded courses and training \$50,000
- I. Thin-client technology pilot program \$20,000
- J. Molecular modeling laboratory maintenance support \$25,000

# 1997-98 Vision Plan Status Report

Main Goal #1. To provide general technology support for the new curriculum

a. interactive television distance learning facilities

Pharmacy's large interactive classroom (seats 136) and control room were renovated in the summer/fall 1997. This half-million dollar project brought us up-to-date in ITV technology. \*Need\* However, we have an important and heavily-used 44-seat distance learning classroom that is in need of funding for renovation.

b. online curriculum, web-based curriculum, multimedia-based curriculum

The Learning Resource Center set a goal this year of assisting interested faculty with uploading/converting portions of their curriculum for web access or WebCD access. The College's webmaster, Belinda Lehmkuhle, is an exceptional teacher, trainer, digital artist and designer. She has been working with Jim Karboski to develop a groundbreaking WebCD for his Patient Assessment Course. Belinda has also worked with Associate Dean Davis to put a significant amount of course material online for his Infectious Disease Courses and Pharmacotherapy course. A handful of faculty have begun to put at least their syllabus, test schedule and course objectives on the web. We hope to assist 4-6 faculty per year in making a significant redesign of their materials for web use while helping many others take small steps in that direction. Belinda teaches web courses in our Summer Pharmacy Institute and makes recommendations on communication and collaboration tools. Belinda utilizes 2 interns and 2 work-study students each semester to assist with web-projects and curriculum development.

c. multimedia and graphics assistance for faculty

The College has a webmaster and digital graphics specialist (Belinda Lehmkuhle) available to assist faculty, staff and students. She runs the Instructional Development Lab which supports PowerMacs, multimedia software, a color printer, scanners, slide scanner, film recorder, digital cameras and other important equipment. \*Need\* We would like to collaborate with another College to experiment with video-on-demand. We are in need of appropriate funding to experiment with digitally accessed courses.

d. computer resources for students

Computer resources for students in the College of Pharmacy is in good shape. The College has three student microcomputer labs stocked with PowerMacs, 266Mhz IBM Intellistation Pros and run on a Labman server. This summer, most of the powermacs were upgraded to 266mhz G3 speed via an upgrade card. We have upgraded the memory to 64megs. System and productivity software will be upgraded when all compatibility issues of the new Office products and OS 8.5 have been resolved. The College runs on a high speed 10/100-base-T network and has recently added 144 DHCP notebook computer ports to a distance learning classroom and the media library. New student orientation has been expanded to include extended time in technology classes to learn Netscape, Word, Excel and get around the College of Pharmacy web site. \*Need\* Discussions are in progress with Nancy Elder of the Life Sciences Library to support high-security access to restricted databases but no significant action has been taken. Some databases are currently offered via Pharmacy's server. \*Another need\* We have been pushing for 1-800 telesys access for our students who are sent out-of-town on rotations. These students access the internet for a price/performance that is similiar to locally accessed Telesys. At this time, the University has no plans to provide this service, but we will continue to lobby for a solution.

Main Goal #2. To support statewide and national CE initiatives via distance learning and teaching.

We are currently supporting and planning to expand our distance technology services with degree programs and CE courses utilizing interactive television and the internet. Perhaps our most ambitious distance learning venture to date will be the launch of a non-traditional Pharm.D. program in the Spring of 1999, known as TxPharm, in cooperation with Texas Tech, Texas Southern University and the University of Houston. Technologies that will facilitate this degree program will vary from mailed videotapes to satellite broadcast to web-based courses. The program is a joint effort to offer pharmacy practitioners in the state of Texas the opportunity to upgrade their baccalaureate degree to the now standard Pharm.D. degree.

Key Goal #3. To support Cooperative and Joint Degree programs via distance learning

The College currently offers a joint Pharm.D. degree program with UT Health Science Center in San Antonio and is developing a second Cooperative Program with UT El Paso. These programs require that a portion of the core curriculum courses be simultaneously delivered to two and eventually even three sites via Austin, El Paso, or San Antonio. The programs currently rely heavily on interactive TV transmission via compressed video. Additionally, internet resources and other computer technologies are increasingly being utilized. \*Need\* We must develop a comprehensive training curriculum for faculty who wish to deliver the highest quality courses at a distance. Although we provide a number of resources already, training is not comprehensive.

Key Goal #4. To support of research efforts via distance technology

The College regularly supports our faculty in joint interactive television research meetings with the M.D. Anderson Cancer Center in Smithville and drug companies such as Eli Lilly and Bristol-Myers. Our faculty have become increasingly comfortable with these types of meetings and we expect that their frequency will increase.

Main Goal #5. Enhance unrenovated classrooms with multimedia

\*Need\* The College has four general purpose classrooms in the College. The electronic classroom is supplied and supported by the College to serve the entire University. The other three rooms are in desperate need of renovation, equipment and support. Funding for this initiative and the support of the electronic classroom should come from the University.

## Facilities and Staffing

The College of Pharmacy technology facilities includes an SGI computer laboratory, two microcomputer laboratories, an instructional development laboratory, a media library, two distance learning classrooms, a multimedia storage facility and a television control room. Additionally, the Learning Resource Center houses seven staff in its administrative facilities. The technology staff of the Learning Resource Center include:

Manager – Directs the Learning Resource Center

Systems Analyst – Network and Microcomputers

Systems Analyst – Web and multimedia development

Development Researcher – technology fundraising

Administrative Associate – Media library and office management

RTV IV – Audiovisual equipment support

RTV IV – Instructional television coordinator

The College also has a Senior Systems Analyst who supports administrative computing.

At UT-Health Science Center in San Antonio the College also has another distance learning classroom and computer lab. A television technician is supported totally by the Health Science Center to operate and manage the facility.

## Proposed Projects for 1999-00

The College is in the process of developing a new 3-year technology plan. We know that once the plan is finished, specifics may change but it has been valuable in the past to have a three-year plan that can then be modified annually. Long-range planning issues include life cycle funding for student computing, new strategies for life-cycle funding for administrative computing, restructuring the LRC to reflect new technical needs and skills necessary in our changing technology landscape, retraining College administrative personnel to more fully utilize web technologies, re-evaluating current technology services, investing in a growing data and video network, and planning for the technical and training needs of faculty to adjust to new ways of presenting the curriculum. Finally, the College must plan for the renovation of four general purpose classrooms and one distance learning classroom.

### A. Classroom renovations \$200,000

The College has six classrooms in need of multimedia renovations. The classroom in greatest need is our 44-seat distance learning classroom, PHR 4.114. To completely overhaul the room would require \$50,000 in construction funds and \$100,000 in equipment. Additionally, the College has maintained, served and equipped a general purpose computer lab. The lab is in need of multimedia enhancements, software, and computer upgrades that would cost \$50,000. Target audience: students and faculty.

Funding sources: Institutional funds, ITAC special allocation

### B. Network expansion \$20,000

The College was wired for 10/100 base-T ethernet two and a half years ago at a cost of \$80,000. Now the network is virtually used to the maximum and faculty are requesting to be upgraded to 100-base-T. \$7,500 would cover the purchase of 5 fast ethernet hubs plus pay for patchcords, outlet installation fees, and miscellaneous expenses associated with completion of the upgrade.

Additionally, the distance learning video network operates via a cable broadband system. We are now being asked by Communications to upgrade to a fiber optics connection to the network operations system at a cost of approximately \$2500.

Target Audience: students, staff and faculty Funding: ITAC

### B. Computer hardware and software upgrades \$100,000

The College's computer upgrade policy for student laboratories has been to upgrade at least one third of the student and learning resource center computers each year to prevent the entire computer inventory from being totally out of date in three years. Thirty-five computers need to be upgraded this summer include four for the computer lab in San Antonio. Although the cost of upgrading these computers will cost \$116,000, we take into account the savings incurred via trade-in or campus-based sale of existing equipment. System software upgrades will need to be purchased for any Macintosh computers and also the multimedia software collection is in need of an update @ a cost of \$5,000.

Target Audience: students Funding: ITAC, ITAC special allocation, Pharmacy Technology Fee

#### D. Upgrade of mobile multimedia carts \$40,000

The College utilizes mobile multimedia carts containing one or more of the following: data and video projectors, laptop computers, VCRs, CD-Rom, Zip Drives or extra monitors. The current repertoire of carts is in need of upgrading to better projection devices and computers. We would like to upgrade 4 carts @\$10,000 ea.

Target audience: faculty, students Funding: ITAC, College funds

#### E. Multimedia and web-based courses material support \$20,000

The instructional development laboratory requires two high-end computers, memory, software and peripherals to assist faculty with 3-D animations and digital editing. Each set-up will cost \$5,000. Additionally the television control room requires a linear editing system to assist faculty with editing teaching materials. This system is particularly important in light of the fact that videotapes will be a part of the non-traditional Pharm.D. degree program. A satisfactory system can be purchased for \$10,000.

Target audience: faculty and graduate students Funding: grants, ITAC special allocation

#### F. Training for distance learning faculty \$5,000

The College of Pharmacy offers numbers training sessions throughout the year to assist faculty with the design or re-packaging of their course materials for a variety of technology formats. However, our College has not offered a comprehensive curriculum designed specifically to help faculty adjust to teaching students at a distance. This year, it is our goal to offer more workshops and seminars (incorporating those already offered by CIT) that assist faculty in the art and science of teaching at a distance. We would specifically like to offer or send faculty to workshops to learn WebCT, html editing, preparing PowerPoint slides and other visuals for television use, how to effectively communicate with 50+ students via e-mail, use of chat rooms and listserves,etc. Target audience: faculty Funding: conference income

#### G. Staff expansion for computing,web and network support \$40,000

The College is reaching the limits its human resources available for computing, networking, troubleshooting, machine maintenance, server maintenance, web development, graphics development, pilot project testing and consulting. With the plans to expand the use of PCs in the student labs, the ever growing need to manage and control in-house server systems, the mind-numbing pace at which web resources are being developed and the ever present desire to have immediate computer troubleshooting assistance, the College is in need of (1) FTE systems analyst to augment the services already ably provided by (2) 75% FTE systems analysts.

Target audience: students, faculty and staff Funding source: Pharmacy Technology Fee

#### H. Video-on-demand access of pre-recorded courses and training pilot \$50,000

The College would like to test the feasibility of digitally recording classes and making them available via the web or on a cumulative CD. This would have enormous implications for Pharmacy's non-traditional programs and would give our traditional students "anytime, anyplace" availability to lectures. This may be an area in which we might partner with Colleges experimenting with this technology to share resources and knowledge as well as different potential applications of the technology.

Target audience: local and CE students Funding: grants, ITAC special allocation

#### I. Thin-client technology pilot program \$20,000

The College's administrative and research units are only now beginning to consider life cycle funding models for computer resources. We would like to partner with another College or ACITS to develop a thin-client pilot program in the research laboratories. Graduate students sometimes receive the oldest computers in the college to use in the laboratories. Thin-client technology may utilize these machines as hosts for the latest software and operating systems. This has great potential to affect the total life cycle funding model for Pharmacy.

Target audience: graduate students Funding: ITAC special allocation, grants

#### J. Molecular modeling laboratory maintenance support \$25,000

As part of the Education Component of the College of Pharmacy's Vision Plan, we have established a Molecular Modeling Teaching Laboratory. Matching funds for this unique facility were obtained through a grant from the National Science Foundation. One objective of this Laboratory is to provide a facility in which computer graphic visualization and manipulation of molecular structures can be used to enhance the teaching of chemical and pharmacological concepts related to molecular structure. Another objective is to provide a facility wherein students can gain hands-on experience in using computational chemistry software useful for understanding chemical behavior and drug design strategies. By providing state-of-the-art hardware and software, we not only accomplish these objectives but also stimulate interest in research careers and prepare students to use the hardware and software they would actually encounter in professional environments. We are requesting funds for hardware and software maintenance @ \$25,000.

Target audience: students Funding: ITAC

## College Technology Funding Overview and Life Cycle Methodology

### Funding Sources:

Technology funding sources come from ITAC fees, Pharmacy technology fees, College funds, University funds and grants.

Life cycle funding for academic computers in Pharmacy is paid for by student fees. Research funding pays for computers in the research labs, for faculty and for some staff. College funds pay for some staff computers. With limited College resources, administrative computers have not been upgraded on a specific schedule. However, this is changing. Several administrative divisions in Pharmacy such as the Dean's office

are adopting a lifecycle funding plan for computers. Additionally, Pharmacy will consider how thin client technology may work for stretching the computer dollars in research labs.

## Appendix I

Total IT summary expenditures report

Technology staff salaries including administrative technology staff \$275,782

(Funding sources: Pharmacy technology fee, College funds)

Work-study and part-time assistance \$13,500

(Funding sources: Pharmacy technology fee, Digital TV account)

Distance education programs \$30,000

(Funding source: Digital TV account)

Equipment, maintenance, repair and software expenditures (approx) \$100,000

(Funding sources: ITAC funds, Digital TV, Pharmacy technology fee, grants, College funds, earned-income funds)

Facilities renovation (varies) avg over four years \$125,000

(University institutional funds, College funds, ITAC funds, Pharmacy technology fee, earned-income funds, grants)

Total yearly expenditures: \$543,500

## Appendix II

College network infrastructure status

100% of offices, research laboratories and computer labs are wired for 10/100 base-T ethernet. Additionally, we support 144 outlets for DHCP mobile computing. At this time, faculty in particular are wishing to upgrade the network to 100 base-T which will entail buying new hubs and incurring installation expense to upgrade the 10-base-T outlets.