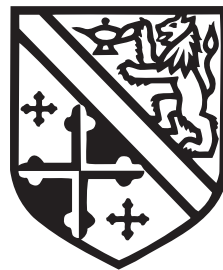




**Howard Community College  
Technology Plan  
FY 2009 – 2012**

**February 2009**



**Mission Statement.** *“The Information Technology area supports the constantly changing high-technology environment of HCC by providing comprehensive technology services to advance instruction, college services, and business processes for students, faculty, and staff.”*

In order to accomplish its mission, the IT staff works together with the college community by assisting with technology initiatives, planning, securing resources, exploring new technology applications, and implementing and maintaining technology projects. The IT Department strives to meet the needs of its stakeholders by staying current with industry changes and receiving input from an external technology advisory board and an internal technology cross-functional team.

**Purpose of the Technology Plan.** This plan defines the strategic and operational direction, goals, and objectives for technology applications over the next three years. It provides a common vision for the future deployment of technology at Howard Community College, which is focused on enriching the learning experience for students and improving the college’s business processes. The plan also outlines an outcomes assessment process that monitors key business processes and services against industry benchmarks and best practices. This plan has been prepared with input from the Technology Cross Functional Team and the college community. The plan is updated on an annual basis.

**Information Technology Area Overview.** Information Technology services are provided through four departments. The IT staff includes 41 full-time and 21 part-time employees with professional degrees, certifications, and training.

*Student Computer Support (SCS).* SCS provides technical support for the infrastructure that is used to assist and deliver instruction and learning resources to HCC students. The staff works directly with our faculty and students to provide technology and operational support for classroom instruction in our credit and noncredit programs. They are responsible for keeping the college’s computer labs operational, which are located in the main campus buildings, Hickory Ridge, Laurel, and the Business and Training Center at Gateway. This department provides installation, testing, and maintenance of all instructional software and technology, including CE6, which is the college’s distance learning platform. Technical support is also provided for the Library, Test Center, Learning Resource Center and Belmont Conference Center.

*Administrative Information Systems (AIS).* AIS manages the college administrative computing system (Colleague), which is a centralized enterprise database system that supports the college business processes. The Colleague administrative computing system supports financial management, human resources, payroll, scheduling, academic history, and enrollment management processes.

*Information Technology Services.* This department provides centralized help desk support,

## Howard Community College Technology Plan – February 2009

---

management of student open labs, reprographics support, and administration of the college website including: programming, website development, content review, and reporting.

*User Network Services (UNS).* UNS maintains desktop systems, file servers, and network infrastructure to support the technology and communication needs of the college community. This work group is responsible for managing the campus data and voice network infrastructure as well as the computer workstations used by faculty and staff. UNS provides infrastructure support services for the college web, email services, Internet, intranet, administrative system, and instructional servers. The staff monitors and keeps current state of the industry applications of security, firewall protection, and anti-virus protection to assure the integrity and reliability of all systems.

**Technology Cross-Functional Team.** The Technology Cross-Functional team assists with keeping the college's technology infrastructure and applications current and robust to meet the educational and business needs of the college community. The team assists with technology planning, advancements, applications, policies, standardization, end-user competencies, and funding. This cross-functional team is composed of campus technology leaders and staff from all constituency groups and was formed in May 2001. The team has reviewed and provided input to the development of this plan.

**Technology Advisory Board.** The Technology Advisory Board provides an external source of knowledge and expertise for the advancement of the college's technology infrastructure, services, business processes, and educational offerings. The Technology Advisory Board is composed of representatives from the public and private sectors of technology companies, technology practitioners, government agencies and educational institutions. They have assisted with planning, input on major technology initiatives, corporate training, and resources. The advisory board was formed in April 2000 and has 17 members.

### **Strategic Direction and Focus**

The focus of this technology plan is based upon guidance contained in the college's strategic, academic, student services, and master facilities plans. In order to support these plans and provide accurate and timely access to information resources, the IT area, along with input from the IT Cross-Functional Team, has developed goals and objectives that also consider organizational strengths, weaknesses, threats and opportunities (SWOT). The SWOT analysis is provided at Attachment 1.

Technology goals and objectives align with the college's three strategic goals. Specific technology objectives are outlined in Attachment 2. Attachment 3 provides a prioritized matrix of objectives by fiscal year.

## Information Technology Strategic Planning SWOT Analysis

### Strengths

8. Inputs from Technology Advisory Board
9. IT workforce skills & certifications
10. Technology to support instruction
11. Enterprise System (Colleague)
12. Collaborative partnerships w/ state county government, library, & other MD community colleges
13. Relationships with suppliers (Datatel Dell, Convergence)
14. IT Project completion rates
15. High customer service ratings
16. Consolidated Help Desk

### Weaknesses

1. Communication w/Students
2. Need for revised/new IT policies/procedures
3. Life Cycle Mgt. of IT Assets
4. Business Continuity and Redundancy
5. Variation of online teaching tools
6. Use of non-standard applications
7. Need for additional training or revised training applications
  - a. Staff IT Security
  - b. Access and Responsibility

### Opportunities

1. Further server virtualization
2. Leverage purchases – economies of scale
3. Deduplication of data storage
4. Closer Integration of Academic, Student Services, and IT Plans
5. Deployment of new telecom infrastructure with VOIP
6. Sustainability of IT systems (printing, pc power utilization)
7. Deployment of student portal (increased communication, collaboration and social networking)
8. Management reporting tools
9. Vista Implementation
10. Access to Howard County fiber ring
11. Video on Demand
12. Improve stakeholder satisfaction with the college's website and intranet.

### Threats

1. Increasing security vulnerabilities (internal and external)
2. BRAC – Loss of Employees
3. Loss of funding from State and County
4. Employees using non-standard applications
5. New spyware and viruses

# Howard Community College Technology Plan – February 2009

---

Attachment 2 – Goals and Objectives

## *College Strategic Goal: Student Success and Lifelong Learning*

### **Supporting Technology Goals and Objectives:**

***Technology Goal: Improve the College's Technology Infrastructure, Applications and Computing Resources to Achieve Secure, Reliable and Flexible Systems that Support Learning, Student Services and Business Processes***

### ***Technology Objectives:***

1. Deploy key system redundancies for the Colleague administrative system in Duncan Hall to allow business continuity in the event of system failures.

Timeline: June 2009

Resources: \$120,000

Priority: High

Owner: UNS (Primary owners: M. Heinmuller)

2. As part of business continuity efforts, acquire a data de-duplication storage device for the Colleague database. Data de-duplication eliminates redundant data storage, increases storage capacities, improves manageability of stored information and recovery processes, and reduces operational costs through efficient use of storage devices.

Timeline: FY2009-2010

Resources: \$100,000

Priority: High

Owner: AIS and UNS (Primary owners: L. Wu and M. Heinmuller)

3. Deploy a new telecom infrastructure that incorporates voice over Internet Protocol (VoIP). This objective will also address college business requirements for announcements, zone paging, call trees, emergency phones and consolidation of emergency notification processes through a centralized interface.

Timeline: FY2009 - 2010

Resources: \$1,214,409 (capital funding)

Priority: Low

Owner: UNS (Primary owners: M. Heinmuller)

## Howard Community College Technology Plan – February 2009

---

4. In partnership with CentreTEK Inc. redevelop the Laurel College website with the goal of increasing student enrollment. The project's focus will market the center's unique identity within the community and better promote its flexible learning options and degree programs.

Timeline: FY2009

Resources: \$20,000

Priority: High

Owner: UNS (Primary owner: R. Stott)

5. Upgrade to Exchange 2007 to complement the Microsoft Office 2007 rollout and provide enhanced email functionality to users.

Timeline: FY2010

Resources: \$120,000

Priority: High

Owner: UNS (Primary owner: T. Glaser)

6. Implement the Colleague Advancement module to support Development and Foundation, Senior Administration and Continuing Education processes that include the management of communications, financial data, and client information.

Timeline: FY2009

Resources: \$140,000

Priority: High

Owner: AIS (Primary owner: L. Wu)

7. Research and test reporting applications to assist the college in its strategic planning initiatives and accountability requirements.

Timeline: FY2009-FY2010

Resources: Undetermined

Priority: High

Owner: PROD and AIS (Primary owners: L. Wu and Z. Irvin)

8. Implement and deploy Datatel's retention module to enhance retention efforts and establish an early warning system for at-risk students. See college strategic plan (FY2010-2015), item 1.2B.

Timeline: FY2010

Resources: \$40,000

Priority: High

Owner: VPSS, VPIS and AIS (Primary owner: L. Wu)

## Howard Community College Technology Plan – February 2009

---

9. Generate requests for proposals and select suppliers to upgrade digital copiers in the Print Shop and 39 office copiers. Obtain cost effective lease or purchase options. Consideration should be given to provide an online print management solution that allows employees to submit electronic printing requests directly to the Print Shop. Current contracts expire in May 2009.

Timeline: FY2009

Resources: Ongoing costs: \$120,000. Annual increase of \$25,000 projected

Priority: High

Owner: ITS (Primary owner: R. Pollard)

10. Develop an integrated online inventory to assist in managing the PC refresh schedule and funding projections based on application and performance requirements. The annual PC refresh is 25 percent of the total desktop inventory. Total pc inventory is 3,200 desktops. The annual refresh is calculated at 800 desktops at a unit cost of \$950.00.

Timeline: FY2010

Resources: \$760,000

Priority: High

Owner: IT Directors (Primary owners: M. Heinmuller and S. Lee)

11. Expand server virtualization technology to lower the number of physical servers, reduce maintenance costs, increase space utilization, and allow the deployment of multiple operating systems on a single platform. During 2009, SCS will virtualize five physical servers on existing virtualized servers.

Timeline: FY2010

Resources: No funding required

Priority: High

Owner: UNS and SCS (Primary owner: M. Heinmuller and S. Lee)

12. Upgrade the college's web content management system to SiteExecutive 4. The upgrade provides greater flexibility using cascading style sheets and advanced forms, enhances management reporting, allows HTML editing, and incorporates the capability of using blogs.

Timeline: FY2010

Resources: \$18,100

Priority: Medium

Owner: ITS (Primary owner: R. Stott)

13. Implement a portal system to provide students an effective tool for shared communications, along with customized access to program and course information, email, schedules, financial account information, and campus information. Conduct student focus

## Howard Community College Technology Plan – February 2009

---

groups to determine requirements and expectations.

Timeline: FY2010-20011

Priority: Medium

Resources: \$140,000

Owner: ITS (Primary owner: R. Stott)

14. The Administrative Information System staff will transition to a MS SQL version of the Colleague administrative enterprise system. The change in database architecture will provide flexibility with technological advancements and recruitment of staff.

Timeline: FY2011

Resources: None

Priority: Medium

Owner: AIS (Primary owner: L. Wu)

15. In conjunction with the representatives from the Academic area and Technology Cross-Functional Team reassess existing and identify new technology learning tools used to support instruction. Consideration should be given to bandwidth utilization, on-demand access to high definition video resources, portable technologies, social networks, and application delivery

Timeline: FY2010

Resources: None

Priority: Medium

Owner: AIS (Primary owner: S. Lee and R. Pollard)

16. Improve HCC's website design and navigation to streamline access to information and services. Conduct stakeholders' focus groups to solicit requirements and suggestions. Update SiteExecutive templates and cascading style sheets.

Timeline: FY 2010

Resources: None

Priority: Medium

Owner: ITS (Primary owner: R. Pollard)

17. Replace servers used to maintain the college's website. Equipment will reach the end of its expected lifecycle in 2010 (5 years after initial deployment).

Timeline: FY2012

Resources: \$100,000

Priority: Medium

Owner: UNS and ITS (Primary owner: M. Heinmuller)

## Howard Community College Technology Plan – February 2009

---

18. In cooperation with PGCC, upgrade the existing network infrastructure and computer resources for the Laurel College Center to support the academic learning environment.

Timeline: FY2010

Resources: \$150,000

Priority: Low

Owner: UNS (Primary owner: M. Heinmuller)

19. Examine and possibly implement Colleague's online admissions module to replace the current online application hosted on the college's primary website.

Timeline: 2011

Resources: Undetermined

Priority: Low

Owner: AIS (Primary owner: L. Wu)

### *College Strategic Goal: Organizational Excellence*

#### **Supporting Technology Goals and Objectives**

#### ***Technology Goal: Advance Technology Security Practices and Safeguard College Information Resources and Systems***

#### ***Technology Objectives:***

20. Publish a technology security plan that (1) summarizes important security considerations for the college, (2) identifies, assesses and prescribes actions to mitigate vulnerabilities and threats to the college, (3) outlines management procedures for the accountability and use of IT resources and (4) provides references to more detailed documents, such as disaster recovery and business continuity plans.

Timeline: FY2009-2010

Resources: No funding required

Priority: High

Owner: IT Directors (Primary owner: R. Pollard)

21. Based upon the recommendations from an external security audit, expand technology policies and procedures to provide detailed technical guidance to employees for the use of computing resources, access to information, and protection of regulated and confidential information. Examples of topics include: classification and protection of information resources, access to the college VPN, password and identity management, use of college

## Howard Community College Technology Plan – February 2009

---

email and messaging, Internet use, phone system and voicemail, personal communication devices, use of wireless communication, and anti-virus guidelines.

Timeline: FY2009-2010

Resources: No funding required

Priority: High

Owner: IT Directors (Primary owner: R. Pollard)

***Technology Goal: Ensure staff have the right technical skills sets to meet customers' needs and respond future advances in technology***

### ***Technology Objectives***

22. Develop a department staff development plan, which evaluates skill sets and training requirements to ensure personnel are able to meet current and future institutional technology needs.

Timeline: FY2009

Resources: None

Priority: Medium

Owner: UNS, AIS, UNS, ITS (Primary owner: M. Newberger)

### ***College Strategic Goal: Build Partnerships***

#### **Supporting Technology Goals and Objectives:**

***Technology Goal: Develop Alliances with Other Institutions and Government Agencies to Advance Technology Initiatives, Create Synergies and Reduce Costs***

#### ***Technology Objectives:***

23. Collaborate with Howard County Government and evaluate the possible utilization of shared resources. This partnership should permit:
- a. Increase bandwidth to the college
  - b. Allow utilization of the fiber network that connects Howard County's government and educational entities
  - c. Utilization of a common network operations center for disaster recovery purposes.

Timeline: FY2009 - 2010

Resources: Undetermined

## Howard Community College Technology Plan – February 2009

---

Priority: Medium

Owner: VPIT (Primary owner: T. Glaser)

