

Wake Technical Community College
Technology Plan



Academic Year 2005-06

Wake Technical Community College
Information Technology Services
Approved September 9, 2005 by the ITS Advisory Committee

Table of Contents

Preface.....	3
Statement from the President.....	3
Mission Statement.....	4
Minimum Technology Standards for Employees	4
Minimum Technology Standards for Students	4
Implementation for 2005-06	5
Priority: Faculty and Staff Computers	5
Priority: Student Classroom and Lab Computers	5
Priority: Telecommunications Technology.....	5
Priority: Classroom Instructional Technology.....	5
Current Projects	6
Lab Plan	6
College-Wide Help Desk	6
Datatel Student Module Implementation.....	6
Web Advisor	6
Campus Cruiser.....	7
Other CIS Needs	7
Distance Learning	7
Electronic Mail Upgrade with Anti-Spam and Virus Protection.....	7
CamNet	7
Wireless Access	7
Cable Television	8
Remote Access.....	8
Priority: Faculty and Staff Computers	8
Priority: Student Classroom and Lab Computers	8
Priority: Telecommunications Technology.....	9
Priority: Classroom Instructional Technology.....	9
The Goal for Classroom Technology.....	9
Constraints and Limitations	9
Definitions.....	9
Levels of Classroom Technology	9
Classroom Technology – Level 0	10
Classroom Technology – Level 1	10
Classroom Technology – Level 2	10
Classroom Technology – Level 3	10
Classroom Technology – Level 4 (Video Classroom).....	10
Classroom Technology and Future Construction and Renovation	11
Current Inventory.....	11
Cost of Implementation.....	12
Implementation	12
2006-07 and Beyond	14

Preface

This document is created as part of a dynamic plan to describe both the current state of information technology and the future, desired state of information technology at Wake Technical Community College.

Because technology, personnel, and budgetary resources change on a frequent basis, this document will necessarily have to change as well. Look for updates to occur at least annually.

Information for this document comes from policies approved by the College, planning done by the Technology Advisory Committee, the Institutional Effectiveness Committee, the Distance Learning Advisory Committee, and other committees. Information is also obtained from historical records, institutional effectiveness surveys, and other documents involved in the planning process.

Comments or questions about this document may be address to Dr. Darryl McGraw, Chief Information Officer at (919) 662-3388, or via electronic mail at ddmcgraw@waketech.edu.

Statement from the President

Technology is a tool that provides students with new ways to learn. As a College, we are committed to using technology to improve learning and to enhance services.

As technology is taking on a central role in education, Wake Technical Community College is responding by upgrading instructional computer hardware and software to industry standards; by providing in-house training in instuctional technology; and, by upgrading administrative technology used to support the teaching and learning process.

As president, my goal is to expose every student to technology, both as a learning tool and as a tool for daily life. This Technology Plan will provide a framework for accomplishing this goal.

Mission Statement

The mission of Information Technology Services (ITS) at Wake Technical Community College is to support student learning, faculty teaching, and college operations through the use of Information Technology.

The philosophy of ITS is that the most important thing on the college campus is the relationship between the instructor and the student. Everything else on campus is in support of this relationship. ITS is committed to supporting this relationship through the provision of instructional technology used in the teaching and learning process and the provision of administrative technology used in support of the teaching and learning process.

Minimum Technology Standards for Employees

It is the philosophy of the college that every employee should have access to a minimum level of technological tools in order to accomplish the tasks for which they have been hired.

Each full-time employee should have, as a minimum, the following equipment to ensure productivity:

- ❖ A computer with a processor not more than 2 generations old and an operating system not more than 2 generations old;
- ❖ An individual telephone with voice mail;
- ❖ A GroupWise electronic mail account;
- ❖ Appropriate accounts on the administrative information systems as determined to be necessary by the employee's supervisor;
- ❖ Access to the internet.
- ❖ "Work at Home" rights for the MS Office and Novell Groupwise
- ❖ Secure, remote access to campus networking services

In addition, the following standards will apply:

- ❖ Each faculty member will have the option of using a course management system for each of their courses;
- ❖ Each part-time faculty member will have a GroupWise electronic mail account and a voice mailbox where possible.

Minimum Technology Standards for Students

It is the philosophy of the college that every student should have access to a minimum level of technological tools in order to facilitate the educational process. Access to these tools is made possible by the payment of the Technology Fee. As such, it is the College's responsibility to ensure that the following standards will apply:

- ❖ All full-time curriculum students have an e-mail account.

- ❖ All students will access to the Open Lab for email access, internet-based research, limited printing services, and networked campus services.
- ❖ Student Computing Labs will have computers that have processors not more than 2 generations old and operating systems not more than 2 generations old.
- ❖ All campus computing labs will have internet access.
- ❖ Unfettered wireless network access will be available in limited areas on campus.

Implementation for 2005-06

In order to achieve the minimum standards as outlined above, we must prioritize the objectives as outlined above. The following are College priorities, not in any specific order:

Priority: Faculty and Staff Computers

Ensure that all faculty and staff members have computers that meet the standards as described above.

Priority: Student Classroom and Lab Computers

Ensure that student computer labs meet the standards as defined above. Computer labs formerly considered to be “stand-alone” labs are now supported by ITS, and will be included in upgrades as budget permits.

Priority: Telecommunications Technology

Purchase and implement a new telephone system that allows faculty and staff to take advantage of new, modern telephone features such as conference calling, call forwarding, caller ID, voicemail, remote access, etc.

Priority: Classroom Instructional Technology

Identify priorities for various levels of classroom technology, and create a plan to implement those priorities.

Current Projects

More technology upgrades and projects are being planned for immediate implementation. The following projects are designed to enhance one or more of the college core values.

Lab Plan

A presidential priority, this plan is a significant investment in current computers, and a commitment to upgrade computers on a regular basis.

After re-directing a shipment of 213 computers, we will need to purchase approximately 174 computers for new construction on the main campus. *Status: Complete.*

The next purchase was for 209 computers in 10 labs for the new Western Wake Campus. *Status: Complete.*

A lease of 377 computers is being considered by the State Board on 9/15/2005. The computers acquired by this lease will replace 24 outdated student computer labs on all campuses. *Status: In Progress.*

College-Wide Help Desk

Effective June 1, 2005, the College implemented a college-wide Help Desk, enhancing communications and collaboration across multiple divisions. The Help Desk accepts requests for service in most service areas of the college. Faculty and staff are able to submit requests on-line, or via telephone at 662-HELP.

Initial evaluations of the Helpdesk service have been overwhelmingly positive.

Datatel Student Module Implementation

One significant effort by the college will be the **implementation of the Student Module for the Colleague system**. The implementation for this system has already started, and will take until the Fall of 2006.

Web Advisor

This is a part of Datatel's Colleague system that allows students to register for classes, check grades, and perform other student service functions. So far, we have Web Advisor up and running with the human resources functions. It should be fully functional in the Fall of 2006.

Campus Cruiser

This is a student portal system that although meant for use with Datatel's Colleague system, can also be interfaced with the existing IIPS software. This student portal system greatly enhances college-wide communication by giving each student an electronic mail address. In addition, the distributed nature of the system makes it easy to operate, empowers individual divisions of the college to creatively provide information, and offers faculty a better way to communication with students and collaborate with each other. However, the major benefit to students is that this system can register a student for classes, allow a student to check grades, and many other functions.

Campus Cruiser was implemented at the beginning of the Fall semester of 2005, and has proven to be very popular with the students.

Other CIS Needs

There will be other CIS needs as time goes by. These needs include, record Imaging, FA-link, and more.

Distance Learning

The enterprise version of BlackBoard 6 is up and running, and has replaced the older version of Blackboard 5. It is running on new hardware, and has greatly increased our ability to provide distance learning courses.

In addition to on-line distance learning projects, we have purchased interactive videoconferencing technology to be used between the Main Campus, the Health Sciences Campus, and the Plastics Center. Classes for the Plastics Center are schedule to be up and running for the Spring semester of 2006.

We are currently testing alternatives to the use of Blackboard.

Electronic Mail Upgrade with Anti-Spam and Virus Protection

One immediate need is an upgrade from an old unsupported version of Groupwise to the latest version. New servers and software were necessary, and installation of the client for users was completed in May, 2005.

CamNet

CamNet is a video-based communication system that places video monitors in strategic places on campus. Implementation Date is tentatively 30 September 2005.

Wireless Access

To enhance services to the students and the community, un-encrypted wireless access will be available in the Student Lounge, the Student Cafeteria, and the Conference Center in the Student Services Building.

Cable Television

Cable television will be placed in the student lounge and the cafeteria on monitors suspended from the ceiling. Cable outlets will be made available in the Library Education building and Holding Hall. Implementation date is tentatively 1 November 2005

Remote Access

The ability to work from home is very important to the faculty and staff of the College. Currently, there is little or no network storage, and the only remote access is to electronic mail.

Pending the availability of funds, we will implement a Virtual Private Network which will allow people to check email, access personal and shared storage space on the administrative network, and get access to Colleague and other administrative functions. This will take place from any properly equipped computer anywhere on the internet.

Testing is currently taking place.

Priority: Faculty and Staff Computers

Recent efforts to upgrade faculty and staff have been highly successful. In the Summer of 2005, there were 213 faculty and staff members given new state-of-the-art computers. Due to moves, staff expansion, and new hires, approximately 40 new needs were identified and are being satisfied for the Fall semester of 2005.

Once current, all faculty and staff computers will be constantly upgraded through a new acquisition process to be determined by ITS and the Executive Council. There should be no faculty members with computers that do not meet the technology plan guidelines.

Priority: Student Classroom and Lab Computers

Phase 1: Immediately purchase 174 new Dell computers for 7 new computer labs. These computers will be installed in new labs in Pucher-LeMay hall. *Status: Complete.*

Phase 2: Purchase 209 computers, along with other related equipment for the new Western Wake Campus. This will complete 10 labs in this new facility. *Status: Complete*

Phase 3: Lease 377 computers for replacement of 24 existing student computer labs. The total price is cost prohibitive, so the lease will allow us to spread the cost of these computers out over three years. *Status: In Progress.*

Priority: Telecommunications Technology

The plan in this area is for a new telecommunications switch on the main campus, with remote access into the switch by other campuses. Approximate cost will be \$522,000 or less.

As of mid-September, 2005, there is a bid being offered by State ITS to acquire such a system. Implementation is expected to be complete by the end of the academic year.

Priority: Classroom Instructional Technology

The Goal for Classroom Technology

The goal of this plan is to provide instructional space with a minimum level of instructional technology. The lowest level of instructional technology will be available in most instructional spaces on each campus. Depending upon the needs of the “owning” department, additional technology will be made available in that classroom.

Constraints and Limitations

Due to the amount of technology requested by faculty and staff, this plan will take a number of years to complete. The plan will be re-visited and updated every year, and will be completed as budget, time, and other constraints allow.

Definitions

The terminology used in this document is *classroom* as opposed to *instructional* technology, because there is a great deal of instructional technology that might not necessarily be used in a classroom.

Levels of Classroom Technology

Not every classroom will need specific pieces of classroom technology due to the specialized nature of the dedicated classroom and its purpose. However, the college will assume that by default, all instructional spaces will be equipped at level 1 unless the “owning” department declares it to be a level 0 (no technology needed) or a higher level of technology.

Future classroom construction and renovation will equip instructional spaces with level 1 technology unless otherwise specified by the owning department.

The following levels of classroom technology are defined:

Classroom Technology – Level 0

No special technology needed, or some highly specialized technology outside of the parameters of this plan is needed.

Classroom Technology – Level 1

Every instructional space should have a minimum level of technology. Level 1 Technology includes:

- Instructor workstation furniture
- Instructor workstation computer
- Instruction workstation connection to the campus network
- Ceiling mounted projector with remote control
- Electrical power to the ceiling-mounted projector
- VGA Cabling to the ceiling-mounted projector
- RCA video and audio cabling to the ceiling-mounted projector

In this configuration, secondary audio and video cabling is included so that VCR/DVD combinations on carts can be wheeled into the rooms to be used in classroom presentations.

Classroom Technology – Level 2

This level of classroom will contain everything stated above in level 1. In addition, this classroom will have a:

- VCR/DVD combination.

Classroom Technology – Level 3

This level of classroom will contain everything stated above in level 2. In addition to the VCR/DVD combination device, this classroom will contain a:

- Document camera and an audio amplifier and speakers.

Classroom Technology – Level 4 (Video Classroom)

This level of classroom will contain everything stated above in level 3. However, this classroom will have:

- Videoconference codec
- Appropriate monitors

The intent of this subset of the campus Technology Plan is to ensure that there are appropriate levels of instructional technology within the classrooms and instructional spaces at Wake Tech. With the appropriate levels of technology, an instructor can prepare electronic “handouts” and presentation graphics at home or the office, and walk into any equipped classroom and pull up the files necessary to be productive.

Classroom Technology and Future Construction and Renovation

It is the intent of this proposal that level 1 classroom technology is built into future construction and renovation projects. Technology at higher levels should be identified and planned into space by the department for which the space is being constructed or renovated.

However, this leaves the question of how to “catch up” the current classroom inventory to these proposed standards. Statistics for instructional spaces and the current classroom inventory is shown below.

Current Inventory

In August of 2005, a comprehensive inventory of instructional spaces and permanently installed instructional technology was completed on all campuses at Wake Technical Community College. The result of this inventory is displayed in the Table 1 below:

Description	Count			
Number of Labs:	145			
Number of Classrooms	164			
Total Number of Instructional Spaces:	309			
Number of Completed Instructional Spaces:	95			
Total Number of Instructional Spaces to Equip:	214			

Table 1: Classroom and Lab Inventory

Instructional Spaces by Level:				
Number of Level 0, non-equipped spaces:	51			
Number of Level 1 to install:	147			
Number of Level 2 to install:	71			
Number of Level 3 to install:	32			
Number of Level 4 to install:	8			
Total Number of Instructional Spaces:	309			
Instructional Spaces to Equip:				
	Count	Approx. Unit Cost		Approx. Ext. Cost
Number of Level 1 to install:	103	\$4,500		\$463,500
Number of Level 2 to install:	71	\$4,600		\$326,600
Number of Level 3 to install:	32	\$5,200		\$166,400
Number of Level 4 to install:	8	\$25,000		\$200,000
Total Number of Instructional Spaces to Equip:	214			\$1,156,500

Table 2: Inventory and Approximate Costs

Cost of Implementation

In order to satisfy faculty and administrative goals, and conform to the leveling specifications mentioned in previous pages, it will cost approximately \$1.1 million dollars. This will be possible if the implementation for classroom technology is spread out over several years, and new construction and renovation includes classroom technology.

Implementation

Since the need for basic classroom technology is so great, the first year of this plan should be dedicated to getting the widest number of classrooms upgraded to level 1. And, since cabling and electrical installation is a major component of level 1 classrooms, we can add more technology if work mostly with “tech-ready rooms”.

We will upgrade to level 1 the rooms that are high-use, high-priority as identified by Curriculum Education Services Division deans, or tech-ready. This will result in 51 instructional spaces being upgraded to Level 1 with a cost estimated to be approximately \$204,000.

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The rooms that affected by this proposal are listed below in Table 3:

Campus	Bldg #	Room #	Room Type	Owner	Use Code	Tech Level	Priority
HS	HSB	312	Classroom	HS	110	4	99
HS	HSB	414	Classroom	HS	110	3	99
Main	AHT	B127	Computer Lab	VT	210	2	99
Main	AHT	B128	Classroom	VT	110	2	99
Main	AHT	B130	Classroom	VT	110	2	99
Main	AHT	B132	Classroom	VT	110	2	99
Main	AHT	B134	Classroom	VT	110	2	99
Main	AHT	B136	Classroom	VT	110	2	99
Main	AHT	B138	Classroom	VT	110	2	99
Main	AHT	B140	Computer Lab	VT	210	2	99
Main	ETB	125	Classroom	AHSS	110	1	14
Main	ETB	127	Classroom	AHSS	110	1	13
Main	ETB	128	Classroom	AHSS	110	3	11
Main	ETB	130	Classroom	AHSS	110	3	12
Main	LE	10	Classroom	AHSS	110	1	99
Main	LE	11	Classroom	MSD	110	3	99
Main	LE	14	Classroom	ASD	110	4	99
Main	LE	206	Classroom	AHSS	110	1	99
Main	LE	207	Classroom	ASD	110	1	99
Main	LE	208	Classroom	AHSS	110	1	99
Main	LE	210	Geology	MSD	210	3	99
Main	LE	221	Classroom	AHSS	110	1	9
Main	LE	225	Classroom	AHSS	110	1	18
Main	LE	227	Classroom	AHSS	110	1	10
Main	PLM	138	Classroom	AHSS	110	3	7
Main	PLM	141	Classroom	AHSS	110	3	4
Main	PLM	146	Computer Lab		210	1	99
Main	PLM	150	Classroom	AHSS	110	1	5
Main	PLM	151	Classroom	AHSS	110	1	99
Main	PLM	154	Classroom	AHSS	110	1	2
Main	PLM	216	Computer Lab	CIS	210	2	99
Main	PLM	224	Classroom	AHSS	110	3	6
Main	PLM	230	Computer Lab	CIS	210	2	99
Main	PLM	236	Computer Lab	CIS	210	4	99
Main	PLM	238	Computer Lab	CIS	210	2	99
Main	PLM	241	Classroom	MSD	110	3	99
Main	PLM	246	Classroom	AHSS	110	3	8
Main	PLM	304	Computer Lab	CIS	210	2	99
Main	PLM	306	Computer Lab	CIS	210	2	99
Main	PLM	308	Computer Lab	CIS	210	2	99
Main	PLM	320	Computer Lab	CIS	210	2	99

WAKE TECH
INFORMATION TECHNOLOGY SERVICES

Main	PLM	322	Computer Lab	CIS	210	2	99
Main	PLM	325	Computer Lab	CIS	210	2	99
Main	PLM	326	Computer Lab	CIS	210	2	99
Main	PLM	330	Computer Lab	CIS	210	4	99
Main	PLM	336	Computer Lab	CIS	210	2	99
Main	PLM	338	Computer Lab	CIS	210	1	99
Main	PLM	341	Classroom	CIS	110	2	99
Main	PLM	346	Classroom	BE	110	2	99
Main	TE	105A	Classroom	AHSS	110	3	1
Main	TE	105B	Classroom	AHSS	110	3	3

Table 3: Classrooms Proposed for Upgrading to Level 1

There are 51 classrooms in Table 2. Since most of the classrooms have electrical outlets already installed, it is estimated that the average cost for these rooms, including computer, network connection, instructor workstation furniture, and data projector, will be approximately \$4,000 each. The total projected cost for this fiscal year is approximately **\$204,000**.

If this proposal is accepted and approved, there will be a determination of the amount of budget available for this project. This determination shall be made by the President, Executive Vice President, Chief Financial Officer, and Chief Information Officer. If insufficient budget is determined to exist, then priority will be given to those rooms deemed high priority by division deans, and we will implement the plan in order until funds are exhausted.

Once the estimated cost and specific rooms are determined, an inventory of the rooms will be conducted to verify network connections, electrical connections, and other technology. The inventory shall be conducted by ITS and AV.

This inventory verification will be used to prepare a bid that will contain 2 components. The first component is the turn key installation of level 1 technology in each of the classrooms to be named. This will include furniture, computer, network cabling, electrical cabling, projector cabling, wiremold, project, projector mount, etc. The second component of the bid will be a convenience contract from which the College will be able to purchase portable, stand-alone projectors.

2006-07 and Beyond

The ITS Advisory Committee, in conjunction with the Executive Council, will revisit the classroom inventory in the summer of 2006 to identify priorities and re-adjust the inventory list as needed.

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