

**School of Nursing**  
**2009-2010 Vision Plan for Information Technology**  
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**INTRODUCTION**

This report outlines the proposed infrastructure and one-time projects for student instructional technology (IT) and nursing informatics (NI) resources within the School of Nursing.

**SUMMARY OF 2009-2010 ONE-TIME REQUESTS**

The projects to be addressed during the next academic year using Student Instructional Technology (SIT) funds in priority order are to 1) upgrade 55 computers in student facilities, 2) purchase additional clinical simulation equipment and accessories, and 3) continue classroom upgrades. A total of \$328,600 is requested to support these projects.

1. Upgrade 55 student computers with thin client (when available).	< \$16,500
2. Additional high-fidelity simulation equipment	\$167,100
3. Classroom upgrades	<u>145,000</u>
<b>TOTAL REQUEST</b>	<b>\$328,600</b>

**NEEDS AND PROPOSED USE OF FUNDS**

**Infrastructure Allocation**

Infrastructure funds received will be used for ITS contract (\$18,000), salaries (\$10,000), and recurring costs for software licenses (\$8,000 for SPSS, Clinical Pharmacology, Lippincott, etc). After occasional repairs and replacements, the total allocation (approximately 31,000) is more than exhausted.

**One-Time Projects**

Projects being worked on are listed below. Funds requested are much more than we expect to receive. Any funds we receive will be used 'toward' the completion of these projects. Fund allocations are decided by the School's Computer Utilization Committee, a committee of faculty, staff and students appointed by the dean and by student leaders, and a weekly meeting of staff that implements the recommendations of the Computer Utilization Committee and responds to emergency needs and new technology information.

**Project 1 - Upgrade student computers** (contributes to UTSON IT goals 1 and 2)

The school has three computer areas available for students: the Learning Center computer classroom (13 computers), lab (25 computers), and the Cain Center computer lab (8 computers). In addition, the Simulation Lab has three workstations in each of the three practice labs that are used for electronic charting systems and CAI. All student computers, now 4 years old, will be out of warranty December 2008. Although we have not had major repairs yet, this may become a problem any time. We are investigating the use of thin client machines as an adequate, economical approach for providing the computer power and speed essential for our students. The cost of thin clients is not available yet, but we estimate that the cost would certainly be less than \$20,000.

Thin client units	55 @	\$300 ea guess	\$16,500
<b>TOTAL</b>			<b>\$16,500</b>

Project 2 - Simulation equipment (contributes to UTSON IT goals 5,7 and 8)

The country is experiencing a severe nursing shortage. As certain social situations develop (retirement of the baby boomers, etc) the shortage is likely to increase. Responding to this shortage UTSON (+17) and other schools have increased enrollments. Adding to the solution (and problems), there has been a growth in the number of nursing schools in Central Texas without matching growth in clinical practice environments. As a result quality practice experiences are difficult to locate and arrange for students. Faculty have found that simulations with high fidelity simulators are excellent alternative learning experiences—often better.

Additional equipment is needed to provide sufficient quality simulation opportunities for students. Equipment that would add to our ability to create quality simulations for students is listed.

SimMan with accessories	1		\$70,000
Vitual IV's with modules and warranty	2 @	17,000	\$34,000
in hospital module	2 @	2,500	\$5,000
phlebotomy module	2 @	\$4,000	\$8,000
anatomical viewer	2 @	500	\$1,000
infant module	2 @	2,500	\$5,000
Vital sign monitors and stands	3 @	3,800	\$11,400
Cabinets	4 @	800	\$3,200
3 or 4 channel Intravenous pump (refurbished)	3 @	\$3,000	\$9,000
Med dispensing system	1		\$17,000
Fetal monitor	1		\$3,500
Electronic Charting Program			
<b>TOTAL</b>			<b>\$167,100</b>

Project 3 Classroom Environments (contributes to UTSON IT goals 1, 5 and 7)

Maintaining classrooms is a continuing task. Although we have done much to improve the functionality of the classrooms, much remains to be done. An itemized list of classroom needs follows.

Tiered classrooms with fixed seating:

Standardization and upgrading lighting controls.	5 rooms @	lots;	no estimate
Add lighting and screen controls to consoles	5 rooms @	lots;	no estimate
Classroom furniture with electrical outlets (five tiered classrooms)	364 seats @	200 ea	\$72,800

large classrooms with flexible seating:

Small modified console with laptop	4 @	3,500 ea	\$14,000
Document camera	4 @	2,500 ea	\$10,000
Dimmable lights in large classrooms	4 @	2,600 ea	\$10,400
Classroom furniture	189 @	200 ea	\$37,800

All classrooms

Better control and greater range of lighting available for down lights and black out curtains 12 rooms @ lots; no estimate

Electrical outlets for laptops available 12 rooms @ lots; no estimates

**TOTAL \$145,000++**

**OVERVIEW OF CURRENT IT PROGRAMS AND INFRASTRUCTURE**

Vision/Mission/Goals of the School of Nursing are attached and may also be found at <http://www.nur.utexas.edu/it-ni/stratplan.pdf>. Briefly, our vision, mission, and goals include strategies that encourage and facilitate the inclusion of instructional technology and nursing informatics concepts in the curricula and in our professional and educational tasks. Further, we aim to promote the competent use of technology by faculty and students, by preparing faculty, staff and students to teach and practice nursing in an increasingly technology-based healthcare system. To accomplish this, we must provide sufficient computing power and resources to enable teaching and learning activities that foster the innovative use of technology.

IT Organization

The School’s IT structure consists of the Computer Utilization Committee, a dean-appointed committee of faculty, staff and students. This committee meets at least twice a semester and invites all faculty, staff and students who indicate an interest in IT, members of another dean-appointed faculty committee, the Technology Enhancement Committee, and the ITS staff person who manages the student network. These individuals direct the IT efforts of the School, which are submitted to the dean or her designee for approval. Furthermore, these individuals submit ideas and approve the content of the Vision Plan. Prior to the development of the Vision Plan, an email is sent to all faculty, staff and students for ideas of one-time projects to include.

Infrastructure

Classrooms

Most classroom instruction takes place in the Nursing building. With the increasing numbers of students admitted to the professional sequence (80 today vs. 50-60 in the past), we have had to move one of the large lecture classes to campus facilities. To accommodate on-site classes, the school has 5 large tiered (fixed-seating) classrooms, 4 large (flexible-seating) classrooms, and 8 conference/seminar rooms.

One of the tiered classrooms (1.106) is used for teleconferences in the undergraduate and graduate programs, collaborative research projects. In addition, a mobile codec system allows teleconferencing in any space in the School.

All tiered classrooms have University-built interactive consoles. This past year ceiling mounted projectors were installed in four large and two small classrooms. The remaining 4 small classrooms will be equipped with projectors during the spring semester.

### Learning Center

The LC consists of 5 areas/services: a nursing/health audiovisual library, a computer facility, a learning enhancement program, a clinical simulation laboratory, and an AV/web production facility. All components of the Learning Center use and teach technology in various ways. For example, an important role of staff in the library is to teach students to search online databases for needed references. The AV/web production facility assists students in the design and production materials for class assignments, patient teaching activities, or the presentation of research data.

The School's Learning Center computer facility has 35 PC computers, creating a network with 100 MB Ethernet access, basic application software such as Microsoft Office, FileMaker Pro, Dreamweaver, Firefox, and many nursing and health-related instructional programs. All computers, managed by LabManager software, provide access to the University printing service. Thirteen of the computers are located in a small classroom, where software-related classes are taught. The 22 computers outside the classroom plus the 13 workstations in the classroom (when not being used for a class) are available to students 67 hours a week.

The Learning Center also furnishes 13 laptops for student and faculty checkout.

Although wireless access was installed in six student areas, one is able to access the network throughout the building. With the addition of the wireless network, more and more students are bringing their laptops to classes and the LC. This phenomenon has accentuated the need for electrical outlets in the classrooms and other study areas.

The Simulation Center features three clinical skills practice classrooms. Students practice various clinical skills and respond to clinical situations using a variety of simulators, from lower fidelity VitalAnne mannequins to task trainers such as IV arms. A second area, the Simulation Lab houses computerized high fidelity simulators (SimMan and a birth simulator) for which faculty create clinical scenarios to challenge or test students' critical thinking skills.

### Research Computer Lab

The Cain Center Computer Lab has 9 workstations (7 Pentium IVs and two Apple G4s) equipped with software needed by faculty and graduate students engaged in original research. Software such as SPSS, SAS, N5, nQuery, EQS, and N6 are examples of applications available in this facility.

### Faculty and Instructional tools

Faculty are using the following tools with varying levels of sophistication:

- e-mail
- presentation software—PowerPoint®
- BlackBoard® including discussion boards and other communication devices
- WebSpace
- Classroom Response System®

Faculty use computerized testing software, QuestionMark®, and MyNursingLab®, a website that accompanies a textbook.

Two projects have been instituted this academic year involving online instruction. One is a grant from the Seton Family of Hospitals to provide three courses in the RN to BSN program for practicing nurses. One course, Nursing Research was offered in the fall semester. Spring semester '09 two courses, Conceptual Bases of Aging and Leadership & Management of Nursing Care, will be offered.

A second project aiming to increase the number of nursing educators available for area schools of nursing was funded through the State Workforce Commission. The first course, Conceptual Foundations of Nursing Education, was offered in the Fall 08 semester. Two additional courses, Strategies of Teaching and Best Practices in Clinical Education, are being constructed and will be offered in future semesters.

#### Clinics (Children's Wellness and the Family Wellness Centers)

The School of Nursing manages two health clinics, one for children in the Del Valle Independent School District and one that provides healthcare for underserved families. These facilities provide important sources of clinical practice and research for students and faculty as well as opportunities to use technology associated with the delivery and management of patient care.

#### IT Staff and Student Network Management

The IT staff of the School of Nursing consists of one System Analyst and one LAN administrator for the School and 1.5 (60 hours) FTE Computer Technician Assistants. Both IT staff positions and TAs are paid from the School's accounts.

Management of the student computer network is contracted (6 hours a week) to ITS. This contract is funded by the SIT account. In addition, a 10-hour/week-student worker, who assists LC staff with new-user education, is funded by the SIT account. A full-time web master is partially (15%) funded by the SIT account.

Network -- 100MB Ethernet throughout building—offices and classrooms  
Wireless – available throughout the building

#### Workstations

Students, financed by ITAC: 2.4 GHz PCs, 512MB RAM

Faculty, financed by FCI, CLC, SON MO&E, Dean's discretionary account and cascades from student workstations: Tenure and tenure-track faculty equipment average 2.0 GHz PCs and Macs. Clinical faculty machines are 1.0GHz or better PCs and 867 MHz or better Macs.

Staff, financed by SON MO&E, Dean's discretionary account and cascades from student workstations: average 1Ghz Macs.

#### Current and proposed funding sources for IT programs and infrastructure

Currently, the School's IT equipment, programs and infrastructure are funded by a combination of the SIT account, the Dean's Various Donor account, the LC MO&E, the Learning Center Utilization fee, the clinical course fees, and faculty research grant awards (when possible).

The SON benefits from and appreciates the Faculty Computer Initiative (FCI) and Life Cycle Funding furnished by the University. With the exception of occasional funds from the School's MO&E and the Dean's Various Donor accounts, FCI and Life Cycle funds are the only sources of new faculty computers, while the major source for upgrades is cascades from replacement of student computers, which we do every four years.

No new funding sources are anticipated in the future.

### Best Practices

All SON printers are now on a private network for increased security.

Work continues on bringing the SON into compliance with UTS 165. Work has been completed UT's on ISORA annual risk assessment survey. The School's security profile of actual reported security incidents remained at an "A" rating (i.e., many fewer incidents than UT average).

We continue to expand our program of restricting administrative permissions on workstation logon accounts and security awareness for all users.

Use of Spamcaster anti-spam software on the mail server has been reinstated. This is in addition to our ongoing use of the Barracuda anti-spam filter. We have upgraded the Barracuda's memory to handle bulkier firmware and increased traffic. Performance is now satisfactory.

Virtually all SON PC workstations are running fully patched Windows XP and Microsoft office 2007. We have no plans to move to Windows Vista on a large scale, but are accepting Vista on some new purchases. We are currently acquiring RAM upgrades and evaluating new Apple computer purchases as needed to bring all SON Apple workstations up to MacOS X 10.5 (Leopard) and Microsoft Office 2008.

### **USE OF PREVIOUS ACADEMIC YEAR ALLOCATIONS**

SIT funds are used to fund personnel and equipment consistent with the original guidelines established for the account.

#### Infrastructure funds pay for:

- one student employee who supports faculty and staff in learning to use computer resources (\$3,000),
- 15% of the School's webmaster salary (\$9,205),
- management the student computer network by ITS (\$17,500),
- part of the ITS service charge (\$1506) , and
- recurring costs of software licenses (\$11,500).

#### One-time projects

Instructional Environments - This year, six ceiling-mounted projectors were installed in classrooms, replacement computers were purchased for the one of the tiered classrooms, and two student laptops were replaced (\$15,731).

Electrical outlet was added and sound equipment was installed in the ceiling (\$1,097) in the small teleconference room (5.120)

Software purchases (\$1050)

Miscellaneous purchases (\$392.96)

Academic Year 08-9 we received:	
Infrastructure	\$31,000
One-time projects	<u>\$62,651</u>
Total Income	\$93,651
Carried over from 07-8	\$8,360
Infrastructure	\$42,711
One-time projects	<u>\$18,300</u>
Total expenditures	\$61,011
Remaining in SIT acct	\$41,000

The University of Texas at Austin School of Nursing  
**NURSING INFORMATICS AND INFORMATION TECHNOLOGY STRATEGIC PLAN 2009-10**  
11/2008 reviewed

**Vision Statement**

The vision for information technology (IT) in the School of Nursing is that all students, faculty, and staff learn, teach, conduct School and professional business independently and efficiently with out regard to time or place. Specifically:

- Students, faculty and staff are competent, comfortable users of information technology;
- Appropriate technological and educational support is available to all students, faculty, and staff;
- SON administration, students, faculty and staff appreciate, understand, and use nursing informatics concepts and information technology in all aspects of nursing practice, education, and research;
- Faculty and staff are leaders in the innovative use of nursing informatics (NI) and information technology (IT) in nursing practice, education, and research; and
- The University community understands the role of nursing informatics and information technology in nursing and health care.

**Mission:**

Enable students, faculty, and staff to exploit technology for communication, collaboration, and information management.

**Goals for 2009-20010**

1. Students will have access to state-of-the-science technology.
2. Faculty and staff will have access to adequate computing resources on their desks.
3. Faculty and staff will have access to state-of-the-science technology within the building.
4. Faculty, staff, and students will possess a basic set of skills in nursing informatics, information technology and computer use.
5. Faculty, staff, and students will be challenged to incorporate nursing informatics concepts and new technology into their professional and scholarly activities.
6. Accurate, timely technical consultation will be available to students, faculty, and staff.
7. Nursing informatics and information technology content will be integrated into the curricula.
8. Resources will be identified and allocated for acquisition, support, enhancement, maintenance, and protection of technology.
9. The University community will be informed of the role of nursing informatics and information technology in nursing and health care