

JOLIET
Junior *College*

TECHNOLOGY
IMPROVEMENT
PLAN

2007-2009

1215 Houbolt Road, Joliet, IL 60431

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EXECUTIVE SUMMARY

Joliet Junior College is pleased to present the 2007 – 2009 Technology Improvement Plan. Development of the plan has been a collaborative effort that the college has been working on since November 2005.

Four essential components have been identified for integrating technology into the classroom, and in determining the underlying framework for requesting, deploying and securing technology on the college campus.

Three-year Technology Replacement Plan, Financial Summary – This document was modified to show anticipated technology expenditures for 2007-2009. Expenditures for FY2007 include \$245,700 for infrastructure, \$663,175 for computers and printers, and \$478,625 for instructional delivery, Colleague, new faculty, staff and student initiatives.

Technology Improvement Planning Process - In 2006, a new strategic planning process was adopted for submitting and approving FY 2007 college-wide technology projects. Projected ETAC and LTAC initiatives for FY 2007 total \$332,549. An additional \$75,348 is required to cover annual recurring costs. A single project funded from the Operating Budget total \$93,100. An additional \$93,100 is required to cover annual recurring costs. Projected IT projects for FY 2007 total \$170,900 of which \$121,000 for Colleague is funded as part of the Technology Advisory Council (TAC) replacement plan. An additional \$127,900 is required to cover annual recurring costs. The remaining initiatives are identified as FY 2008-2009 projects and total \$151,100.

Help Desk Services

Included as part of the Technology Replacement Plan (TRP) is replacement of PC's and printers. In FY 2007, Help Desk Services will be replacing 530 PCs, 65 Macintosh computers, 13 laptops, and 25 printers in accordance with our four-year replacement plan. Another project that the Help Desk is embarking on is the integration of a new ticketing system which is IT Infrastructure Library (ITIL) and Sarbanes-Oxley compliant.

JJC Information Security Plan

To architect the best possible solution to address security concerns, IT will be concentrating in the following areas; DMZ Restructuring, Web Filtering, SPAM Defense, Incident Handling, Education, and Policy Development. This is key in ensuring removal of single points of security failure and deploying a security infrastructure that is highly resilient against attacks while also providing the privacy capabilities needed to remain compliant with so many of today's new regulations.

Supporting documentation is included in the appendix referencing the technology replacement plan financial summary, guiding principles, aqip criteria, process maps, and PC/printer replacement plan.

Technology Improvement Planning Process

Figure 1 shows the project planning process that was adopted by the college to select and approve projects for FY 2007.

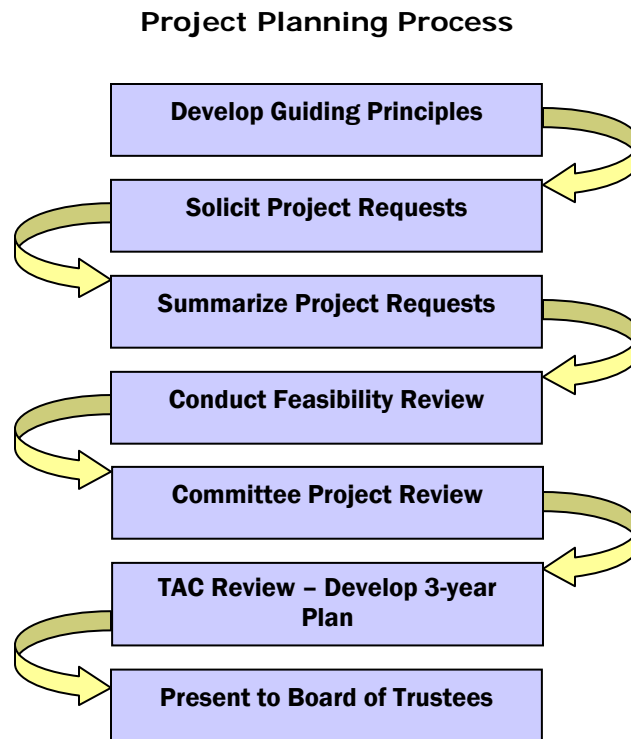


Figure 1. Project life-cycle

DEVELOP GUIDING PRINCIPLES

As a starting point, the VP of Information Technology is responsible for making the necessary recommendations regarding new and existing technology, and tasked with drafting a set of guiding principles that will serve as a baseline for staff and faculty to submit project requests for the upcoming fiscal year. TAC reviews and approves the guiding principles.

Solicit Project Requests

Annually, the co-chairs of TAC will solicit the campus community for project requests for the upcoming year. The project request provides a summary of the proposed projects and addresses pertinent facts that will assist in the decision making.

Summarize Project Requests

At the conclusion of the submission deadline, Information Technology will create a project portfolio document summarizing all proposed project requests and assign preliminary project costs.

Feasibility Review

A technology review committee will conduct an impact analysis of the proposed projects. The technology review committee will consist of the following individuals: Vice President of IT; Project Analyst; representatives from Colleague; PC Help; network group; other department representatives as deemed necessary.

At the conclusion of the initial review process, updated copies of the portfolio document will be distributed to ETAC and LTAC.

Committee Project Review

ETAC and LTAC will review and evaluate each project request. If necessary, interviews and informal presentations may be requested of the project initiator. At the conclusion of the review, the committees will rank the projects by order of priority and submit committee recommendations to TAC.

TAC Review

TAC will consider the committee's recommendations and, with input from the Vice President of Information Technology, incorporate selected projects into the three-year technology plan.

Present to Board of Trustees

Following TAC review, Administration will present the three-year technology plan to the Board of Trustees.

Calendar of events:

The college has outlined the planning calendar for this year as follows:

November 17, 2005	TAC issues guiding principles to campus community to be used in submitting projects
December 7, 2005	Project requests are due
January 20, 2006	IT completes initial analysis and summary of projects
February 24, 2006	Evaluation, review, and prioritization of projects completed by ETAC and LTAC
February-March 2006	TAC considers recommendations of ETAC and LTAC
April 25, 2006	Three-year technology plan presented at the Board of Trustees workshop

FY2007 Projects

It is important to note that many of the recommendations that will be made will require the development of detailed implementation plans and timelines. The goals and recommendations that result from the project submission process will be the basis for a three-year technology plan beginning in fiscal year 2007 and continuing through fiscal year 2009.

For reporting purposes, projects are broken down according to the following technology related classifications:

- Enterprise Technology Advisory Committee Projects
- Learning Technology Advisory Committee Projects
- Funded from Operating Budget
- Information Technology Projects
- Projects for FY 2008 – FY 2009

1. Enterprise Technology Advisory Committee Projects

- Wireless for Main and City Center Campuses: Implement Cisco's wireless technology at City Center and expand wireless services at Main Campus.

Estimated Cost: \$60,887

- Student Help Desk 24x7x365: Contract with a third party vendor to provide continuous 24-hour, 365 day technical support for students using the online academic and support services offered by the college.

Estimated Cost: \$34,300

- Instant Enrollment Module: Purchase and install Datatel's Instant Enrollment Web Workflow Module to provide non-credit students access to online registration.

Estimated Cost: \$5,400

- Identification Cards: Purchase and install a photo identification card system for staff and students.

Estimated Cost: \$51,000

- Network Analyzer: Purchase a network analyzer to enable Information Technology to troubleshoot, analyze, and monitor the college's network.

Estimated Cost: \$37,500

- Portal Content Management System: Purchase and install the Academus portal content management system. This software will allow person(s) to approve users' web content prior to production.

Estimated Cost: \$65,000

- Bookstore Web Project: The Bookstore point-of-sale system has the capability to interface with the Colleague system. In doing so, the point-of-sale system could provide real time access to student and accounting data.

Estimated Cost: \$39,000

- Greenhouse Control System: The current greenhouse computer control system is dysfunctional and requires replacement.

Estimated Cost: \$520 - \$4,112

2. Learning Technology Advisory Committee Projects

- Music Lab K-2009: The music lab is currently equipped with 12 student computers. The Music Department is requesting to expand the lab by six computers to support additional student enrollment in the program.

Estimated Cost: \$6,000

- Culinary Arts Demonstration Lab: The existing demonstration classroom is no longer an effective solution for providing students access to view demonstrations. The department is requesting to purchase several cameras and a large screen monitor so students can view instructor presentations on the screen mounted overhead.

Estimated Cost: \$6,000 - \$8,000

- Smart Classroom KK-102: The Natural Science/Fire Science/EMS departments share a standard classroom and would like the classroom to be equipped with semi-smart technology.

Estimated Cost: \$5,000

- LRC Proxy Server Authentication: LRC is requesting that IT deploy a proxy server solution to allow staff and students access to the Library's online databases from off campus through the Internet.

Estimated Cost: \$0 - \$3,950

- Data Projector Lamp Replacement Fund: Media is requesting a budget to purchase spare projector bulbs to expedite the replacement process.

Estimated Cost: \$3,000

- Technical / Automotive Software Budget: Automotive is requesting an increase in budget to cover the cost of upgrading lab software and cover maintenance contracts.

Estimated Cost: \$9,400

3. Funded from Operating Budget

- Communication Links between Campuses: The telecommunication circuits at the remote campuses should be upgraded to support additional bandwidth requirements. Funding is from the Operations and Maintenance Fund.

Estimated Cost: \$93,100

4. Additional Information Technology Projects

- Colleague Server and SAN Lease Replacement: The Colleague hardware lease expires in FY 2007. A new lease needs to be negotiated and new hardware installed. Funding comes from the TRP.

Estimated Cost: \$121,000

- Colleague Release 18 Migration: Implement the next version of Datatel's Colleague software. This project is required to remain current with technology and provide support in every area of administrative computing. New versions of the Colleague software help position us to take advantage of new technologies as they emerge.

Estimated Cost: \$5,000

- Web-based Job Application System: Automate the employment application process to improve services to hiring departments and search committees while increasing control and oversight of the employment process.

Estimated Cost: \$34,500

- Computerized Grade Reporting: Develop a Colleague program to allow faculty to report Mid-term enrollment verification and final grades online.

Estimated Cost: \$0

- Communication Management: Develop a cohesive plan to approach communication management from a campus-wide perspective.

Estimated Cost: \$0

- Colleague End User Review in Human Resources: Research Colleague processes in HR with the focus on automation/self-service.

Estimated Cost: \$0

- Pell Voucher Modification: Modify the Pell Voucher Colleague program to avoid students from overcharging their account balance.

Estimated Cost: \$0

- Display Financial Aid on eResources: Add to the financial aid presence on eResources to provide more current information.

Estimated Cost: \$5,000

- Webadvisor Workflows: Identify and implement unused and optional Webadvisor workflows that would be useful to the college and in alignment with college goals. Cost based on two modules.

Estimated Cost: \$5,400

5. FY 2008-2009 Projects

These are projects that were submitted and are not included in FY 2007 either because of funding or the need for further review.

- Paperless Payroll System: Eliminate paper payroll checks and issue debit cards for those who do not do direct deposit. This will make the payroll process more efficient, reduce errors and lost checks, and eliminate staff overtime.

Estimated Cost: \$4,700

- Room Scheduling: Purchase third party scheduling software to optimize the use of rooms and thereby provide more sections of classes at critical times.

Estimated Cost: \$32,300

- Third Party Reporting Tools: Purchase and install a third party reporting tool to facilitate end-user reporting.

Estimated Cost: \$20,000

- Paper Consumption Reduction: Identify reports generated by IT and explore alternatives to reduce the volume of paper consumed by the college.

Estimated Cost: \$0

- Automate Timekeeping Process: Implement a campus-wide timekeeping solution to eliminate manual entries for payroll.

Estimated Cost: \$8,600

- Colleague Workflow Module: Implement Colleague's Workflow module to facilitate the flow of information and tasks to improve manual business processes. Cost is based on implementing three modules.

Estimated Cost: \$26,000

- Position Budget and Control: Purchase and install the Colleague position budget and control module so all position data is automated and integrated with other Colleague modules.

Estimated Cost: \$23,250

- Budget Management: Purchase and install budget management module to allow departments to submit their budget through Colleague.

Estimated Cost: \$36,250

- Prospective Student Module: Develop a process for displaying an online information page on the Web.

Estimated Cost: \$0

6. AQIP Criteria

A Q I P M A T R I X

Project Name	Helping students learn	Accomplishing other distinctive objectives	Understanding student's and other stakeholder's needs	Valuing people	Leading and communicating	Supporting institutional operations	Measuring effectiveness	Planning Continuous Improvement	Building collaborative relationships
Enterprise Technology Advisory Committee									
Bookstore Web Project								X	
Greenhouse Control System						X			
Wireless for Main and City Center Campuses		X							
Student Help Desk 24x7x365			X						
Instant Enrollment Module								X	
Identification Cards		X							
Network Analyzer						X			
Portal Content Management System					X				
Learning Technology Advisory Committee									
Data Projector Lamp Replacement Fund			X						
Technical / Automotive Software Budget			X						
Music Lab K-2009	X								
Culinary Arts Demonstration Lab	X								
Smart Classroom KK-102	X								
LRC Proxy Server Authentication	X								
Funded from Operating Budget									
Communication Links between Campuses						X			

Figure 2 is a summary of the FY07 ETAC projects requesting consideration, the cost of implementation and any recurring FY08 maintenance costs where applicable.

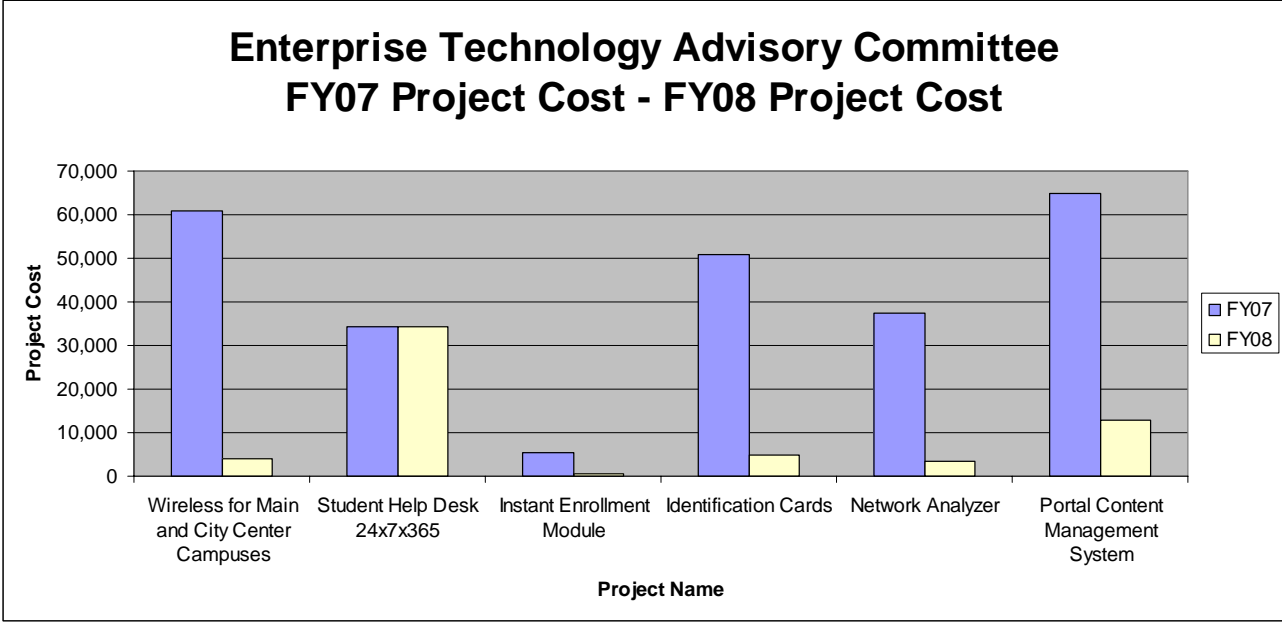


Figure 2. Estimated project costs for ETAC.

Figure 3 is a summary of the FY07 LTAC projects requesting consideration, the cost of implementation and recurring FY08 maintenance costs where applicable.

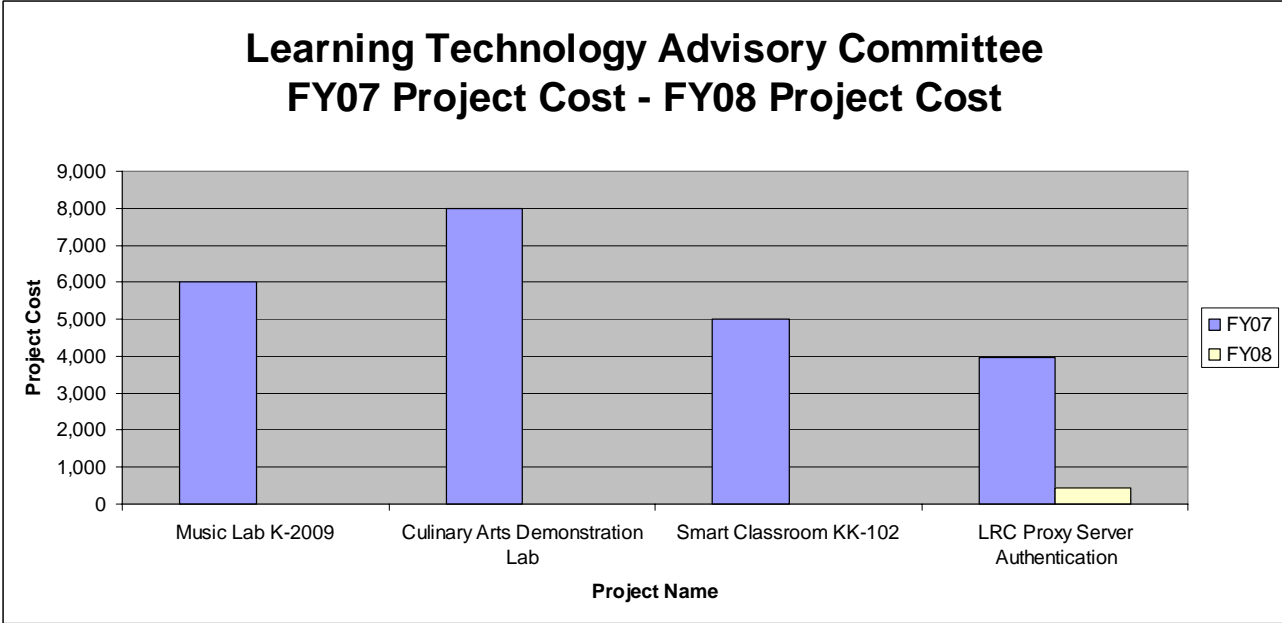


Figure 3. Estimated project costs for LTAC.

Figure 4 is a summary of the FY07 self funded projects requesting consideration, the cost of implementation and recurring FY08 maintenance costs where applicable.

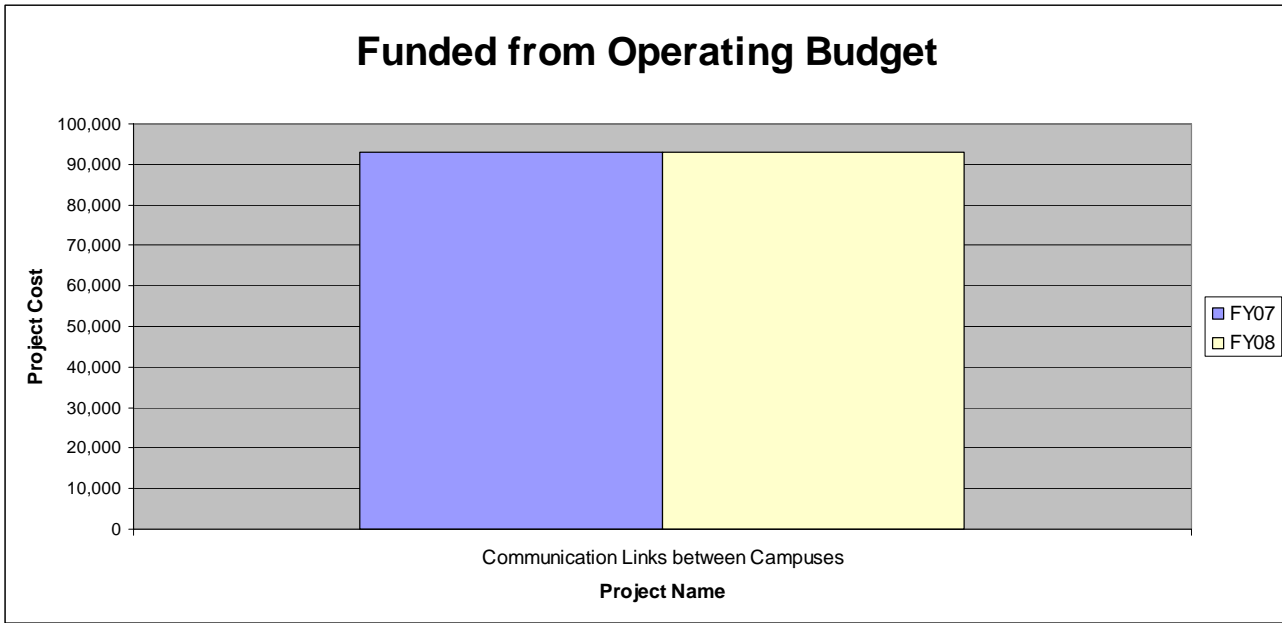


Figure 4. Estimated project cost.

Figure 5 is a summary of the first eight on-going Information Technology projects, the cost of implementation and recurring FY08 maintenance costs where applicable.

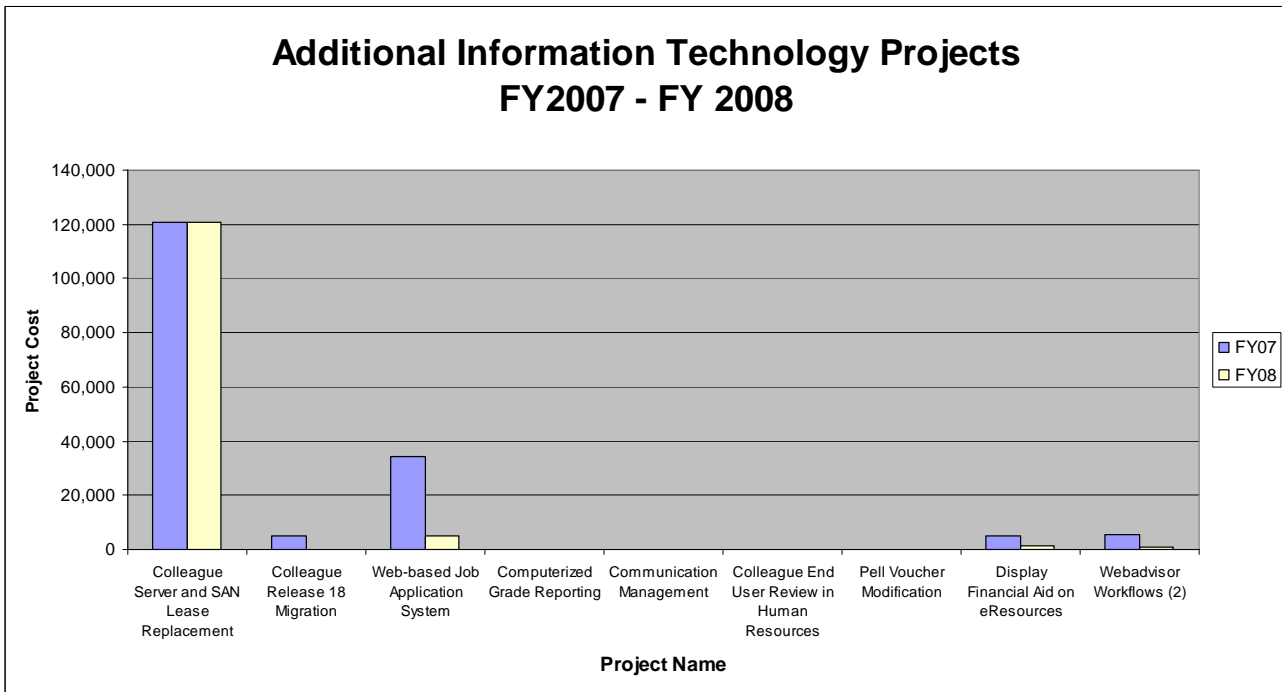


Figure 5. Estimated project costs for the first eight IT projects.

Figure 6 is a summary of the remaining eight on-going Information Technology projects, the cost of implementation and recurring FY08 maintenance costs where applicable.

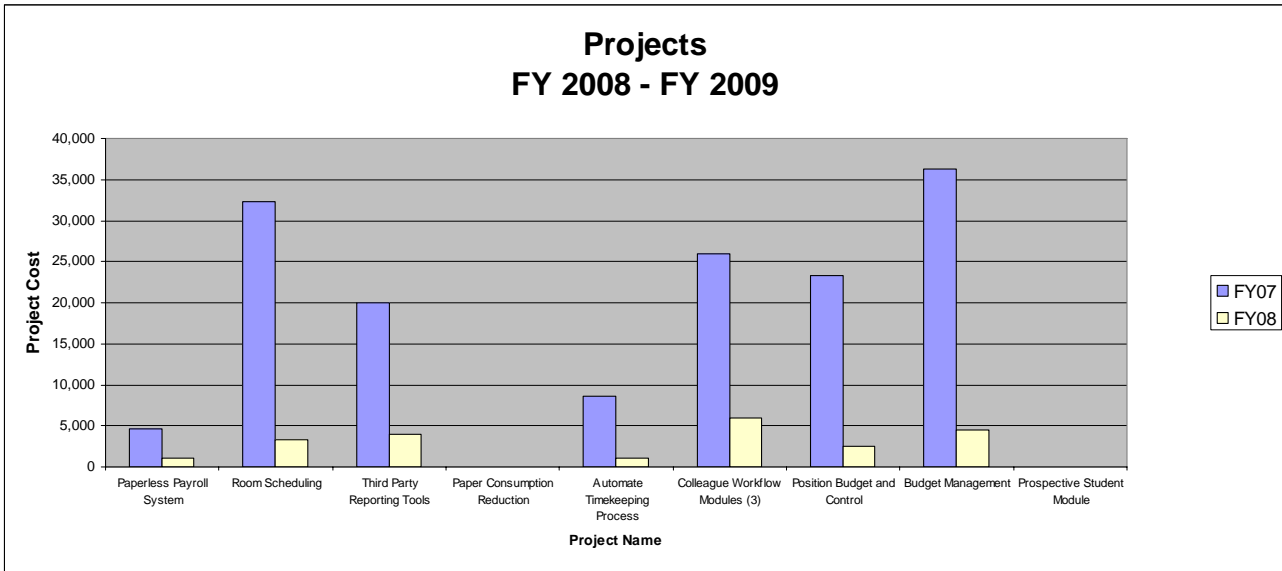


Figure 6. Estimated project costs for FY 2008 – FY 2009.

Figure 7 is a project cost breakdown by project classification, the cost of implementation and recurring FY08 maintenance costs where applicable.

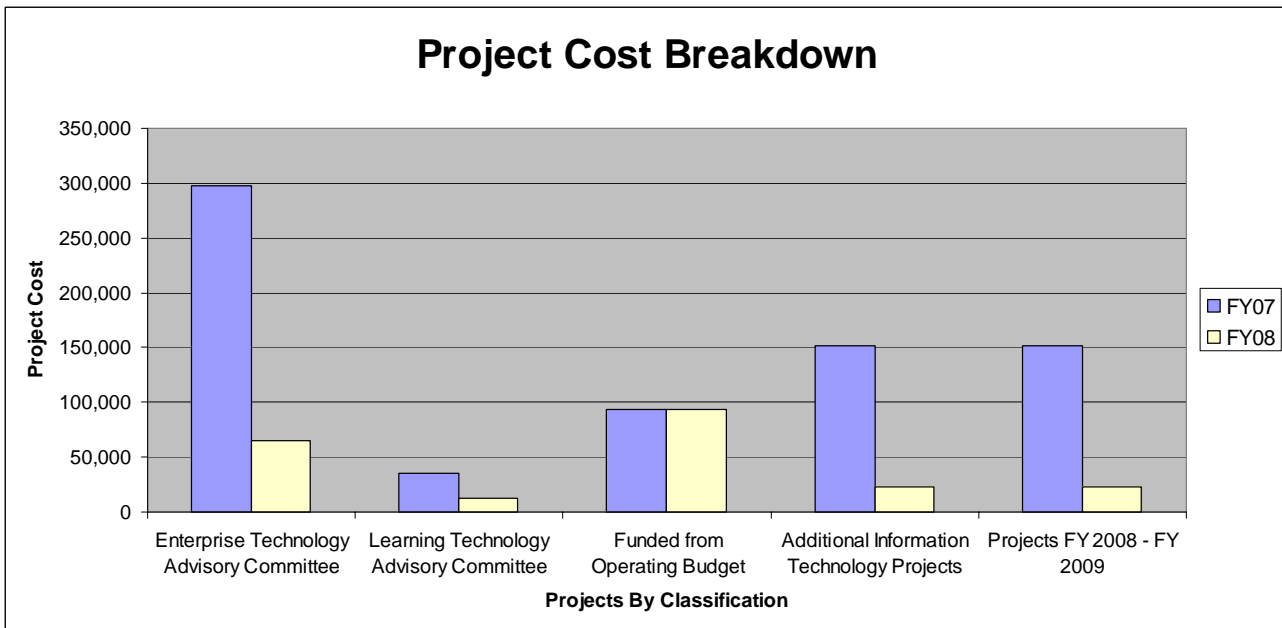


Figure 7. Estimated project costs by classification.

Project Expenditures

Enterprise Technology Advisory Committee (ETAC)	FY07	FY08
Bookstore Web Project	39,000	5,000
Greenhouse Control System	4,112	0
Wireless for Main and City Center Campuses	60,887	3,998
Student Help Desk 24x7x365	34,300	34,300
Instant Enrollment Module	5,400	700
Identification Cards	51,000	5000
Network Analyzer	37,500	3,500
Portal Content Management System	65,000	13,000
Sub Total	297,199	65,498
Learning Technology Advisory Committee (LTAC)	FY07	FY08
Data Projector Lamp Replacement Fund	3,000	3,000
Technical / Automotive Software Budget	9,400	9,400
Music Lab K-2009	6,000	0
Culinary Arts Demonstration Lab	8000	0
Smart Classroom KK-102	5,000	0
LRC Proxy Server Authentication	3950	450
Sub Total	35,350	12,850
ETAC and LTAC Project Totals	FY07	FY08
Total	332,549	78,348

Project Funded From Operating Budget	FY07	FY08
Communication Links between Campuses	93,100	93,100
Additional Information Technology Projects	FY07	FY08
Colleague Server and SAN Lease Replacement	121,000	121,000
Colleague Release 18 Migration	5,000	0
Web-based Job Application System	34,500	5,000
Computerized Grade Reporting	0	0
Communication Management	0	0
Colleague End User Review in Human Resources	0	0
Pell Voucher Modification	0	0
Display Financial Aid on eResources	5,000	1,200
Webadvisor Workflows (2)	5,400	700
Totals	170,900	127,900
Projects FY2008 - FY 2009	FY07	FY08
Paperless Payroll System	4,700	1,100
Room Scheduling	32,300	3,300
Third Party Reporting Tools	20,000	4,000
Paper Consumption Reduction	0	0
Automate Timekeeping Process	8,600	1,100
Colleague Workflow Modules (3)	26,000	6,000
Position Budget and Control	23,250	2,500
Budget Management	36,250	4,500
Prospective Student Module	0	0
Totals	151,100	22,500

PC and Printer Replacement Plan

1. PC Replacement

For the 2007 Fiscal Year, 530 PCs (through 1730MHz), 65 Macintosh computers (replacing all G3s and most G4s), and 13 laptops for the technical laptop cart will be replaced in accordance with our four-year replacement plan. All of the machines being replaced have been out of warranty for several years and will not run our minimum configuration of Windows XP and Office 2003. After a reasonable testing period, we plan on implementing Windows Vista (Longhorn) and Microsoft Office 2007 college-wide. All current systems will need to be upgraded in some fashion. A copy of the IT PC replacement schedule by room and computer will be posted in public folders under IT Department.

2. Printer Replacement

75 printers are out of warranty and many do not meet compliancy with our network standards. The Help Desk will replace any printers from the replacement list as problems with hardware or support arise. See list in appendix.

3. Help Desk Software

The PC Help Desk will be moving to a new piece of Help Desk software (Vertical Solutions' PowerHelp IT) to move towards ITIL and Sarbanes-Oxley compliancy while drastically improving efficiency and processes. Estimated date for installation is before the start of the FY 2007.

PC Replacement Plan FY 2007

Qty	Name	Max Clock Speed
1	Intel Pentium II processor	232
1	Intel Pentium II processor	265
6	Intel Pentium II processor	331
1	Intel Pentium II processor	333
6	Intel Pentium II processor	348
16	Intel Pentium II processor	398
19	Intel Pentium III processor	448
13	Intel Pentium III processor	498
5	Intel Pentium III processor	548
13	Intel Pentium III processor	598
102	Intel Pentium III processor	648
10	Intel Pentium III processor	664
5	Intel Pentium III Xeon processor	697
52	Intel Pentium III processor	730
6	Intel Pentium III processor	796
2	Intel Pentium II processor	800
1	Intel Pentium III processor	863
7	Intel Pentium III processor	930
1	Intel Celeron processor	950
3	Intel Pentium III processor	996
2	Intel Pentium III processor	1000
2	Intel Pentium III processor	1129
1	Intel Pentium III processor	1200
1	Intel Pentium III processor	1262
5	Intel Pentium III processor	1295
58	Intel Pentium III processor	1296
2	Intel Pentium III processor	1395
1	Intel Pentium III processor	1396
1	Intel Pentium III processor	1493
8	Intel Pentium III processor	1495
84	Intel Pentium III processor	1496
1	Intel Pentium III processor	1500
2	Intel Pentium III processor	1594
14	Intel Pentium III processor	1595
1	Intel Pentium III processor	1596
5	Intel Pentium III processor	1694
1	Intel Pentium III processor	1695
18	Intel Pentium III processor	1728
8	Intel Pentium III processor	1729
2	Intel Pentium III processor	1793
169	Intel Pentium III processor	1794

Printer Replacement Plan FY 2007

Qty	Manufacturer	Printer Model
1	Brother	Brother HL-5070N series
1	Epson	EPSON Stylus COLOR 3000
1	Hewlett-Ward Inc.	Hewlett-Packard Business Inkjet 2200
4	Hewlett-Packard	Hewlett-Packard Color LaserJet 4550
1	Hewlett-Packard	Hewlett-Packard DeskJet 1120C
11	Hewlett-Packard	Hewlett-Packard LaserJet
1	Hewlett-Packard	Hewlett-Packard LaserJet 1300n
1	Hewlett-Packard	Hewlett-Packard LaserJet 1320 series
10	Hewlett-Packard	Hewlett-Packard LaserJet 2100 Series
18	Hewlett-Packard	Hewlett-Packard LaserJet 4000 Series
20	Hewlett-Packard	Hewlett-Packard LaserJet 4050 Series
1	Hewlett-Packard	Hewlett-Packard LaserJet 5P Printer
1	Hewlett-Packard	Hewlett-Packard LaserJet 5P Printer
1	Hewlett-Packard	Hewlett-Packard Business Inkjet 2300
1	Hewlett-Packard	Hewlett-Packard Color LaserJet 8550
1	Hewlett-Packard	Hewlett-Packard LaserJet 4Si
1	Hewlett-Packard	Hewlett-Packard LaserJet 5M
1	Hewlett-Packard	Hewlett-Packard LaserJet 5M
1	Hewlett-Packard	Hewlett-Packard LaserJet 5Si
1	Tektronix	Tektronix Phaser 860N

JJC Information Security Plan

1. Summary

Joliet Junior College's stand on security has changed from a firefighting mode to a proactive stance since we experienced a serious network violation in May of 2004. The incident brought to the surface many security requirements that the college needed to address immediately, and also set the college in a proactive mode to plan for security needs for the future.

Since the incident, significant efforts have been implemented to make the college's computing environment more secure overall. The initial implementation of a clustered firewall, email redundancy, secure remote email access and isolation of the server farm to one subnet was the beginning of a long road of security measures placed to make the college more secure.

Joliet Junior College requires open and flexible information resources to provide an environment in which faculty, staff, and students can thrive while having appropriate protection for servers and sensitive information. The combination of properly protecting servers and sensitive information against the necessity for open and readily available resources requires an innovative approach to information security. It's hard to imagine all of the possible threats that try to attack networks today. It seems as though there are endless internal and external vulnerabilities that must be accounted for. It is unrealistic to expect one single security solution to protect a system with current technology.

Utilizing a regularly scheduled Vulnerability Assessment is an invaluable network security mechanism. The additional security measures are key in ensuring removal of single points of security failure and deploying a security infrastructure that is highly resilient against attacks while also providing the privacy capabilities needed to remain compliant with so many of today's new regulations.

2. Introduction

This security plan is designed to describe and define projects that represent the most effective use of Joliet Junior College resources. The projects described touch on a variety of aspects of information security and incorporate a multi-layered approach to increase information security: Vulnerability Assessment, DMZ restructuring, Web filtering, SPAM defense, incident handling assessment, education, and policy development.

This plan is based on information gathered from a variety of sources and will be refreshed on an annual basis at minimum to ensure that it reflects the best information available.

3. Scope

The security plan set forth here represents projects and decision points for information security at Joliet Junior College. It does not, and is not intended to illustrate all aspects of the day-to-day activities of the Chief Information Security Officer (CISO) or any other group or individual within Joliet Junior College.

4. Security Measures FY 2005-2006

The following is a list of security measures that were implemented in the previous two years:

- Clustered Perimeter Firewall
- Secure OWA remote email access through an ISA firewall
- Traffic Load balancer (F5) to offer an always up solution for the SMTP Gateways, Web advisor and Portal Web Servers
- SMTP Mail gateways to scan email for viruses and also allow for email queuing if a problem comes up with a downstream email server
- SPAM filtering through MailFrontier after the virus check to block incoming SPAM
- Campus wide Antivirus replacement for all workstations and servers
- Citrix Farm deployed to provide students, faculty, administrators and vendors with seamless, secure access to instructional and administrative applications and information through a web platform.
- Implementation of a Storage Area Network (SAN) to consolidate data and speed up data backup times.
- Separate students and staff Exchange 2003 Clusters utilizing the SAN
- Home and Share clustered servers utilizing the SAN
- Active Directory migration of student and staff domains
- Core Router and Switch (Cisco 6513) operating system software upgrade (Cat IOS to native IOS)
- Replacement of 55 legacy network switches
- Reconfiguration of network trunking protocol from isl to 802.1q on all switch and router uplinks to allow for Clean Access installation
- Backup software upgrade from Backup Exec to Net Backup
- Expanded Backup Tape Library from 20 to 40 tapes
- Wireless reconfiguration with certificate and user login
- Rollout of wireless to North and Morris campuses
- Clean Access solution implemented at all campuses to scan workstations for current OS patches and virus definitions
- System Management Server (SMS) implementation to remote control workstations and servers, collect inventory, distribute software and also provide diagnostics and reports
- Cisco Works implementation for network device management.
- Development of Security Policies and Disaster Recovery Plan
- Change Control Committee created
- Chief Information Security officer position created

Joliet Junior College has dedicated its resources to ensure the confidentiality, reliability and availability of the sensitive information stored on the college's computer systems. As a result of these implementations, JJC has drastically improved its security posture and ability to provide reliable technology services to its campus community.

5. Vulnerability Assessment

Security problems are on the rise. In terms of being targeted for cyber attack, it is no longer logical to assume that one given business is safer than another. We must not fall into the "who would want to attack us" syndrome. Vulnerabilities are rapidly growing in number and imposing a dramatic decrease in time to remediate them.

IT will be taking a preventative approach in proactively securing Joliet Junior College's network assets through a yearly vulnerability assessment performed by an outside security firm through

a RFP process. The assessment will shed light on potential vulnerabilities in the network before a hacker alerts us to those vulnerabilities the hard way. It will serve as a guide to the IT department by providing a prioritized plan for security upgrades, modifications of operational procedures, and/or policy changes to mitigate the risks and vulnerabilities to the college's critical assets. The vulnerability assessment will also provide a framework for developing risk reduction options and associated costs.

In the event of a network breach or implementation of new critical hardware/software during the year, a vulnerability assessment will be run to mediate the source of the breach or evaluate any vulnerability risk of such new hardware/software.

6. DMZ Restructuring

As more publicly accessible servers are placed into the DMZ, the need to implement higher security and reorganize the DMZ infrastructure to facilitate trusted secure communication to the internal Network is needed. To accomplish this task, segregated DMZ zones will need to be implemented.

Creating segregated DMZ zones through Virtual Local Area Networking (VLAN) segments enables for the isolation and separation of network traffic. Access between the Internet and the network can be monitored more efficiently and breaches can be identified and isolated at a faster rate. All servers that need public access will be put in the DMZ and placed into a corresponding VLAN. Zones, such as Web servers, will be created where architecture and controls enforce information security policy and ensure appropriate access within risk tolerances.

The goal of the initial restructure of the DMZ will be to define the number of segregated zones needed as they apply to the types of servers being placed into the DMZ. This will include defining requirements and identifying resources. Next, the basic system defense requirements for all systems within the trusted zones including anti-spyware, anti-virus, patching requirements and backup of data will be assessed. An examination of the network requirements will also be undertaken in order to examine segmentation, control, and monitoring requirements (Intrusion Detection Systems (IDS)) for network architecture within a trusted zone; as well as determining what changes will be required to properly authorize users within a trusted zone; implementing a content management server for web authoring, for instance.

7. Web Filtering

Certain activities that are done on a daily basis – doing research over the internet, sharing files (peer-to-peer networks), sending instant messages, and emailing status information while traveling – are making our IT infrastructure vulnerable to mobile malicious code, spyware, viruses, Trojan horses, and phishing and pharming. The gateway firewalls and antivirus software are not enough for these new, virulent threats.

To ensure the needed protection, we need to incorporate content level protection into our overall security strategies. IT will be investigating Web filtering in order to provide an integrated web security solution that fills the time and technology gaps left open by the traditional security solutions we currently have in place.

The web filtering solution will have to be able to filter out inappropriate content while allowing relevant information to reach faculty, staff and students. At the same time, it must allow

administrators to customize internet usage policies by user, group, workstation, or network i.e. allowing faculty to access a different range of sites than students.

With the up and coming Voice over IP (VoIP) project, the network will have to run more efficiently. MP3s, streaming video, and online chats require a great deal of bandwidth and can seriously affect the network's speed and performance. To remediate this, network traffic will have to be monitored (transparently), reported on, and internet usage managed to conserve bandwidth.

Applying a web filtering solution will also allow JJC to comply with Federal Law. Laws like the Children's Internet Protection Act (CIPA) can penalize schools that don't use web filtering software by withholding federal internet and computer funding.

Another benefit that web filtering allows is avoiding lawsuits brought by concerned parents and organizations. Installing these systems will limit legal liability by blocking inappropriate and objectionable material.

8. Spam Defense

Blocking unsolicited commercial email or "spam" is an increasingly important but difficult task for the IT staff. The IT department has placed a great effort on developing sophisticated content filters that can identify messages to determine their level of "spaminess". We have seen an increase in SPAM passing through the system by "spammers," with a money motive, who continually modify their content to get through these filters. Some senders of unsolicited commercial email have taken the process of avoiding content filters one step further; using widely available tools to scan their messages through popular anti-spam packages before they are sent so they can modify their content to make sure it gets through.

We have learned through experience that content filters face a natural trade-off; the more aggressive they are at blocking spam, the greater the risk of inadvertently blocking legitimate email. The IT department has also seen an increase in the management of the blacklists (lists of suspected "bad" mail servers) and whitelists (lists of assumed "good" mail servers); which also increases the possibility of inadvertently blocking legitimate email. In addition, content filters are defenseless against dictionary harvest attacks, denial of service attacks and pose an important risk to Joliet Junior College.

IT will be looking at enhancing the overall effectiveness of content-based filters in combination with a reputation-based mail flow control system. Reputation-based systems are the next generation of "identity-based" spam-fighting. It makes decisions based on comprehensive information about the source of the message and relies on objective data to assess the probability that a message from any given IP address is spam. This probability is based on data such as how many messages a mail server is sending, how many complaints they get, whether or not the mail server is sending to "honeypot" accounts, where the sending organization is located, how long the organization has been sending email from a given location and the amount of volume. Joliet Junior College will be investigating reputation-based mail flow control system and their ability to provide a multi-layered approach to enhance our SPAM fighting abilities.

9. Incident Handling

Incident handling is a key component of the information security at Joliet Junior College. It will provide the mechanism for the IT department to leverage all information security resources under the leadership of the CISO to improve information security operations and service

delivery. The outcome of this will be improved, structured, and consistent procedures and controlled recommendations which will increase the quality of response in an incident. These undertakings require strong collaboration between the CISO, the IT department, Joliet Junior College senior leadership, and the end-user community.

Our response is our strongest weapon against information security incidents. It is therefore paramount that we develop a clear, consistent, coordinated methodology across the institution. This incident response plan must encompass not only the actions of the CISO and the IT department in response to potential security breaches, but also the actions of Community Relations and Joliet Junior College decision makers. The necessary documentation and communications requirements must also be explicitly spelled out.

The approach is for the CISO to build up a starting point and then work with all parties to develop and draft out the process. The departments that are responsible for executing the incident response plan will then be trained on these new policies and procedures. Because this assessment is focused on process, we foresee no budgetary impact; but, time and dedication is a must from all parties.

10. Education

The CISO is charged with helping all members of the Joliet Junior College community obtain the life skill of information security. Education is essential to that goal.

Each year, the CISO will focus on expanding and improving the outreach to the various groups within the user community. This concentration does not indicate a lack of educational opportunities for the other users. It only indicates that efforts will be focused on improving the outreach to the particular group indicated. Though our initial concentration will be on the faculty and staff, opportunities to interact with students will be undertaken. This will increase the security knowledge of the Faculty and Staff which interact with students on a daily basis. Some of these efforts have already occurred including a monthly security newsletter and security advisory alerts. Additionally, a CISO website is being created to have a consolidated source for policies and also point out existing information security sites to increase security awareness. It will also provide users opportunities to interact directly with the CISO via questions and responses posted on the site.

11. Policy Development

In regards to policy, the CISO will be undertaking a review of the procedures for enacting security policies at Joliet Junior College. Part of this review is studying the possibility that separate policies should be enacted for end-users and the IT department. The philosophy behind this effort is to ensure that end-users receive the information that they need concerning their responsibilities without being overwhelmed by highly technical information. The IT department would be responsible for understanding the more technical policies that relate directly to their positions. The results of this examination will help the developmental process and the manner in which policies are constructed in the future.

12. Conclusion

This plan will be reviewed annually and will be republished in the spring of each year.

Appendix

Technology Replacement Plan Financial Summary

**Joliet Junior College
Technology Replacement Plan Financial Summary
FY 2007-2009**

	Replacement Cycle	Original 2006 Repl Plan	2006	2007	2008	2009
Infrastructure						
Servers	3 Years	100,000	56,000	120,000	155,000	150,000
Data Electronics	5 years	104,553	262,000	118,700	294,263	130,000
Load Balancer	4 years			0	45,000	0
UPS Data Closets	3 Years	3,600	4,200	4,200	4,200	4,200
UPS Data Center	7 Years	-	0	0	0	139,995
UPS Individual	3 Years	2,000	2,000	2,000	2,000	2,000
Wireless Access Points	3 Years	400	400	800	1,200	1,200
Total		210,553	\$324,600	\$245,700	\$501,663	\$427,395
Computers and Printers						
Desktop Computers	4 Years qty: 2,200	577,500	341,400	545,175	541,750	541,750
Laptop Carts	3 Years Tech. Cart	55,000	0	23,000	0	0
Apple Macintosh	4 Years	-	75,085	70,000	40,300	50,000
Printers	4 Years 169 network printers	133,750	25,000	25,000	25,000	25,000
Total		766,250	\$441,485	\$663,175	\$607,050	\$616,750
Instructional Delivery Systems						
Instructional Delivery Projectors	5 Years	24,400	35,000	35,000	35,000	35,000
Total		24,400	\$35,000	\$35,000	\$35,000	\$35,000
Other						
Colleague		65,000	80,000	121,000	121,000	121,000
Touch Tone Registration System			25,000	0	0	0
Phone System	10 Years	-	0	0	0	0
Total		65,000	\$105,000	\$121,000	\$121,000	\$121,000
Additional Needs						
Cisco Clean Access		-	\$133,915	\$0	\$0	\$0
Disaster Recovery		-	\$150,000	\$0	\$0	\$0
New Initiatives (Faculty/Staff/Students)		-	\$60,000	\$322,625	\$22,787	87,355
Total		-	\$343,915	\$322,625	\$22,787	87,355
Grand Total Expenditures		1,066,203	\$1,250,000	\$1,387,500	\$1,287,500	\$1,287,500
Expenditures do not include any new campuses, cabling, or telephone system replacements.						
FY 2007 replacement plan includes deferred replacements from FY2005 and FY2006 less 100,000 for new initiatives						
Replacements and priorities will be reviewed and possibly revised by TAC.						

Guiding Principles



INTEROFFICE MEMORANDUM

TO: Campus Community
FROM: David Agazzi and Denis Wright, Co-chairs, TAC
DATE: November 17, 2005
RE: Information Technology Strategic Plan

Joliet Junior College's Technology Advisory Council (TAC) is soliciting proposals for the 2006-2009 Information Technology Master Plan. This is the first of an annual process to develop a rolling three year technology plan.

The President has outlined the planning calendar for this year as follows:

November 17, 2005	TAC issues guiding principles to campus community to be used in submitting projects
December 7, 2005	Project requests are due
January 20, 2006	IT completes initial analysis and summary of projects
February 24, 2006	Evaluation, review, and prioritization of projects completed by ETAC and LTAC
February-March 2006	TAC considers recommendations of ETAC and LTAC
March 28, 2006	Three-year technology plan presented at the Board of Trustees workshop

Attached are the major principles and goals identified by TAC to be considered when submitting project requests and examples to achieve those goals. There will be an informational meeting to discuss the IT Planning Process on December 2, 2005 at 3:00 p.m. in D-2001. The form for the project request process is available on-line at <http://www.jjc.edu/it> .

Please feel free to contact us or the co-chairs of LTAC (Chris Harvey and Kathy Wolz) and ETAC (Mary Jo Wolfersberger and Amy Murphy) if you have any questions.

INFORMATION TECHNOLOGY PLAN 2006-2009

Joliet Junior College Mission

Joliet Junior College is committed to providing a quality education that is affordable and accessible to the diverse student population it serves. Through a rich variety of educational programs and support services, JJC prepares its students for success in higher education and employment. As part of this college's commitment to lifelong learning and services to its community, it also provides a broad spectrum of transitional, extension, adult, continuing, and workforce education.

Joliet Junior College Vision

Joliet Junior College will continue to be a leader and innovator in the provision of educational and training endeavors. Through the twenty-first century, the College will remain a major catalyst to the economic growth of the community.

Academic quality improvement program (aqip) criteria

*Helping students learn
Accomplishing other distinctive objectives
Understanding student's and other stakeholder's needs
Valuing people
Leading and communicating
Supporting institutional operations
Measuring effectiveness
Planning Continuous Improvement
Building collaborative relationships*

TECHNOLOGY GOALS AND RECOMMENDATIONS:

The benefit of an information technology plan for Joliet Junior College is that it provides the strategy within which specific goals, objectives, and activities are developed to improve the support for both instructional technology and administrative information systems, to improve business efficiencies, and provide improved services to students, faculty, and staff.

It is important to note that many of the recommendations that will be made will require the development of detailed implementation plans and timelines. The goals and recommendations that result from the project submission process will be the basis for a plan that is based on a 3 year period beginning fiscal year 2006/2007 and continuing through fiscal year 2008/2009.

This year the emphasis on IT projects that are funded will be based on the following principles:

- 1) IMPROVE BUSINESS PROCESSES THAT PROVIDE REAL-TIME ACCESS TO INFORMATION FOR STUDENTS AND STAFF
- 2) IMPROVE CLASSROOM LEARNING ENVIRONMENT BY USE OF TECHNOLOGY
- 3) IMPROVE VIRTUAL LEARNING EXPERIENCE FOR STUDENTS
- 4) PROVIDE INFRASTRUCTURE AND BANDWIDTH TO SUPPORT BUSINESS CONTINUITY FOR ACADEMIC AND ADMINISTRATIVE APPLICATIONS IN THE EVENT OF A DISASTER

There are four comprehensive goals identified by the Technology Advisory Council, all of equal importance. Project activities that meet these goals will be considered for the three-year Technology Plan.

I. **ENHANCE THE CAPABILITIES AND SUPPORT FOR THE USE OF INSTRUCTIONAL TECHNOLOGY FOR TEACHING AND LEARNING**

EXAMPLES:

- USE TECHNOLOGY TO ENHANCE THE STUDENT LEARNING AND INSTRUCTIONAL DELIVERY PROCESS FOR CREDIT AND NON-CREDIT STUDENTS**
- EXPAND THE NUMBER OF SEMI-SMART CLASSROOMS**
- INTEGRATE NEW TECHNOLOGIES THAT DELIVER INSTRUCTION ON DEMAND (ANYTIME/ANYWHERE)**
- OFFER STUDENTS REMOTE ACCESS TO THEIR APPLICATIONS AND DATA**
- OFFER THE STUDENTS A LAPTOP RENTAL/PURCHASE PROGRAM**
- OFFER STUDENTS NETWORK ACCESS ANYWHERE ON CAMPUS (WIRELESS)**
- OFFER LECTURES AND WHITEBOARD NOTES TO BE REPLAYED TO THE STUDENT**

II. **ENHANCE THE CAPABILITIES AND FUNCTIONALITY OF THE COLLEGE'S ADMINISTRATIVE INFORMATION SYSTEMS**

EXAMPLES:

- WEB ENABLE BUSINESS PROCESSES SUCH AS PAY ADVICES, GRADE REPORTING, ADVISING, ETC.**
- PROVIDE A PORTAL FOR STAFF, CREDIT AND NON-CREDIT STUDENTS, AND ALUMNI TO ACCESS THEIR ON-LINE RESOURCES**
- USE TECHNOLOGY FOR RECRUITING, JOB APPLICATION, APPLICANT TRACKING, AND SCREENING PROCESS**
- USE EXISTING ERP SYSTEM'S FUNCTIONALITY TO IMPLEMENT NEW OR IMPROVED BUSINESS PROCESSES**
- USE TECHNOLOGY FOR COLLEGE'S REGISTRATION SYSTEM TO INSTANTLY ENROLL BOTH NONCREDIT AND CREDIT STUDENTS**

III. **ENHANCE THE COLLEGE'S INFORMATION TECHNOLOGY INFRASTRUCTURE**

EXAMPLES:

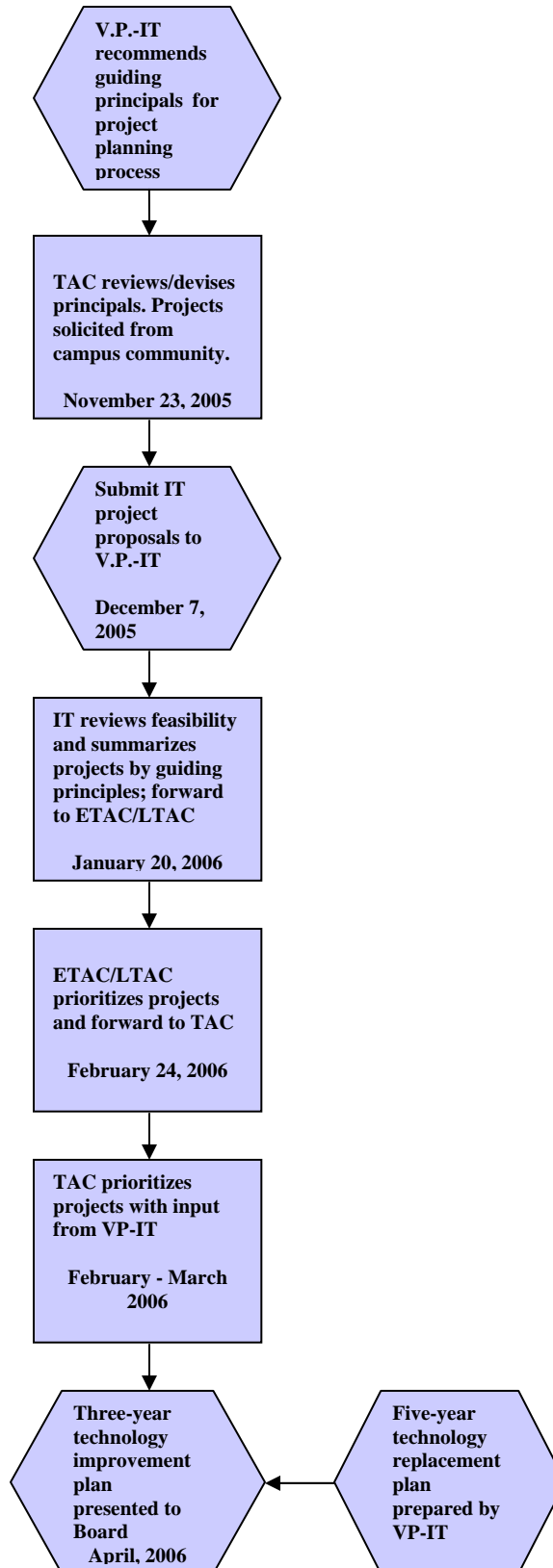
- PROVIDE FOR DISASTER RECOVERY/BUSINESS CONTINUITY FOR IT INFRASTRUCTURE**
- PLAN INFRASTRUCTURE TO INCORPORATE NEW TECHNOLOGIES SUCH AS IP VIDEO, VOIP AND WIRELESS**
- MANAGE BANDWIDTH CONSUMPTION**
- PROVIDE INTERNAL INTRUSION DETECTION SYSTEMS**
- PROVIDE COMPLIANCE WITH LEGAL REQUIREMENTS**
- MANAGE PRINT SERVICES EFFECTIVELY**

IV. **DEVELOP AND MAINTAIN AN EFFECTIVE AND RESPONSIVE ORGANIZATIONAL STRUCTURE AND PLANNING PROCESSES TO SUPPORT TECHNOLOGY AND INFORMATION RESOURCES**

EXAMPLES:

- PROVIDE EFFECTIVE REPORTING TOOLS FOR PROJECT MANAGERS AND USER COMMUNITY**
- DEVELOP ON-LINE STRATEGY FOR COMMUNICATING AND UPDATING THE TECHNOLOGY PLAN**
- ESTABLISH CUSTOMER SATISFACTION REPORTING TOOLS AND METRICS TO CONTINUOUSLY IMPROVE QUALITY**
- Establish technical staff's professional development plans annually as part of evaluation**

IT Strategic Planning Process Flowchart



Joliet Junior College
Information Technology Project Request
FY 2006-2009 Planning Cycle

Project Title: _____ Department: _____

Request Prepared by: _____ Date: _____
(Person to be contacted regarding this request.)

Department Chair/
Supervisor Approval: _____

Vice President/
Approval: _____

Project Description

A detailed description of the project that clearly states the overall goal of the initiative and the role of the technology component.

Project Resource Requirements

Include hardware, cable, software, recurring maintenance, training, and outside consultants' expenses.

Other Resources Available for this Project

Identify outside funding or assistance available for this project.

Project Justification and Alternatives Considered

Include benefits and external factors such as legal that are driving this project.