CHAPTER 5 INSTRUCTIONAL RESOURCES AND RESPONSIBILITIES

IN.1 INSTRUCTIONAL RESOURCES

IN.1: The school should provide and manage resources to meet the instructional responsibilities created by the programs offered.

The College of Management's instructional responsibilities are governed by the mission and objectives of its degree programs. Within each of the programs, emphasis is placed on the use of technology in enhancing the quality of the educational experience of our undergraduate and graduate students. College resources, library resources, and other campus resources support both student learning needs and faculty instruction and support needs.

Instructional Technologies

The COM has demonstrated a strong commitment to the use of a variety of instructional technologies in the classroom through its ongoing acquisitions of state-of-the-art multimedia computer/video hardware and software.

Institutional Resources

COM has nine multimedia classrooms in Nelson Hall, including a 475-seat auditorium and a video studio classroom. When the Nelson Hall renovation is completed in spring 2000, there will be a total of 13 multimedia classrooms. Each of the Nelson Hall classrooms is equipped with the following multimedia equipment:

- Dell P200 computers with 15-inch monitor, 32 megabytes RAM, and 1.2 gigabyte hard drive
- NEC LCD Projectors mounted on ceiling to display computer monitor
- VCR hooked up to LCD projector, with sound amplifier and speakers
- External port to connect laptops for ADA compliance and guest speakers
- Installed software includes Microsoft Office 97, Netscape Navigator, SAS, and SPSS
- Access to walk-in lab server
Additional support in Nelson 240 classroom (auditorium) including a Hughes light-valve projector, document camera, laser pointer, and sound system with both wireless hand-held microphone and wireless lavalier microphone.

In 1995, the COM began operating a video classroom in which courses are videotaped for delayed broadcast on the local CATV education channel. These videotapes are made available in subsequent semesters to interested students through the NC State Office of Instructional Telecommunications. Nineteen courses, including three business management and accounting courses, were videotaped in 1998-1999.

In 1996, multimedia capabilities similar to those in the classrooms were added for the Nelson Hall Board Room, where seminars delivered by faculty and visiting scholars.

The COM also provides additional support for the utilization of instructional technology. Facilities for producing classroom materials, including the ability to burn-in CDs, video cameras for the use of recording presentations, digital cameras, and scanners, are available to faculty.

Nelson Hall houses a walk-in computer lab with a capacity of 101 seats. All lab computers are equipped with Pentium microprocessors, feature an average two-gigabyte hard drive, and have 32 to 64 megabytes of RAM. Most of these computers have Zip drives. Computers are replaced on a three-year cycle using monies from student fees. The lab also contains five Hewlett-Packard HP-5 LaserJet high volume printers and one HP color LaserJet printer. Lab hours are Monday through Thursday 9 a.m. to 12 midnight, Friday 9 a.m. to 6 p.m., Saturday 9 a.m. to 5 p.m., and Sunday 9 a.m. to 10 p.m. Lab hours will be extended in August 1999. The lab is staffed by undergraduate students and economics graduate assistants. Two assistants are available in the lab at any one time and are knowledgeable in the use of the available software.

All NC State students receive a Unity account, which provides e-mail capability and access to 40 megabytes of storage for users to save work. COM students can log in to the COM walk-in lab computers through a Novell operating system. The COM log-in allows the student access to the COM network off a Compaq Proliant Server through Unity space. COM log-ins also allow students to access their university memory and e-mail
capability. Student log-ins are automatically activated from class rolls. The COM network provides access to a standard software suite.

Nelson Hall also is equipped with a teaching computer lab that provides a networked 43-seat classroom in which each student has access to a personal computer. The computers are identical to those in the walk-in computing lab. The classroom contains one HP 5 high-volume printer and an instructor’s station with access to projection and video. Accessible programs are the same on all machines and similar to those available in the walk-in lab.

The teaching lab is utilized most of the day for classes, including all sections of M 200, BUS 340, 495, 541, 545, and ACC 440. The M 200 class teaches students the basics of the Internet, Microsoft Word, Microsoft Excel, and database concepts such as Mail Merge. M 200 is a prerequisite course for ACC 310, ACC 320, ACC 440, and BUS 340.

There are two graduate student labs reserved for the graduate student population in COM. The MAC Student Lab contains five Pentium personal computers. The lab also contains one HP LaserJet 5 printer and one photocopier. The lab is maintained by the Department of Accounting. Logging on to the walk-in lab server provides access to the standard software suite.

The Patterson Hall Graduate Economics Student Lab consists of eight Pentium personal computers. Four of the computers provide access to the walk-in lab server network while four are stand-alone machines. The lab also contains one HP LaserJet 5 printer. This lab will be moved to Nelson Hall after the renovation of the building. In addition, there is one Pentium computer and one HP 5 LaserJet printer for use by MSM student organizations.

Resources for faculty use parallel the student resources. All faculty have a Pentium (or equivalent) personal computer for their offices, which typically contains a one-gigabyte or larger hard drive, either 32 or 64 megabytes of RAM, and a 15- or 17-inch color monitor. Many of the machines also contain Zip drives. All faculty machines are connected to the COM faculty computing network and thus have access to the standard software suite. In addition, the COM faculty network provides access to the following software: RUMBA, Dr. Solomon Anti-virus, ONTIME, ELDB, FINLIT, Microsoft Office 97, Pegasus Mail, Netscape, Novell NetWare, Windows 95, LIMDEP3, SAS, TCP/IP Utilities, Windows 95 Telnet, and Microsoft FrontPage 97. Many faculty have augmented these resources to support their instructional and research interests using grants and departmental funds to acquire additional hardware (e.g., printers, scanners,
laptop computers) and software. Faculty also have access to the supercomputers at the North Carolina Supercomputing Center (NCSC) for research and instructional purposes.

All computer networks within the COM are connected to NCState.Net for access to other colleges and the World Wide Web (WWW). There is a 10/100 switch for the student lab, and the other networks will soon follow. A conversion to Windows NT is planned for 1999-2000.

All university-owned computing equipment in the COM is supported by the COM computing services staff. Director Dan Steen and four full-time staff provide maintenance and training. The Computing Services staff regularly reviews the composition of the COM standard software suite for adequacy and makes recommendations on enhancements.

NC State’s Information Technology department maintains six Unity/NDS computing labs across campus that are open to all faculty, staff, and students with Unity/NDS accounts (available at no cost). Students can use any Unity lab across campus to log in and access the COM network. The resources available at these labs include:

- **Avent Ferry Complex**: Sixty Sun Sparc5 Workstations, two printers. Open 24 hours/seven days a week.
- **D.H. Hill Library**: Forty-five Sun Sparc4 Workstations, two printers. Open during library hours.
- **109 Laundry Building**: Seventy-one Windows NT Workstations, thirteen Sun Ultra10 Workstations, four PowerMacs, two printers. Open Monday through Friday 8 a.m. to midnight, Saturday 8 a.m. to 6 p.m., and Sunday 1 p.m. to midnight.
- **119 North Hall**: Twenty-eight Sun Sparc4 Workstations, two printers. Open 24 hours a day, seven days a week.
- **103 Sullivan Hall**: Seventeen Sun Ultra10 Workstations, sixteen Windows NT Workstations, two printers. Open 24 hours a day, seven days a week.
- **33 Tucker Hall**: Thirty-four Sun Sparc4 Workstations, two printers. Open 24 hours a day, seven days a week.

NC State students also may connect personal computers to the NC State computing network through ResNet via a 10BaseT Ethernet adapter or by telephone access. NC State is actively participating in the development of Internet II.
Classroom Facilities

Nelson Hall currently contains nine classrooms including a 475-seat auditorium. All rooms have multimedia instructional equipment. The COM also utilizes classrooms across campus. Nelson Hall is currently undergoing a major renovation to both classroom and faculty and staff office space. Once the renovation is completed in April 2000 there will be seven tiered classrooms with full multimedia facilities and networked computer hook-ups, including web access, at each seat. Each of these classrooms will seat 50 to 55 students. There will be four additional multimedia classrooms seating from 40 to 65 students and a video studio classroom. The auditorium will retain full multimedia capabilities and seats 475 students.

Upon completion of the Nelson Hall renovation, there will be three graduate study areas: one each for students enrolled in the MSM, MAC, and economics programs. Each of these dedicated study areas will have four computer stations with Zip or Jaz drives and software specialized to each discipline. In addition, there will be seven break-out study/interview rooms for the graduate students. Ph.D. students in economics with instructional duties will have offices with computers.

Assessment

The computer facilities of the College of Management and NC State are well suited to support the instructional mission of COM at the graduate and undergraduate levels. Students and faculty have at their disposal the necessary hardware and software to facilitate the integration of technology and technology management into the traditional disciplines of accounting, economics, and business management.

NCSU Libraries

The NCSU Libraries consists of the D.H. Hill Library, Burlington Textiles Library, Harrye B. Lyons Design Library, Natural Resources Library, and the Veterinary Medical Library. The NCSU Libraries’ collections include more than 2.6 million volumes, 26,000 serial subscriptions, and a growing array of electronic full-text and image collections. The
COM management collection is principally housed in D.H. Hill Library, which offers 24-hour reference, and circulation service. D.H. Hill Library is also a U.S. Federal Documents depository and is the region’s only full patent and trademark depository.

The NCSU Libraries offers many elements of a digital library, such as:

- Content-rich access through its WWW homepage to the Internet and to local resources
- A flexible network infrastructure that provides users both on campus and statewide with exceptionally powerful, very high bandwidth access to digital resources
- An online information system in cooperation with the Triangle Research Libraries Network (the TRLN is comprised of NC State, Duke University, North Carolina Central University, and the University of North Carolina at Chapel Hill)
- Access to thousands of CD-ROM and locally mounted products for computerized searches of databases in a variety of disciplines
- An automated document delivery system developed by TRLN, with the NC State Libraries as pilot institution in Spring 1998
- Geographic Information System (GIS) software and other numeric data resources
- Reference and circulation renewal services to the NC State community via electronic mail
- The only full patent and trademark depository in the region, with access to data on CD-ROM, in microfilm, and through the Automated Patent System
- An electronic reserve system that provides 24-hour access to course reserves via the WWW.

The NCSU Libraries has recently created a Learning and Research Center for the Digital Age. This Center includes the following:

- Learning Technologies Service (LTS) with staff and equipment to support new teaching approaches using multimedia and web-based resources
- Scholarly Communication Center with legal staff to provide guidance to the Libraries and the campus on intellectual property and copyright issues
- Information Technologies Teaching Center consisting of Windows and Mac computer labs and a multimedia presentation facility
- Scanning and Digitization Laboratory
LTS, in partnership with the Faculty Center for Teaching and Learning, serves as a campus focal point for educational technology activities. LTS offers assistance in exploring, evaluating, and applying innovative multimedia applications and information resources to enhance student learning. LTS makes these technologies and skills available to faculty and their supporting staff for their own development efforts. The LTS team monitors the needs expressed by the faculty, reviews the appropriate software and hardware products, and makes recommendations for acquisition or internal development.

LTS, NC State Computing Services, and the NCSU Libraries offer workshops and courses to provide faculty, staff, and graduate students with knowledge and skills needed in developing online course materials. Specific forms of assistance offered by the LTS include:

- **Site Design**: Assistance in developing a coherent look and feel for course offerings with emphasis on standard page design elements such as navigation.

- **Instructional Tools**: A learning and demonstration area in which to try out new instructional tools and technologies.

- **Project Planning**: Consultation on software, equipment, and/or personnel needs, as well as help in locating other possible resources.

- **Graphics Services**: A rich graphics library of navigation and control buttons in a wide variety of colors and styles.

- **Scanning, Audio & Video Digitization, and Programming Services**

- **Instructional Design**: Assistance in creating an online learning environment, including consideration of audience characteristics and preferences, content organization, and the appropriate/effective use of multimedia formats.

- **Research Consultation**: Help in identifying information to enrich online course materials, including related links and images, online databases in all subject areas, and published research; some material may be appropriate for student access through the Libraries’ electronic reserve.
The NCSU Libraries provides access to and training in the use of a variety of databases for both instructional and research needs. The research databases that are available include:

- **ABI/INFORM Global**: Worldwide literature in business and management, accounting, economics, finance, taxation, marketing, real estate, public administration, labor relations, health care, banking, and insurance.

- **Academic Universe**: Full-text and abstracts of comprehensive news, business, and legal information, including foreign news sources, regional US news services, radio and television transcripts, federal and state case law, medical, legislative and industry news, annual reports from the Securities and Exchange Commission and more.

- **American Business Disc**: A compilation from the Yellow Pages of over 5,000 telephone directories, Business White Pages, selected portions of corporate annual reports and SEC filings, Chamber of Commerce directories, and State directories; limited credit rating information also available.

- **Business Index**: Indexing and abstracts for over 850 business, management, and trade journals, plus selected citations to business-related articles in more than 3,000 other publications.

- **Business & Industry**: Information database with coverage from over 900 trade publications covering business events in over 190 countries.

- **Disclosure**: Detailed records for more than 16,000 public companies and selected records for foreign companies traded on major American exchanges; includes extensive quarterly and annual financial data for the parent company, company ratios, selected shareholder information, and textual information from Management Discussion and President's letter; fully searchable.

- **Econlit**: Citations to, and selected abstracts of, the international literature in the field of economics; developed by the American Economic Association. EconLit corresponds to the Journal of Economic Literature and the Index of Economic Articles and covers journal articles, dissertations, books, book chapters and articles, and conference proceedings; topics include economic theory and history; monetary theory and financial institutions; labor economics; international, regional, and urban economics; and other related subjects.

- **Economic Censuses, 1987 & 1992**: US summary and state files on

Findex: Worldwide directory of market research reports

Hoover’s Company Capsules

Hoover’s Company Profiles

Lexis/Nexis

Investext: Abstracts or full text of investment reports and forecasts for more than 11,000 US and international companies and for 53 industries prepared by Wall Street and international brokerage firms

National Trade Data Bank: Extensive library of more than 70,000 government publications, including government periodicals related to exports, imports, and economic conditions in foreign countries, chapters of the CIA’s World Fact Book, embassy reports on foreign industries, and export/import statistics on individual products

Social Science Citation Index: Multidisciplinary index to the journal literature of the social sciences covering 1,400 journals in 50 disciplines

Standard and Poor’s Company Profiles: Directory information for largely US public and private companies and biographical information for selected executives and offices

Standard and Poor’s Stock Reports: Financial investment reports for 6,300 public companies traded on major American exchanges, with industry outlook reports, Wall Street consensus, and news updates for selected companies


U. S. Exports of Merchandise: Quantity, value, and shipping weight for US exports of domestic and foreign merchandise by commodity code, country of destination, customs district of exportation, and method of transportation

U. S. Imports of Merchandise: Net quantity, value data, value and shipping weight data for vessel and air shipments in terms of commodity
by country of origin, by customs district of entry, and by rate provision.

The COM has augmented these resources by acquiring and maintaining the Standard and Poor’s COMPUSTAT database and the Center for Research in Security Prices (CRSP) databases used extensively in the research efforts of college faculty.

**Assessment**

The NCSU Libraries provides a rich array of instructional resources to support the teaching and research missions of the COM. These facilities serve the needs of both students and faculty.

The recent creation of the NC State Faculty Center for Teaching and Learning and the Learning Technologies Service will provide additional support and guidance for the continued introduction and use of varied instructional technologies by the faculty of the college. The purpose of this center is to provide faculty of all colleges with support in areas of pedagogy, communication, course design, and use of technology to facilitate instruction and learning. The COM has aggressively pursued the improvement of instruction within the college and is committed to continue its support of attendance by college faculty at teaching workshops. This new university resource is another opportunity to help the college achieve its goal of teaching excellence.

**IN.2 COLLECTIVE FACULTY INSTRUCTIONAL RESPONSIBILITIES**

**IN.2: The school’s faculty in aggregate and the faculty’s sub-units are responsible for:**

- effective creation and delivery of instruction,
- evaluation of instructional effectiveness and student achievement,
continued improvement of instructional programs, and innovation in instructional processes.

**Creation and Delivery of Instruction**

The creation and delivery of instruction is reviewed by students, faculty, and various levels of administration. Each department in the College of Management (COM) maintains a curriculum committee to regularly review degree requirements, current courses, and new course proposals submitted by faculty. The course review and new course action processes include the evaluation of content, objectives, syllabi, reading materials, and prerequisites. In addition, the COM Curriculum Committee reviews proposals submitted by the departments, and final proposals are reviewed and approved by the university Courses and Curriculum Committee or the Administrative Board of the Graduate School. New and experimental courses can be offered as needed without delay for completion of the full review process required to add a course to the official catalog. Recent course offerings of this type include but are not limited to courses in the economics of aging and intergenerational transfers, personal selling, staffing, and electronic commerce. In addition, all faculty are required to maintain syllabi on file for review by peers, students, and administrators. Finally, The University of North Carolina General Administration guidelines require a review of every course at least every ten years.

**Evaluation of Instructional Effectiveness and Student Achievement**

As explained in more detail in Section IN.3, COM’s instructional programs are continuously evaluated for effectiveness and student achievement. Every semester, each course and instructor are evaluated by all students in the course. These evaluations are used by the faculty, department heads, and curriculum committees as input to revise and update courses. Evaluations also are used by the department heads and deans as a major factor in the annual review process and in the determination of merit pay increases. Teaching evaluations are also considered by the senior faculty as part of all tenure and promotion decisions. In recognition of teaching excellence, the college and university maintain a series of teaching awards, including Outstanding Teacher Awards, Alumni Distinguished Undergraduate and Graduate Professors, Board of Governors Awards, and Outstanding Lecturer Awards.
Each department also maintains a regular peer review of the teaching process. Formative reviews are designed to provide peer suggestions to increase teaching effectiveness. This process involves peer observation of teaching and is required annually for all instructors and untenured faculty. In addition, a summative, more comprehensive review is designed to provide an overall evaluation of teaching effectiveness. This is required of all faculty (tenured or not) at least every five years, during the year before a retention decision, and during the year before any promotion decision.

The COM has established additional steps for continued improvement in instruction and teaching effectiveness. Each department has established a Comprehensive Review Committee (CRC) for post-tenure review of all tenured faculty. Normally, associate professors are reviewed every three years and full professors every five years. A central element of this review is evaluation of teaching effectiveness by a faculty member’s peers. This evaluation includes direct observation of classroom performance by other faculty.

Student achievement is evaluated in several ways. Current and former students are routinely surveyed as part of the university’s Institutional Effectiveness Program that requires departments to evaluate performance relative to explicit objectives. Periodically, the MSM program director organizes student focus groups to discuss the curriculum. Further monitoring of student achievement takes place through the COM’s Academic Affairs office. Prior to registration every semester, all students have the opportunity to meet with their academic advisors and/or attend an advising session conducted by advisors. Also, students who are currently having academic difficulty must consult with a professional advisor at the beginning of every semester. The college also surveys employers in an effort to ascertain the quality of its graduates and needs for programmatic improvement.

In addition to the course and instructor review processes noted above, the college strives to continuously improve instructional programs through several initiatives aimed directly at improvement of teaching. The college conducts "Teaching Effectiveness Workshops" for faculty, and the university maintains a Faculty Center for Teaching and Learning, which supports faculty in all aspects of teaching. In addition, all graduate student instructors are required by The University of North Carolina to undergo university and departmental orientation before undertaking their duties as teaching assistants or instructors. Ph.D. students in economics teaching their own sections report to a coordinator who oversees their classroom activities.
Innovation in Instructional Programs

In addition to its course creation and review processes noted above, the college maintains several innovative instructional programs. Each department offers several distance-learning courses via the university’s Office of Instructional Telecommunications. Recently, the college has created courses that are available via the Internet. Also, each department supports web-based instruction to accompany existing classroom courses. This support is tailored to the requirements of each course. The college also supports the Technology, Education and Commercialization Program (TEC), a joint program with the College of Engineering where students work in interdisciplinary teams to screen, assess, and develop new technologies and products for commercial applications. Finally, in conjunction with the university’s general education requirements, each department participates in a writing initiative in which the writing requirements of each course are reviewed and updated.

IN.3 INDIVIDUAL FACULTY INSTRUCTIONAL RESPONSIBILITIES

IN.3 Individual members of the faculty are responsible for:

currency in their instructional field(s),
delivery of effective instruction, and
accessibility to students consistent with the school’s expectations.

Faculty in the College of Management at NC State are responsible for maintaining knowledge of the latest developments in their fields and disciplines; for the effectiveness of their teaching; and for maintaining office hours that make them reasonably accessible to students. They are subject specific policies and expectations of the university and their respective departments.

Faculty Reviews: Each department in the COM conducts annual reviews of faculty performance, and salary increases are largely tied to the results of these reviews. Each faculty member, in accordance with university policies, must submit an annual activity
report describing his or her professional activities and achievements during the previous year. The report is kept in each faculty member’s personnel file. In the last several years, all salary increase funds allocated by The University of North Carolina Board of Governors have been based on merit or market adjustments, with no across-the-board increases.

The North Carolina General Assembly and The University of North Carolina both recently have underscored the primacy of teaching effectiveness in tenure and promotion decisions. More specifically, in "Teaching and Tenure in The University of North Carolina," the board of governors recently called upon the constituent campuses to "...review mission statements, tenure policies, and the criteria for making faculty personnel decisions...to give explicit recognition to the primary importance of teaching in the University (system)." The board’s report also asked that formal methods of peer review and student evaluations be included in the teaching evaluation procedures. As indicated previously, the peer review procedures at NC State include direct observation of classroom teaching of new and non-tenured faculty and of graduate teaching assistants each year. For tenured faculty, the procedures require peer review at least every five years.

Student Evaluations: Each course and each instructor is evaluated by students using a standard COM teaching evaluation instrument. The evaluations focus on issues such as clarity of communication, challenge of the course, presentation style, and other factors that have a bearing on the quality of a teacher’s performance in the classroom. In addition, Student Government independently uses its own evaluation form with the results published on the university’s web pages. About one-fourth of university instructors chose to participate in this voluntary evaluation last year.

Document 5.1 COM Student Evaluation Form

Office Hours: Consistent with university policies, faculty in the college must schedule "time during each week when they are available to meet with students." Generally, office hours are posted on or near the instructor’s office door.

Assessment of Faculty Instructional Responsibilities: Numerous indicators suggest that the quality of instruction is high in the College of Management. Student evaluations of teaching effectiveness of College of Management faculty are very positive on average with departmental average ratings exceeding 4 on a 5-point scale. Further, there is a heavy demand for College of Management courses from students in other colleges at NC
State. In fall 1998, 38 percent of the college’s total undergraduate credit hours are from non-College of Management students. Other departments across campus encourage their students to pursue these courses. In these degree programs, some College of Management courses are required.

**SUMMARY ASSESSMENT**

The College of Management has adequate physical resources and equipment to accomplish its teaching and research objectives. The renovation of Nelson Hall, the rapid expansion of multimedia classrooms, the expansion and upgrades of computer labs, and the upgrading of personal computers for faculty during the past five years have dramatically improved the COM’s facilities. The existing resource base and scheduled improvements enable the college an opportunity to provide high-quality instruction to students in appropriately furnished classrooms, provide computer facilities consistent with the COM’s focus on technology, and enable the faculty to conduct leading edge research. In addition, the NCSU Libraries provide outstanding support for faculty and student scholarly activities.

The COM is committed to teaching excellence and is constantly monitoring teaching performance. High quality instruction is valued and rewarded. A variety of opportunities are provided for personal improvement.