



**Douglas College**

**EDUCATIONAL TECHNOLOGY PLAN**

**2007 – 2010**

**Appendix B**  
**Submissions from within Douglas College**

From: Xavier Serrano      Wednesday - December 20, 2006 3:25 PM  
To: Kisiel, Piotr  
CC: Jensen, Blaine; Leonard, Terry  
Subject: Bookstore e-commerce

Piotr,  
Please include the DC Bookstore-on-the-web in the Educational Technology Plan. We hope to test a DC Bookstore e-commerce solution in the summer of 2007 and launch it by the opening of the DL campus expansion. As a hosted solution provided by Nebraska, our inventory control system provider, CampusHub should not require significant resources from CEIT.

Let me know if you have any questions or concerns regarding this matter.  
Thanks.

Xavier

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>>> Piotr Kisiel 11/14/2006 2:23:52 PM >>>  
Linda,

Thanks for the update. Please let us know what your time line is for engaging with CampusHub and having your DC bookstore-on-the-web site started/done.

Having reviewed the documentation related to the system architecture, I do not see any technical showstoppers. However, it would be nice to talk to a technical person from Nebraska about some very technical details of their architecture and possible DC implementation. It's about firewall, ports, protocols, etc. Please let us know whom we need to talk to and how to contact that person.

Piotr Kisiel



**Learning Resources  
Educational Technology  
Three Year Plan 2007-2010**

**NB:** ILL is ILL Interfaces Inc. the Library's integrated library system (ILS) vendor.

- The three-year Learning Resources Educational Technology Plan includes hardware, software and services to meet the needs of today's student.
- Many of the enhancement items that follow in this document directly relate to our Integrated Library Systems (ILS) vendor's understanding, and indeed all ILS vendor's understanding, that today's library user expects a very different look and feel to the most crucial of all ILS modules, that is the WebOpac catalogue.
- Amazon and Google style presentations are being emulated in the catalogue to meet these expectations. There is a flow through of enhancements to other operational ILS modules as this premise is developed.
- Additionally, other major services of the library, such as self-check out operations are gaining acceptance.
- Ensuring accessibility to older technologies such as microfilm is important. Digitization has not yet captured all resources.
- Douglas College Library has been an early adopter of many technologies that are now commonplace. Requests for broader implementation of such technologies are appropriate.
- Space utilization in the library will continue to play a crucial role in effective technology placement to support learning and transformational activities and services.
- Student space for projects such as the Learning Commons will be enhanced not only by current and new media and technology but by language shifts to more appropriate descriptions such as Media Commons, instead of AV Lab, Learning Commons, instead of Library Research computers and Reading Area instead of soft seating area.

**Year 1  
2007-2008**

**SERVER HARDWARE REPLACEMENT to III Sun V240.** Current server is an III Alpha ds10

**Millennium Sun V240 CPU - III**

*Purpose*

- Improve library services by upgrading to the newest versions of library systems software and information technology to facilitate a variety of information and research delivery methods.
- Provide more flexible research delivery modes to increase user self-sufficiency, remove barriers and enhance the online interface to support curricula; and create a student learning centered environment.

*Rationale*

- Existing server was installed in August 2003 and must be replaced. III is phasing out our current Alpha server platform. We have already received specific notification that our current operating platform will not be able to support new ILS functionality and is being phased out. This will completely inhibit library service and development. III anticipates phasing out our current server platform and also indicated that an additional 512MB to 1GB of server memory will be required to accommodate Release 2007.
- Current server will be *critically under specified* to support the enhanced III software capabilities. We will be unable to upgrade to the next new release.
- For example, Release 2007 architecturally will support and present different types of data, improve calendar processes for AV bookings, improve Acquisitions order response and export fund activity, Webopac improvements and circulation improvements.

**Cost: \$ 28,000**

## **EDIFACT Electronic Invoicing - III**

### *Rationale*

- To complement to EDIFACT ordering, EDIFACT invoicing allows invoices for library materials that is books, videos, periodicals, to be retrieved from participating vendors electronically and permits the online processing of these invoices. Shipments and firm orders can be accepted/rejected directly in Millennium Acquisitions. The invoice will no longer need to be created manually thereby reducing duplication of work, eliminating errors and increasing turn around time. This product greatly improves the Millennium Acquisition module and provides secure electronic invoice transactions to enhance this operational activity.

**Cost: \$2,500**

## **Circulation Patron Profiling Software - III**

### *Rationale*

- This product will streamline how we upload students' records into our III system. It will speed up services for students who come to the Library to activate their student IDs and to access Library resources from on and off campus. Currently we extract student records from Banner and upload them to create library accounts for students. The uploading process requires us to use third party software, Data Magician, to convert the records into MARC format before uploading. The profiling software will enable us to bypass using Data Magician and upload 'comma delimited' files from Banner into the III system.
- Further, the Data Magician software is only available on one computer station. This upgrade will enable an improved automated process using III software available at any staff computer.

**Cost: \$3,000**

## **Millennium Spellcheck - III**

### *Rationale*

This new product integrates spell check functionality into the WebOpac Catalogue search tool and advanced search page.

**Cost: \$2,500**

## WebOpac software enhancements - III

### *Rationale*

- III is constantly reviewing web searching trends to create more user-friendly content in library catalogues. More web resources linking, images and links to online serials, relevancy ranking and an “Amazon” like feel and functionality is being created. Providing the most current WebOpac software ensures the usefulness of the library catalogue for students. Examples such as catalogue information feed builder and WebPacPro relevancy ranking will make the catalogue more relevant to today’s students.

**Cost: \$20,000**

## Self-Check Unit & additional self-check software at David Lam Campus

(FF&E or ED. Technology?)

### *Purpose*

- The self-check unit allows patrons to check out library material themselves. Currently, there is one self-check unit at the New Westminster Campus Library. A station for the David Lam Campus has been planned since the initial NW installation and is now required as the number of students expands at that campus and as self-help automated transactions are more accessible.

### *Rationale*

- The self-check unit enables straightforward checking out of library material, minimizes line-ups and allows staff to assist patrons with other requests and services.
- Equitable service at both campus locations
- The Library has also purchased the necessary software to make the equipment work with the III library system. The new self-check unit will require a second user license but at a lesser cost than the initial purchase.

**Total Cost = \$29,000: \$26,000 + \$3,000 user license**

## Relocation of the Self-Check Unit at New Westminster

### *Rationale*

- The self-check unit at New Westminster is currently a stand alone station. To be more effective the self-check unit needs to be embedded it into the circulation counter. Approximately six feet of the circulation counter will have to be lowered and modified to accommodate the equipment.

**Total cost = \$3,200: \$2,800 + \$400 installation**

## **Sony Bravia 40" LCD Large Screen for David Lam**

### *Rationale*

- New Westminster currently has a plasma screen for group work in a preview room. The screen has been very well-received and used regularly by students. It has been regularly booked by students since installed in September of 2005. With Health Sciences programs and students moving to David Lam, the library there will require a large LCD screen similar to the New Westminster arrangement.

**Cost: \$3,000**

## **Electronic Signage – New Westminster and Coquitlam**

### *Rationale*

- Students need to respond to last minute library information alerts. Electronic signage is a quick easy system to alert students when entering the library. Messages such as “the library system is down” or “PaperWERKS is in session,” or “circulation has a recall or change in policy” are examples of usage of this alert system.

**Cost: \$6,000**

## **Library Detection System – Security Gates, New Westminster and Coquitlam (FF&E)**

### *Rationale*

- The existing detection system at NW is at the end of its service life and creates a barrier to access. Both the New Westminster and Coquitlam systems will need revised placements to affect better traffic flows.

**Total = \$35,000: \$15,000 (3M 3802/(double) +\$21,000 3M 3804(quad)**

## **Year 2 2008-2009**

### **AirPAC – III**

#### *Rationale*

- AirPAC is a module that integrates with III to allow access to the WebOpac Catalogue from wireless devices such as mobile phones or PDAs. With AirPac, a library user may look for materials, place holds, check due dates and renew items from any location by using a wireless connection and a cell phone or PDA.

**Cost: \$9,000**

### **Inter-Library Loan Module - III**

#### *Rationale*

- This module allows the library to keep track of requests for books and periodical articles borrowed from other institutions and libraries via the creation of a temporary book/patron record. The module will also offer other valued added features such as an electronic request form and statistical and reporting functions for document delivery.

**Cost: \$8,300**

### **Microfilm/fiche Reader Printer (Canon 800) – New Westminster Campus**

#### *Rationale*

- Replacement Item - Both the current microfilm and microfiche readers are over ten years old. The microfilm reader is used to access the different back file of newspapers. The machine is identified for replacement to ensure that we have the ability to use the resources. A new machine will enable us to use both fiche and film formats.

**Cost: \$20,000**

### **Server Memory Increase/Review - III**

#### *Rationale*

- Software development at III continues at a rapid pace. In three years additional memory for the server will be required to keep pace with these new library software enhancements and upgrades.
- Preplanning to begin for Server replacement following 2010

**Cost: \$2,000**

**Year 3  
2009-2010**

**Serials Electronic Check-In System - III**

*Rationale*

- This module automates the process of tracking the receipt of both electronic and print journals. Electronic packing slips are sent from the serials vendors to the Library Serials module and when an individual issue of a magazine or journal arrives, the information from the electronic packing slip is automatically updated in both the public and staff display of the serial record. At the present time, each time a new issue is received, staff time is spent updating this information on the system. This module also produces labels and automatically places the barcode in the barcode field of each record. This product offers automatic, batch check-in processing for print and e-journal shipments. A Web-based E-check in Server uploads Electronic Packing Slips from our serials vendor

**Cost: \$9,000**

**Electronic Resources Management (ERM) - III**

*Rationale*

- ERM enables the library to keep track of the licensing and purchasing details of e-journals, Abstracting and Indexing databases and full-text databases using the ERM Module.

**Cost: \$26,000**

**Self Return Units – New Westminster and Coquitlam**

*Rationale*

- The self return unit will automate the check-in of returned library materials. This process includes updating all circulation information (date returned, status changed to 'available') and also reactivates the security strips on each item. Currently, both the checking in and re-sensitizing of each item is manually done by staff as two separate steps. This will complement the acquisition of the self-check out unit and complete the plan to provide self-service workstations for library patrons.

**Cost: \$80,000**

## **Interlibrary Loan Book Scanner (Konica Minolta Model PS7000)**

### *Rationale*

- The current book scanner used for Interlibrary Loan processing is ten years old. It was originally purchased with College Innovation Technology funds and has proved to be very successful. It enables the Douglas College library to automatically scan and send documents requested by other libraries and to the David Lam campus library. With every upgrade of the ILL software it is getting more difficult to work with the older technology of this current book scanner. It needs to be replaced to ensure the continuation of this vital service.

**Cost: \$30,000**

## **Digital Integrated Workstation Environment**

### *Rationale*

- Douglas College Library needs to develop and channel a vast array of digital information for more dynamic research discovery. There is no dedicated workstation in the library where staff have all the necessary components to work on these types of specialized digitization projects. There are opportunities for external funding for projects in the archival, heritage and library fields. Currently work is ongoing to review and consolidate material in the Douglas College Archives. There is impetus to move forward with this project and digitize the materials.

**Cost: \$50,000**

Note – 2007-08 Capital  
Additionally three colour laser printers  
\$4,500  
And  
138 flat panel monitors  
X \$250. = \$34,500

From: Karen McCredie Thursday - December 21, 2006 3:55 PM  
To: Kisiel, Piotr  
Subject: 2007-10 Ed Tech Projects

Piotr,

The Registrar's Office is looking at the following projects for the 2007-2010 timeframe:

1. Lifecycle Process Mapping System
2. Laserfiche web application
3. Quickfields - automated version
4. Pre-emptive graduation process (Banner running report on who is eligible to graduate and offering those students graduation).
5. EDI receiving
6. Banner Workflow

Thanks very much. Hope you had a great holiday.  
Karen

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# **Report on Instructional Priorities for Educational Technology**

## **For consideration in the preparation of the 3-year Educational Technology Plan for Douglas College**

Prepared by Sarah Stephens

For the Educational Technology for Teaching and Learning (ETTL) Committee

Teaching and Learning are key activities at Douglas College. As the College prepares its fourth iteration of the 3-year educational technology plan, the instructional areas have reflected on needs and directions.

This report looks first at several environmental factors both inside and outside the College and speculates on how those factors will impact on the required educational technology environment. The factors are: new programs at the College, the new buildings at the David Lam Campus, a renewed commitment to keep students at the centre, and technological change.

### **Methodology**

Each faculty representative met with an Educational Technology Committee from their constituent area to come up with a set of priorities. We combined those priority lists and re-circulated them so all areas could comment on a common set of possible priorities. The resulting set of priorities is included in this report.

The faculty representatives were also asked to identify any items in the Faculty Tactical Plan for their area that may have impacts on educational technology. Few representatives have responded with that information. If this information becomes available in time, it will be incorporated into the College Educational Technology plan.

### **The Planning Environment**

#### **New Programs**

There is currently unprecedented development of new programs across the College. Developers of these programs, at the very least, assume they will have access to the same level of infrastructure support enjoyed by existing programs at the College, and in some cases, the new programs expect to use technology in new ways, expanding and innovating in the interest of student success.

The development of degree-level programs will also impact the educational technology needs for teaching and learning at the College. We don't yet have a clear idea of all the technology implications of new baccalaureate programs. Upper-level courses at universities have traditionally been more in-depth than the broad introductory courses in the university-transfer curriculum. This can mean more specific software requirements; rather than more general introductions to theory that occurs in the first two years of a four-year program, students need to get closer to being job-ready and need hands-on

skills. We may be well-positioned for this aspect of the transition; many of our diploma programs already provide this.

We also anticipate that faculty will undertake more research than they have in the past. Applied research in health sciences, sciences, business or other areas will require access to specialized software and possibly specialized hardware as well. We anticipate an increased need for training in the use of research-related tools such as statistical software.

### **New Buildings**

We expect two new buildings to come online at David Lam campus in 2008. The educational technology plan will need to incorporate technology needs for the Health Sciences programs that will be housed in those buildings, and for infrastructure changes at New West as the space vacated by Health Sciences is occupied by others.

### **Students at the Centre**

More than ever before at the College, there is an openly stated direction to place the student in the centre of everything we do. Faculty believe this has always been true. However, the fact that is now explicitly stated may have implications on expectations for availability, accessibility and quality of the educational technology services delivered to faculty, students and indeed, to service areas that support students.

#### *The challenge of getting student input*

The ETTL committee strongly recommends a formal process of seeking student input to the Educational Technology plan; we interact closely with the students, but should not be expected to speak for them when they can speak for themselves.

### **Technology trends**

Faculty are aware of trends in the world of technology, are interested in learning more, and are willing to try new things, and to adopt new approaches under the right conditions. There are two stages in moving to a new technology: first, trying it, and then, adopting it. Not everything that is tried is adopted. Trying something new requires willingness by the faculty and students to try it, access to the relevant technology and a sufficiently low level of barriers that it is not too difficult to try. Adopting a technology requires that it delivers something of use to the instructor and students, and that it is easy enough to use to ensure that the “cost” of using it doesn’t exceed the “benefits” delivered. In this context, the “cost” seen by instructors is primarily in faculty time, spent learning how to use the technology, and then in supporting it (adding content, communicating with students, maintaining discussion boards, etc.). Other costs include time spent by students dealing with the technology rather than the instructional content. If they find it frustrating, they won’t use it and any potential benefits are not realized. A challenge for those who champion the new technologies is to ensure that faculty don’t over- or underestimate the time commitment required to implement and then to sustain a new approach. Specific technology trends mentioned by Faculty:

- Students use social software.
- Almost all of our students have access to computers in their homes.

- Students and faculty expect Douglas College services to be as easy-to-use as other online sites they are familiar with.
- Storage is growing in capacity and dropping in cost.
- Security is a continuing challenge.
- Use of open-source software and shared content is growing.

### **Action Items**

Faculty recognize that technology has radically changed the way we work, study and interact. They strongly support the need to maintain what we have, and to explore, for the most part, fairly cautiously, what is new, to improve and change the ways we use educational technology to provide the best education to the learners at Douglas College.

### **High priority items**

A group of issues that virtually all faculty submissions are in agreement about:

- Access to e-classrooms, and standardization of e-classrooms. There were some statements that the “full” e-classroom is overkill, that faculty can bring their own laptops or tablets to the rooms, that a computer does not always have to be supplied, but the built-in projector is essential
- Personal computers should be individually assigned to regular faculty.
- Technical support is very important.
- The myDouglas portal will continue to be a key component in college communication. There is a need to improve the functionality, and to encourage use of myDouglas by students, faculty and staff.
- The importance of training.
- There is interest in exploring how technology can support faculty in reducing academic dishonesty—tools such as turnitin.com were suggested.

### **Medium Priority Items**

A group of issues for which there is support, but it is not as universal as the support for the above-identified issues. For these issues, at least two faculty units considered them “high” priority, or several groups identified them as “medium to high.” These issues mostly have to do with “moving forward,” making significant changes to the way we do things at the College, or providing options. Some require creative thinking; some (like the concept of the Employee Work Room) may take resources outside of CEIT.

- The College should encourage the use of online tools to develop and maintain course materials, and provide support to faculty who do so.
- Students need increased access to computer stations for their own use outside of class time.
- We need to support student use of their own devices on campus: notebook computers, PDA, MP3 and other technologies
- The concept of Employee Workroom needs another look to identify what sorts of equipment and space are needed – particularly if the College moves to a model

where each regular Faculty member has a computer. The need for EW will remain, but the configuration and usage may change. Maybe there's a possibility of combining the concept of offices for contract faculty / offices for faculty teaching at a campus that is not the location of his or her primary office.

- The College should encourage the development and use of high-quality public domain course materials, and provide support to faculty who do so.
- The College needs to support just in time training for employees.
- Staff and faculty need access to specialized input and output devices such as scanners and colour printers, possibly in employee workrooms.
- Faculty need more flexibility to explore open-source or web-based services for enhanced instruction.
- Departmental Based Instructional Support should be an option.
- We need to improve the timetable matrix to allow more set-up time for Faculty using multi-media classrooms and improve lab utilization.
- The College should explore the possibility of hosting our own spaces for blogging, wiki, e-portfolio, other new services
- The College should explore the costs and benefits of providing better support to faculty who wish to experiment or to use software/provide services to their students that are not part of the "standard" default setup.
- CEIT should consider creating "specialized technicians" to provide specialized tech support for the specialized labs.
- We will need to increase the number of specialized labs to deliver specific curriculum.

### **Items that are not a priority for this group as a whole**

Items we discussed but determined there is not broad faculty support for them as Ed Tech priorities. Some of these items were given "medium" priority by a few groups, none were given "high" priority by any entire faculty group. (They may have received "high" priority from a single department.)

- The college should devote more resources to ensuring that the registration system is up-to-date and easy to use.
- The College should encourage the development and use of public domain course materials, and provide support to faculty who do so.
- Students need network-accessible storage provided by the College.
- We need to establish criteria and standards under which Faculty or programs may require students to provide their own equipment.
- Students need access to loaner peripherals and loaner notebook computers if requested by faculty.
- The College should support just in time training for students.
- Faculty need to have improved access to videoconferencing.
- Students and faculty at the College need an e-portfolio environment.

## Educational Technology Framework Now and in the Future

ETTL May 2007

The following are examples of how we think technology and the learning environment will change over the next three years at Douglas College. We have attempted to include a variety of examples, but the list does not attempt to identify all changes that will occur.

<b>Learning</b>	
<ul style="list-style-type: none"> <li>▪ currently instructors use blackboards/whiteboards, VCR&amp;TV's, overhead projectors, computers connected to the internet and a projector, and hands-on experiences to teach</li> </ul>	<ul style="list-style-type: none"> <li>▪ many of these technologies will converge. As more and more content is available in digital format, the need for separate devices will decrease. A tablet PC can replace writing on overhead projector film; DVDs do not require a separate device, they can be played on the classroom computer, LCD projector is an improvement over a TV monitor.</li> </ul>
<ul style="list-style-type: none"> <li>▪ students currently receive some of their handouts from photocopies prepared by the instructor and distributed in class or on reserve in the library. Some handouts are available online</li> <li>▪ most library reserves are in digital format.</li> </ul>	<ul style="list-style-type: none"> <li>▪ instructors and the Library will continue to increase the amount of material available online. Whether to put it on paper will be the student's choice.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Most assignments are submitted on paper</li> </ul>	<ul style="list-style-type: none"> <li>▪ Many assignments will be submitted electronically, via e-mail or through other online means.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Students use simple PowerPoint for presentations and must bring the presentation on external media</li> </ul>	<ul style="list-style-type: none"> <li>▪ Student presentations increasingly use video and digital information, in larger files, accessed across the network</li> </ul>
<ul style="list-style-type: none"> <li>▪ academic discourse typically occurs in the classroom or when students meet "face-to-face" on campus</li> <li>▪ use of programs such as WebCT with chat rooms and discussion boards has enabled the move of academic discourse beyond the classroom, both as supplement and as replacement for face-to-face</li> </ul>	<ul style="list-style-type: none"> <li>▪ faculty will continue to try to improve the quality of the online discourse.</li> <li>▪ Discourse will move further beyond the classroom into online virtual reality environments and social spaces.</li> </ul>
<ul style="list-style-type: none"> <li>▪ all students are assumed to have computers at home with internet access</li> </ul>	<ul style="list-style-type: none"> <li>▪ Many students also have laptops</li> </ul>
<ul style="list-style-type: none"> <li>▪ Online courses are managed using the luminis portal (myDouglas) or webCT.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The online spaces will be easier to use.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Digital and other forms of plagiarism are difficult to detect.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Electronic or digital supports for detecting plagiarism will be available.</li> </ul>

<ul style="list-style-type: none"> <li>▪ Education about real-life situations involves a variety of approaches including digital models, actors, role-playing and realistic simulation.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Realistic computer-driven simulations will become commonplace; for example, the patient simulator used for nursing education. “Virtual Reality” environments will be used for some learning.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Most instruction at the College involves course-section groups of a fixed number of students receiving the same set of experiences together at the same time</li> </ul>	<ul style="list-style-type: none"> <li>▪ Technology will make it easy or automatic to tailor instruction to the student, based on ability, prior knowledge, preferred learning styles, transportation issues, availability, or any dimension in which students differ in their preferences or needs.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Available resources to instructors are limited</li> </ul>	<ul style="list-style-type: none"> <li>▪ Disciplines will develop re-usable learning object repositories to increase quality and re-use.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Most programs and courses assume that students and their learning are fully under the control of DC, but this beginning to change, from collaborative degrees to initiatives like the business simulation games that involve teams from multiple institutions.</li> </ul>	<ul style="list-style-type: none"> <li>▪ There will be increases in the numbers of students taking courses at multiple institutions, whether simultaneously or sequentially.</li> <li>▪ There are increased opportunities for inter-institutional cooperation; many more students will communicate with students or faculty at other institutions even if enrolled only at DC.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Most credit instruction at the College consists of 3-credit semester-long courses.</li> <li>▪ It is not uncommon for a student to receive some of the same content again in another course.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Modularization of content will become more common. Technology will enable this in two ways: the ability to share learning objects, and the ability to track students and their learning at a more granular level.</li> </ul>
<ul style="list-style-type: none"> <li>▪ “online instruction” in the minds of most faculty and students means use of WebCT or myDouglas in an instructor-directed approach, with the instructor in possession of the “content” and “delivering” it to the students.</li> </ul>	<ul style="list-style-type: none"> <li>▪ “online instruction” still includes learning management systems and portals but also includes use of social software such as blogs, virtual online environments, e-portfolios, shared-editing spaces such as wikis, more use of “public” spaces, more reflective components and opportunities for students to actively participate in their learning.</li> </ul>

<b>Faculty communication with students.</b>	
<b>Currently</b>	<b>In the Future</b>
<ul style="list-style-type: none"> <li>▪ students contact Faculty typically before or after class in their offices and/or by use of voice mail or e-mail. Students and instructors make extensive use of e-mail as a means of communication.</li> </ul>	<ul style="list-style-type: none"> <li>▪ voice mailboxes and e-mailboxes will be integrated; it will be easy for instructors and students to organize these spaces.</li> </ul>
<ul style="list-style-type: none"> <li>▪ instructors currently post two contact hours which are "face-to-face"</li> <li>▪ some instructors also spend time in a chat room to increase availability to students</li> </ul>	<ul style="list-style-type: none"> <li>▪ instructors may be able to reduce face-to-face office hours in order to increase online availability.</li> </ul>
<b>Academic Administration</b>	
<b>Currently</b>	<b>In the Future</b>
<ul style="list-style-type: none"> <li>▪ all students use on-line registration to apply to the College, to register, add and drop courses, and to receive their grades</li> </ul>	<ul style="list-style-type: none"> <li>▪ more of the "official communication" from the College to students will be carried out via e-mail and the portal.</li> </ul>
<ul style="list-style-type: none"> <li>▪ students typically meet the instructor face-to-face to solve pre-requisite problems Students also use e-mail and scanners to deal with instructors about pre-requisite problems</li> </ul>	<ul style="list-style-type: none"> <li>▪ digital documents will be available from the Registrar, making it easier to do pre-requisite checking online.</li> </ul>
<ul style="list-style-type: none"> <li>▪ instructors typically commute from campus to campus to attend meetings when there is enough time after class to be able to do so</li> </ul>	<ul style="list-style-type: none"> <li>▪ the use of videoconferencing will increase as the college increases capacity for videoconferencing over the network. Individual videoconferencing from your own PC will become common.</li> </ul>
<ul style="list-style-type: none"> <li>▪ instructors submit grades, manage waiting lists and pre-requisite waivers electronically</li> </ul>	<ul style="list-style-type: none"> <li>▪ More of this sort of administrative activity will be seamless. Instructor gradebooks will be available to students online throughout the semester.</li> </ul>
<b>Services</b>	
<ul style="list-style-type: none"> <li>▪ students currently purchase their books in person from the bookstore</li> <li>▪ students have a choice of suppliers if they choose to go online for textbook purchase</li> </ul>	<ul style="list-style-type: none"> <li>▪ students will have the ability to order their course textbooks and course packs on-line from our book store</li> </ul>
<ul style="list-style-type: none"> <li>▪ faculty communication with the print shop is primarily by printing an original and hand-delivering it to the print shop. The print shop is now experimenting with online submission of print jobs.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Online submission of duplicating jobs will be routine. Delivery choices will include having it printed on a nearby printer or in the print shop for pickup or delivery. This service will be integrated with all sources (any workstation, any software.)</li> </ul>

<ul style="list-style-type: none"> <li>▪ students receive a complimentary 300 pages per semester of printing and pay for pages beyond that number</li> </ul>	<ul style="list-style-type: none"> <li>▪ Paid printing will be integrated to allow greater accountability, flexibility and choice.</li> </ul>
<ul style="list-style-type: none"> <li>▪ users are authenticated for access to all services</li> </ul>	<ul style="list-style-type: none"> <li>▪ we will move to a single-signon approach for access to services</li> </ul>
<ul style="list-style-type: none"> <li>▪ students must use external USB storage devices or burn CDs if they want to save their work from student computers at the College</li> </ul>	<ul style="list-style-type: none"> <li>▪ Students will have network access to data storage</li> <li>▪ Students will be able to organize their work into online portfolios</li> </ul>
<b>Facilities</b>	
<b>Currently</b>	<b>In the Future</b>
<ul style="list-style-type: none"> <li>▪ wireless access is available throughout the buildings.</li> </ul>	<ul style="list-style-type: none"> <li>▪ students will be able to access all campus services from their personal devices—notebook computers, PDAs, even digital cell phones. Power outlets will be available for use by students with their devices.</li> </ul>
<ul style="list-style-type: none"> <li>▪ the college provides many general purpose computer labs for use for instruction and for student drop-in use for any purpose. One lab at each campus is left “unbooked” for classes to enhance the availability of drop-in access for students. Drop-in access to computers is also available in the libraries.</li> </ul>	<ul style="list-style-type: none"> <li>▪ College labs are primarily devoted to instruction and, outside class time, for students to access software too expensive for each student to buy.</li> <li>▪ Drop-in computer availability at the College is available in the Libraries, in student lounge areas and in computer labs when classes are not scheduled.</li> </ul>
<ul style="list-style-type: none"> <li>▪ the standard classroom has whiteboard, overhead projector, TV/VCR/DVD. Many classrooms are “laptop-ready” or “full e-classrooms”</li> </ul>	<ul style="list-style-type: none"> <li>▪ the “standard classroom” will be laptop-ready, with an LCD projector, place to plug-in the instructor’s laptop or tablet PC to the Internet and the projector. Power outlets will be available for use with student devices.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Mailbox sizes are x</li> </ul>	<ul style="list-style-type: none"> <li>▪ Mailbox sizes will be 10x-100x</li> </ul>

## Science and Technology

The Faculty of Science and Technology will only see a modest increase in the amount of capital required and instructional technologies employed in the next three years. While there will be some on-line course development in Math and Sports Science the existing learning management systems at the College, Web CT and myDouglas, should be sufficient to the task. Laboratories are and will continue to be an essential component of most course offerings in Science and Technology. While hybrid course development is a possibility most faculty have little interest in developing entirely on-line courses.

Most of the capital requests will continue to focus on replacement of computers in offices and labs in a timely fashion and creating enhanced classrooms for all teaching spaces as instructors switch to projection display technologies. Some faculty have noticed that it is very difficult to book computer labs for occasional bookings on the 5<sup>th</sup> and 6<sup>th</sup> floor as this space is reserved for on-going classes.

In general, the faculty are pleased with the technology infrastructure at the College including the wireless network, learning management systems, e-mail systems, printing facilities, and the level of technical support from the help desk. We would like to see ongoing resources committed to maintaining this infrastructure.