

Oakton Community College Academic Computing Plan

Executive Summary

The Plan hopes to anticipate the needs of the College for the next three to five years but recognizes that each of its forecasts may be revised downward (or upward) at any time. In this plan we outline the current status of academic computing at Oakton Community College and also forecast for the next several years. We hope for the steady improvement of resources and services as time progresses, but understand the inexact science that state and district budgets dictate.

In light of recent efforts by governmental and granting authorities to contain or reduce costs, it must be seen that efforts to improve or enhance instruction must be supported. Our students come to us with a mind-set which demands an approach that provides inventive, attractive, and appropriate use of modern technologies. This is not to say that we will cater to the whims of each new generation and provide education encapsulated into video snippets, but rather that we will find the best mode to deliver the message. The College's media, Information Technology (IT) and video departments must respond reactively and proactively to the needs of the academic departments.

Overall, the College is well situated for support of academic computing. There do exist some areas for enhancement of our readiness as we look to the future. The expansion of dedicated and general computer labs should be addressed as the use of technology becomes more and more ubiquitous. The demand for new ways of learning will drive us to support instructors as they develop innovative ways to deliver their existing materials. This will dictate both the numbers and type of support personnel that we hire. As the Ray Hartstein Technology Center operation gets under way, this plan will undoubtedly need to be revisited for both services there and at the Des Plaines Campus.

Oakton simply cannot be second in instructional technology if our goal is to optimally prepare our students to move forward in their chosen educational and career paths. The current economic forces notwithstanding, support through real financial dollars for academic computing is critical. It is only with a high priority that we will continue to have a proactive approach to the new generation of teachers and learners.

We will adapt.

Vision/Goal

The Academic Computing Committee Subcommittee was formed to develop an academic computing plan for Oakton Community College. The plan is being formulated to help the College meet current and future instructional technology needs for the next three to five years.

The Academic Computing Plan supports Oakton Community College's strategic goals in the areas of Technology and the Learning and Working Environment, to provide an unequalled learning environment for students and faculty.

Specifically, the Academic Computing Plan is designed to ensure that students and faculty have access to and support for instructional computing equipment and services that enhance academic curricula, promote the learning environment, and assist students in achieving the high level of computer skills expected by employers in Oakton's community.

A. Information Technology Environment

1. Network/Server Infrastructure

In order to provide all technology- related services, the College must build and maintain an adequate technical infrastructure capable of supporting current and future applications and traffic with very high reliability. To a large extent, this infrastructure is currently in place, although it must be continually updated and refined as technological and academic needs change. While this infrastructure supports Academic Computing, it is the fundamental underpinning for all technology at the College, Administrative and Academic.

- a. **Wiring Infrastructure:** All rooms on both campuses are currently wired with Cat-5, twisted- pair copper wiring capable of supporting high-speed networking. The College will continue to appropriately wire all new construction and remodeled areas to provide seamless and universal access to the network. The College will upgrade the wiring infrastructure to new technologies as applications demand greater performance.
- b. **Network Switches:** The College currently provides switched 100Mb/s Ethernet connections to all workstations and relies on a high speed Gigabit Ethernet core for interconnecting all switches and most servers. The College will continue to maintain and upgrade this equipment as appropriate to meet the needs of increasing numbers of workstations and higher bandwidth requirements of applications.
- c. **Servers:** The College currently has approximately 50 servers that provide file storage for students and employees as well as application services such as administrative applications, email, Web services, streaming media and online courses. The College will continue to upgrade and expand storage and servers to accommodate the increasing needs of the academic programs.

- d. **Internet Access:** The College currently provides high speed Internet access for all workstations on both campuses. The College will continue to provide this service and ensure that adequate Internet bandwidth is available to meet academic needs and that the service remains highly reliable.
- e. **Wireless Access:** The College currently provides public wireless Internet access in common areas such as the cafeteria, library, etc. The College will continue to expand this coverage into appropriate public areas and adjust the technology to meet the needs. Where appropriate, the College will investigate academic uses of wireless technology.
- f. **RHC Infrastructure:** The College will maintain and support the network/server infrastructure at the Skokie campus to provide transparent interconnectivity between the campuses and allow students and faculty to access resources from either campus.

2. Computing Facilities

In order to provide an appropriate environment to teach technology and to enable improved learning through technology, the College will maintain and enhance a variety of computing facilities.

- a. **Computer Labs:** The College currently has 19 general-purpose computer labs with a total of 459 computers and 14 special purpose labs with a total of 250 computers. The labs are used by classes that teach technology as well as by classes that use technology to enhance learning.
 - i. The College will configure computer labs as follows:

One current technology computer per student with the flexibility to offer access to any of the College's licensed software products.

An appropriate number of handicap accessible stations and other appropriate hardware and software for students with special needs. (5% of all stations per ADA requirements).

At least one scanner.

A high-speed laser printer and a color printer.

An equivalent faculty computer connected to a projector with audio and video output.

A telephone.

- ii. The College will provide a sufficient number of labs to support the needs of the academic programs and provide labs capable of supporting the variety of class size offered at Oakton. When the

RHC expansion is completed in FY 05, the College will see a net gain of two computer labs and approximately 50 computers. Given that nearly all teaching spaces in the Technology Center are also computer labs, the College will realize a respectable gain. As space on the Des Plaines Campus is made available by programs relocating to RHC that space may be used for additional computer labs as appropriate.

- iii. For specific curricula and discipline specific labs, the College will provide the appropriate hardware and peripherals for that field of study (refer to B.1.b. Instructional Computing (Faculty)).
- b. **Open Computer Labs:** The College currently has seven open lab facilities with 195 computers. The College will continue to maintain open lab facilities with appropriate hardware and software so that students will have access to software and equipment outside of class time. In 2002 open lab space was increased at the DesPlaines campus. With the completion of the Technology Center, Skokie will realize more than a doubling of open lab stations. The Academic Computing Committee will continue to work with the Information Technology departments to make adjustments to the number of open lab spaces. This expansion or adjustment should include not only additional stations as defined today, but new configurations as need dictated by the curriculum and the converging handheld / mobile computing technologies.
- c. **Cyber Café:** The College will continue to offer Cyber Cafés on both campuses and expand them over the next few years as needs increase. This will be supported through the Board of Student Affairs (BSA). The Cyber Café provides computer stations in a relaxed non-academic setting. The assumption of maintenance (and cyclical replacing) of the equipment in the Cyber Cafes is presumed, but we must also plan for additional “cyberlocales” at both campuses. The unpredictable reception of cellular and PCS communications while in the building should be investigated to identify additional ways of serving students’ telecommunications needs. As mobile telephones are increasingly Internet capable, this can be a very useful tool to facilitate learning and teaching.

3. Hardware

In order to provide an adequate technical environment, the College must refresh technology on a regular basis. In order to meet the needs of the academic programs, all computers must be capable of running current applications. To meet this need, the College will maintain a replacement cycle for equipment (currently four years) for desktop and laptop computers. The replacement cycle for other equipment such as server and network hardware, printers, and other peripherals will be analyzed on an annual basis.

4. Software

In order to obtain the maximum benefit of the College's significant investments in hardware and to support academic programs, the College must purchase and install appropriate software.

- a. The College will maintain current application software as required by the specific disciplines as well as general-purpose software applicable to all disciplines. Each discipline will develop a detailed technology plan to guide the College in meeting their needs. These plans must have some specificity (the level of which will vary by discipline) as to the hardware and software needs of the discipline (including software titles and versions where appropriate) for the next several years. These plans, coordinated through the divisions and the Academic Computing Committee, will enable the College to plan for successful teaching through technology.
- b. The College will purchase a sufficient number of licenses with the appropriate license models to provide ubiquitous access to software where possible. The College will use appropriate technical means to maintain compliance with software licensing agreements and continue to educate the College community about software piracy and intellectual property.
- c. The College will continue to provide appropriate funding and technical support to assist in software selection and evaluation.

5. Computer Access Accounts

- a. Employee: Each employee of the College is provided a login account with email, Internet and internal applications access as appropriate (plus dial-in access for full-time employees). On campus access to OakSTAR (our Student Information Management System) is provided as appropriate and approved by an area administrator.
- b. Student: Each student is provided with on-campus access to computers and the Internet as well as an optional email account and off-campus access to many resources.

6. Staffing

The College will continue to provide adequate numbers of well-trained IT staff to provide high levels of support for academic computer labs, classrooms and faculty offices. As the complexity and power of software increases, we will see an increase in the opportunities to incorporate technology in teaching and learning as well as a need for assistance in executing those new teaching techniques. We anticipate that these needs will range from assistance with productivity software to "minor" tech enhancements to traditional classes to fully online classes with online laboratories and simulations. Staff well versed in the software will be increasingly essential to assist faculty in the use of the software, but also there will be a dramatic increase in the need to assist faculty in doing it WELL. As we

continue to assess how well we teach and learn, professional staff with specialized knowledge in the pedagogical use of technology are vital. By the year 2006, the College should have a staff of six instructional technologists and three instructional designers to assist with the incorporation of technology into teaching and learning.

7. Communications

We recognize that at the core of good operations are good communications. The IT departments will communicate to the other areas of the College promptly about any upcoming interruptions to the system (or potential interruptions if advance knowledge is available). Also any change in the scheduled replacement of equipment or software will be communicated to the departments affected as soon as possible. Similarly, faculty or academic administration will communicate promptly with the IT departments about changes in their needs.

8. Forecasts

- a. The College will add dedicated computer lab facilities as dictated by needs demonstrated by the academic departments.
- b. The College will provide wired, Bluetooth and WiFi access to the Internet and appropriate College resources throughout the two campuses and as appropriate to faculty, staff and students for off-campus services. Industry standards will be carefully monitored to assure that the College is current and meeting learners' needs both reactively and proactively.
- c. The College will continue the scheduled replacement of equipment as dictated by past expressed needs.
- d. The College will develop a more formal process for software evaluation and selection.
- e. The College computer network capacity will be increased as appropriate over the next five years to keep up with advancing computer system requirements.

B. Instructional Computing (Faculty)

Faculty consistently states the need for a minimum requirement of computer capabilities in classrooms in order to integrate technology with instructional materials. Faculty needs to be able to access computer programs for demonstrations and simulations. They want the option to bring in their own computers, which contain course-specific software. It is clear that increased demand for technology enhanced instruction is key to the learning environment for our students. To meet the obvious needs, it will be necessary to equip the majority of learning spaces in the College to make such enhanced teaching and learning possible and seamless.

1. Classrooms

Faculty will have access to different levels of computerization in the classroom in order to effectively meet the needs of their curriculum, students and teaching delivery styles.

- a. As many basic classrooms as possible will have a computer workstation for the instructor that includes the current technology available at the school, connection to the College network including Internet access, projection equipment, and a printer. At minimum, classrooms will have a network connection and the capacity to have all necessary peripherals delivered.
- b. Discipline specific computer labs will include all of the basic equipment plus a computer workstation for each student with current technology available at the school plus a scanner, color printer, appropriate hardware, and peripherals for that specific discipline.
- c. The College will upgrade connections, hardware, software, and multimedia capabilities as instructional computing applications advance.

2. Instructional Laboratories

The College will provide and support a variety of computer technology resources in instructional labs to meet the continuously changing educational environment.

- a. The College will continue to support and update shared-use instructional labs. These will be available to any faculty member by class assignment and/or a reservation system.
- b. A majority of instructional labs will contain the highest level of computer technology available for faculty to offer students the level of training expected by area employers.
- c. The College will continue to support and update dedicated labs for specific curricula that require specialized hardware and/or software necessary to teach and train students for a particular field.
- d. The College will expand computer labs at both campuses as necessary to meet the future demands of increased computer usage in the classroom.
- e. The College will update and maintain equipment to meet changing instructional technology needs.
- f. The College will provide support for all appropriate computing platforms in instructional labs.

3. Faculty Offices

It is imperative that faculty have access to full computer capabilities in their offices to design, develop, and integrate technology into their curricula.

- a. Each full-time faculty member will have his or her own computer and printer in their office.
- b. The College will maintain and support computer technology in adjunct faculty offices and increase to an average of four computers and a shared printer per adjunct office by 2006.
- c. Faculty will have access to appropriate student information and class databases.
- d. Faculty who teach curriculum-specific hardware and software will have access to that technology and peripheral devices in their offices to

facilitate application of these resources to their scholarly activities, research, and instruction.

- e. IT will continue the appropriate schedule for replacement and upgrading computer equipment in the faculty offices. Currently this a three year cycle.

4. Academic Technical Support for Faculty and Students

Technical support is required for faculty to be able to offer students a consistent and effective technical learning environment.

- a. IT will continue to provide a high-quality networked computer environment that includes access to email, information services, and other electronic resources.
- b. Technical support to faculty and students will be provided on both campuses during the hours the school is open.
- c. The College will continue to support phone-in technical support through the Help desk and expand hours as needed.
- d. Hardware will be kept up-to-date and continue to be upgraded on a continuing rotation schedule.
- e. The College will make every effort to support the changing software needs of faculty to meet their evolving instructional and work environment. Where appropriate, software will be no more than one year behind the most recent release for students to gain the maximum benefit.
- f. Faculty will be informed about funds available for testing instructional software that may be incorporated into the classroom.
- g. Multimedia applications will be acquired and supported based appropriately on faculty needs.
- h. The College will make every effort to assure that the hardware necessary to meet the variety of program needs will be available.

5. Faculty Development/Training

Continued faculty training in the use of computer technology is crucial to facilitating instruction, research and currency in education and discipline-specific fields. Fundamental to training for faculty is the belief that the College and students benefit from knowledgeable faculty who are moving forward with computer technology.

- a. Training opportunities will be expanded for faculty to adopt technology into the classroom.
- b. The College will continue to support and plan professional development courses, workshops, and seminars for faculty through existing departments and change that support infrastructure as needed.
- c. Offices supporting faculty learning and new technologies will be staffed with experienced and knowledgeable personnel who will also provide faculty with individual consultation and assistance.

- d. The College will support structured continuous training programs for faculty to design, develop, and implement on-line and web enhanced course delivery.
- e. Where appropriate, professional development training will be offered by faculty members who have classroom experience with specific topics.
- f. Faculty will be encouraged and supported in learning new and evolving delivery systems.
- g. Faculty who need advanced training will have access to off-campus professional development courses, workshops, and seminars.
- h. The College and faculty will be encouraged to seek out grants and other monetary resources to pay for advanced development and training.
- i. The Faculty Mentors program will provide opportunities for one-on-one consulting to both new and continuing faculty members.
- j. Technology-training workshops will be implemented into the new faculty seminar program.

6. Forecasts

- a. Additional classrooms will be upgraded to include a video projector, dedicated PC, printer and program sources (VCR and/or DVD). The objective is to have 90% of all teaching spaces so equipped by 2006. A replacement cycle appropriate to each piece of equipment will be established and in no case will that cycle be more than 6 years (a likely cycle for program source devices.) Smartboards or other such interactive technologies will be installed in 4 additional rooms per year through 2006 and a replacement cycle established.
- b. All faculty offices will be equipped with a dedicated PC and printer per faculty member.
- c. Staffing will be provided to assist faculty in enhancing existing offerings or converting said to new modes of delivery (converting face to face classes to enhanced or full web offerings).
- d. The College will provide web-based or primarily web-based alternatives to achieving an AA, AS, or AAS degrees. Where appropriate, new full degrees or certificates will be made available on an ongoing basis. The College Distance Learning Plan details the timeline of meeting this need.
- e. As the number of on-line and web-enhanced courses grows, technical support as well as administrative support must be significantly expanded and improved over the next five years.
- f. Students and faculty will have access to increased personal storage space on the College computer network. Additional storage space will be made available for students and faculty whose courses require it.
- g. Each department will develop a technology plan with appropriately detailed information about the hardware and software needed for the department's administrative and academic needs.
- h. Each division will work with the department plans to build a divisional overview for technology which will guide their activities, inform the

divisional representatives to the Academic Computing Committee and assist the College in establishing Technology goals and plans.

C. Student Technology Support

To provide students with an exemplary learning experience, students will have computer access appropriate to their learning objectives, academic goals, and coursework. Current and emerging technologies will be available to students. Often the best “consultant” an enterprise can engage in defining how to meet their users’ needs is the user. To date, the College has had no organized effort to mine this source of knowledge.

1. Access to Technology

- a. Students enrolled as current Oakton students will have a computer login account that provides on-campus access to computers and the Internet as well as an optional email account and off-campus access to many resources.
- b. The College will continue to support and maintain open computer labs on both campuses so students may use the computer resources at their convenience.
- c. The College will adequately staff open labs with properly trained personnel to manage the labs.
- d. A training program for student lab monitors will be established for consistent help in the computer labs at both campuses. This training will include knowledge of both lab hardware and essential software tools such as MSWord, Excel, PowerPoint and Access.
- e. Student lab monitors will at the minimum be able to offer students help with MS Word, Excel, PowerPoint and Access.
- f. The College will continually research ways to increase student access to technology as needed. If necessary, the Academic Computing Committee will work with the Office of Research to survey student needs in this area.
- g. The Learning Center will provide additional technology support to students as needed beyond that offered by the IT help desk (tutoring, etc.).

2. Communication

The College will employ various strategies (including but not limited to web postings, newsletters, and signs) to notify students of available technologies and changes/enhancements to the systems.

3. Forecasts

The College will provide an avenue for student input to the ongoing life of Academic Computing Plan and the College’s technology environment. This will include the use of informal focus groups, email and web-based surveys, brown bag sessions, etc. Each semester the Academic Computing Committee will

undertake one such effort to solicit student input. A panel of representatives from academic and technology administration as well as the faculty will conduct the activities and analyze the results. The findings will be reported to the Vice Presidents for Academic Affairs and Information Technology, and used by the Academic Computing Committee to annually review revise and update this plan.

D. Library

The academic computing needs of the Library are met through a variety of sources and services, both human and electronic. These include but are not limited to: internal Library operations, Oakton Instructional Technology, ILCSO (provider of the ILLINET Online library catalog), NSLS (North Suburban Library System), NILRC, and OCLC (Online Computer Library Center). The level of support provided by these groups depends on the specific service being provided at any given time. In all cases involving the use of materials, such use adheres to current licensing agreements and copyright laws.

1. Web-Based Delivery

The Library and Oakton users will have web-based delivery and receipt for both intra-campus and interlibrary sharing of documents.

2. Integrated Electronic Searches

The Library will provide integrated, customized access to all available electronic materials for its users.

Through portals, searches will be to all materials, including full-text periodical database articles, by subject, as well as other access points. Users can begin by searching only those materials most related to their needs. Although Oakton participates in a library automation consortium, Oakton users will see services customized to their needs. In some cases, this will include integration of book, journal and non-print media in one search.

3. Forecasts

- a. **Electronic Reserve:** The Library will be able to provide to faculty for their students intra-campus and distance learning electronic reserve. This will allow access to and integrate a wide variety of materials including full-text articles, electronic books, and Web sites.
- b. ILLINET Online capabilities will be used as well as additional software. Reserves can be organized and distributed by electronic means in a variety of ways to provide better services to Oakton students at both campuses and through distance learning.

E. Alliance for Lifelong Learning

This plan is not intended to address the needs of the Adult and Continuing Education and the Alliance for Lifelong Learning (ALL) programs, except where they overlap the campus-based credit programs.

1. Dual Enrollment Programs

There are several disciplines (for example, Real Estate) where students sitting in the same classroom may be enrolled through either the credit or the non-credit program. Students are receiving the same instruction and have the same needs for technology services; the faculty member needs the tools and support to reach the students regardless of the nature of the credit received in the class. In this case, the plans for enhancements to software, training, classroom technology, etc., serve both credit and non-credit instruction.

2. Offsite Locations, Including Schools, Libraries and Businesses

There are other needs of the Adult and Continuing Education and ALL programs, which will be addressed through the Oakton Technology Plan, of which the Academic Computing Plan will be a part. This area of the College addresses many complex needs of the community, and will have different technology issues and solutions, including the need to operate and support activities at different offsite locations, including schools, libraries and businesses. We recognize that these programs offer both credit and non-credit instruction, to groups ranging from adults seeking high school equivalency education and professionals seeking continuing education units for maintaining credentials in their chosen fields. The Academic Computing Plan will not speak to the requirements for this off-campus population.

F. Funding Technology

All programs and functions of the College are financially managed by a central accounting system. Responsibility for the management of functional areas (including financial management) rests with designated administrators. Daily operation of certain funds may be delegated to faculty or staff, but ultimately the responsibility remains with the administration. A number of funding sources are available for daily operations and for special initiatives.

1. Normal Operating Budgets

Budgets for each department are built for each fiscal year (July - June) in a process that begins midway through the previous year. This process has a shared responsibility. Faculty and staff are encouraged to express their needs and wishes to their chair and then forward through that chair to the dean or other administrator.

These budgets are for normal operations for the coming year and include categories for personnel changes, equipment, remodeling, general operations (called balance of budget in the process), and a special category called Excellence which is for one time initiatives which may be outside the normal operations of a department or division, but deemed worthy of special one-time funding.

For each of these categories, the administrators will prioritize and plan the budget, within available funds. These available funds come from three major sources: state money distributed by formula to public educational institutions, local real estate taxes, tuition, and fees. As these elements come together, a budget is approved by the Board of Trustees before the beginning of the new fiscal year.

2. Grant Funds

These funds are likewise available to fund special projects; these funds are procured either from external sources or from the OCC Educational Foundation.

- a. OCC Educational Foundation:** In March of each year the Foundation puts out a request for proposals for special project grants that would be funded out of that entity. The Foundation is an independent not-for-profit organization that exists to support the mission of the College but is governed by an independent board of business people and philanthropists. Examples of projects fundable by the Foundation would be experimental labs or equipment, art, special technology or other items that cannot be funded through the general operating budget for various reasons. Awards range, but in some years a few have gone as high as \$30-40,000. The Foundation also is the legal body, which accepts external gifts and grants to the College.
- b. External Grants** are available from a wide range of public and private programs. Over the years, grants ranging in the hundreds of thousands of dollars have been sought and awarded. This work is coordinated through the Office of College Development.

3. Instructional Software Development Fund

Approximately \$10,000 per year is administered by the Director of Software and User Services and requested through the chairperson of the Academic Computing Committee. Faculty may request instructional software purchases or licenses for the purpose of testing prior to proposing it for the curriculum.

4. Forecasts

The ever-evolving learning environment of the 21st century is under constant demand to add technology to meet student learning expectations and faculty savvy in the use of technology and instruction. Further, our sister institutions are facing and responding to the same learning need--in other words, our competition is meeting the integrated need of technology in the classroom. Oakton simply cannot be second in instructional technology if our goal is to optimally prepare our students to move forward in their chosen educational and career paths.

The current economic forces notwithstanding, support through real financial dollars for academic computing is critical. It is only with a high priority that we will continue to have a proactive approach to the new generation of teachers and learners.

Academic Computing Committee Academic Computing Plan subcommittee:

*Maureen Douglas, Jim Kowols, Susan Maltese, J. Dawn Mercedes,
Gary Newhouse, John Stryker, Anita Taylor, John Wade*