# KAPI‘OLANI COMMUNITY COLLEGE

# COMPREHENSIVE INSTRUCTIONAL PROGRAM REVIEW

# Associate in Science Degree

# Assessment Period: 2006-2009

# College Mission Statement

**Kapi'olani Community College  
Mission Statement 2003-2010**

##### Approved October 7, 2002 by KCC Faculty Senate

Kapi’olani Community College

* is a gathering place where Hawai‘i’s cultural diversity is celebrated, championed and reflected in the students, faculty, staff, administration and curriculum.
* is a nurturing workplace of choice for strong and caring faculty, staff, and administrators committed to a shared vision and set of values.
* strives to be the first choice for education and training for Hawai‘i’s people.
* provides open access, and promotes students’ progress, learning and success with low tuition and high quality instructional programs, student development and support services, and selective areas of excellence and emphasis.
* prepares students to meet rigorous baccalaureate requirements and personal enrichment goals by offering a high quality liberal arts program.
* prepares students to meet rigorous employment and career standards by offering 21st century career programs.
* prepares students for lives of ethical, responsible community involvement by offering opportunities for increased civic engagement.
* leads locally, nationally and internationally in the development of integrated international education through global collaborations.
* uses human, physical, technological and financial resources effectively and efficiently to achieve ambitious educational goals.
* builds partnerships within the University and with other educational, governmental, business, and non-profit organizations to support improved learning from preschool through college and lifelong.
* uses cycles of qualitative and quantitative assessment to document degrees of progress in achieving college goals and objectives.

<http://quill.kcc.hawaii.edu/object/kccmissionstatement.html>

# Program Mission Statement

The primary Information Technology (IT) program student focus is career preparation with three major emphases:

• insuring that our graduates possess the necessary IT skills and knowledge to enter the workforce upon graduation,

• preparing students and graduates to move seamlessly and successfully to UH Manoa, UH West Oahu, and other four year institutions, and

• providing lifelong learning opportunities for Hawaii’s workforce that are designed to improve workforce skills and career progression and in a manner that is convenient to the incumbent workforce.

# Part I. Executive Summary of Program Status Response to previous program review recommendations.

We accomplished everything in our Action Plans for the previous Three Year Program Review, including: renumbering our courses, restructuring our prerequisites, creating short certificates, and developing SLOs. In fact, since then, we have modified our SLOs, changed our short certificates, and are adding new courses following the numbering plan developed before.

No other formal/written Program Review Recommendations were received.

# Part II. Program Descripton

## History

The Information Technology program was established in 1966 as part of the Business Education Division at Kapi'olani Community College. In keeping pace with industry standards, the program has evolved from punched cards and an isolated mainframe computer in 1966 to the present interactive networked environment that connects a mainframe computer at UH Manoa and several KCC IT faculty maintained servers with numerous microcomputers at the Diamond Head campus and remote student access sites. Instructional support is provided by the Information, Media and Technology Services division.

In Spring 1990, Kapi'olani Community College submitted the Information Technology program for consideration for the Secretary’s Award as an Outstanding Vocational Education Program.

In Fall 1990, the A.S. degree was revised to better conform with the Data Processing Management Association (DPMA) model and was the only degree program in Hawaii offering the full spectrum of training from an Xbase database management system on microcomputers to RPG on a minicomputer to COBOL/JCL on a mainframe computer.

In Spring 1992, the program was successfully expanded to include offering Information Technology courses and the Certificate of Completion off campus at the Correctional Facility at Halawa.

In Fall 1993, KCC became an academic partner with Novell, Inc, and offered certified network training. A certificate of completion in Networking Technologies was proposed and implemented in Fall 1994. Training in networking has been incorporated in the Certificate of Achievement and Associate in Science Degree effective Fall 1995. From Fall 1993 on, the program offered the following Information Technology credentials:

* An Associate in Science Degree (Programmer, Junior Analyst)
* A Certificate of Completion (Front-end GUI and Database Connectivity) and
* since 2002, A Certificate of Competence (PC Maintenance)

In 1998, we entered a one year agreement with CISCO to provide training in CISCO network routing. The contract has since lapsed and we no longer offer this vendor training. Instead, we continue to offer non-vendor specific training in network management. Similarly, we no longer offer Novell training. New technologies are introduced and others fade away, so we have discontinued our courses in RPG on the minicomputer (AS 400) platform.

In Fall 2001, we began offering “topics” courses to allow us to rapidly respond to industry trends and needs, including an “Oracle” course that led to Oracle certification. In Fall 2002, we started offering courses leading to Microsoft Certified Systems Administrator (MCSA).

As of Fall 2003, courses were offered in Visual Basic .NET, game programming, and Business PC Systems Maintenance/Support and Operating Systems Installation to address the changing IT employment requirement due to outsourcing and September 11, 2001.

In Fall 2005, all courses using Microsoft Office Application (ICS 100, ICS 101, ITS 102, ITS 113) were upgraded to MS Office 2003. This entailed upgrades to the three class/labs and one open lab, instructors workstations, and new textbooks. ITS 157, Web Design and Development, switched from a Microsoft tool, Frontpage, to a Macromedia tool, Dreamweaver MX 2004, based on industry standards and student feedback. The program also invested in a server to pursue development in Sharepoint Services for both staff and student use.

In Spring 2005, the UH mainframe changed its operating system to zOS . Subsequent problems regarding communication between students' computers and the mainframe were resolved.

In Spring 2006, we introduced a new topics course (ITS 220S) on PC and Network Security based on feedback we received from both our students and advisory group.

In Fall 2006, we renewed our Oracle license after a year’s lapse and updated the curriculum to provide local industry with current technology training.

In Fall 2007, we restructured our AS program by renumbering our courses using a consistent, logical methodology and created a series of short certificates as a persistence strategy to reward students for concentrated study along a technology line.

In Fall 2008, as a result of our success in awarding short certificates, but unfortunately not receiving much credit for them, we expanded our three certificates in programming, help desk services, and database administration to include a foundation course in business applications; thereby, changing the certificates to completion (12+ credits), which are counted towards our Perkins’ numbers.

In Fall 2009, after several years of futilely trying to develop a system-wide articulation agreement with UH West Oahu, we have started the process to develop our own independent agreement. To accomplish that end, we are proposing an Advanced Professional Certificate (APC) in IT at KapCC composed of six 300 level IT courses that will then cleanly and wholly transfer to UHWO. In addition, we are working with the other AS and transfer programs of Business Education on a Title III Renovation Grant that will “makeover” our current Computer Lab into a Business Education Collaboration Center.

All programs emphasize the use of computers to support business and to develop business applications. The program has five full-time faculty members, including a designated program coordinator.

## Program Goals

1. To provide graduates with the entry-level skills and knowledge necessary for performing services as a computer support specialist, technical support specialist, help desk technician, local area network administrator, programmer, database administrator, or Web developer using rapid prototyping tools to produce the front-end GUI interface with connectivity to appropriate databases at the back-end.
2. To provide the upgrading of skills of those currently employed in the Information Technology field.

## Occupations for which this program prepares students

* Windows Application Developer
* Web Applications Developer
* Database Administrator
* IT Specialist
* Help Desk Technician
* Network Specialist
* Programmer

## Program SLOs

1. Design and develop software solutions for contemporary business environments by employing appropriate problem solving strategies.
2. Configure and administer database servers to support contemporary business environments.
3. Comprehend and resolve common desktop and network issues.
4. Analyze common business functions and identify, design, and develop appropriate information technology solutions (in web, desktop, network, and/or database applications)
5. Learn future technologies through acquired foundational skills and knowledge and employ them in new business environments.
6. Practice communication, problem solving and decision-making skills through the use of appropriate technology and with the understanding of the business environment.

## Admission Requirements

Standard KapCC admissions.

## Credentials, Licensures Offered

Preparation for:

* CompTia A+
* CompTia Network +
* Oracle Database 10g Administrator Certified Associate
* Oracle Database 10g Administrator Certified Professional
* Certified Internet Web Professional (CIW)
* Microsoft Certified Technology Specialist
* Microsoft Certified Professional Developer
* Microsoft Certified Application Specialist (Word, Excel, PowerPoint, Access 2007)

## Faculty and Staff

* Sandra Lai, B.A., Professor, tenured, 1987 (Teaches both ICS service classes and ITS)
* Alfred Seita, M.S., Professor, tenured, 1994 (Teaches only ICS)
* Kevin Yokota. B.S., Assistant Professor, tenured, 1999 (Teaches both ICS service classes and ITS)
* Steven Singer, Ed.D., Associate Professor, tenured, 2005 (Teaches both ICS service classes and ITS)
* Hal Corcoran, M.S., Instructor, probationary, 2014 (Teaches both ICS service and ITS classes)

## Lecturers

* Dale Nakasone
* Michael Paulding
* Philip Lavoie
* Steven Takaki
* Pat Gilbert

It should be noted that faculty within the IT program teach several different types of classes. Some classes are strictly for the IT major and have the ITS alpha. Some classes are for the pre- ICS major and students are intending to transfer to UHM, these could be: ICS 101, 111, 141, 211, 212, and 241. Some classes are service classes for either programs at the KapCC campus or for UHM Shidler CBA, TIM or Biology: ICS 100 and ICS 101.

## Resources

* Four networked class/labs with 20—30 student workstations, shared with other BE programs (accounting, marketing, entrepreneurship, management, pre- Business, and pre-ICS)
* Four instructor workstations with projection capabilities, shared with other BE programs
* One open lab, shared with other BE programs, with 20—30 student workstations
* Software as appropriate to teach current business applications, programming languages, networking operations, and database and web technologies, shared with other BE programs
* Two counselors, shared with other BE programs
* One lab manager, shared with other BE programs
* One secretary, shared with other BE programs
* Two to six student assistants to staff the open lab and assist the secretary, shared with other BE programs.
* Title III grant for lab renovations, shared with other BE programs

## Articulation Agreements

* UHCC System ETRO/CENT
* UH-West Oahu BAS in Information Technology (Under Development)
* UH Hilo transfer agreement
* HPU (outdated, undergoing review)

## Community Connections, Advisory Committees, Internships, Coops

| KapCC IT Advisory Board 2009 | | |
| --- | --- | --- |
| **First Name** | **Last Name** | **Company Name** |
| Gordon | Bruce | C&C Honolulu |
| Debra | Gagne | State of Hawaii |
| James | Kadota | HMSA |
| Garret | Yoshimi | DTRIC Insurance LTD |
| Randolph | Batoon | Partners In Development Foundation |
| Todd | Park | Oceanic Time Warner |
| Doreen | Nozawa | Servco Pacific |
| Ricky | Chow | Computer Assurance, Inc. |
| Earl | Bethke | Hawaii Health Systems Corp. |
| Naomi | Stafford | Midori Designs Online |
| Paul | Sakamoto | Office of the VP for Community Colleges |

***Internships***

* Oceanic Time Warner Cable
* Pankow Charles Builders Ltd.
* Kaiser Permanente
* Austin, Tsutsumi, & Associates Inc.
* Hawaii Health System Corporation
* University of Hawaii - Information Technology Services
* Partners in Development Foundation
* Envision Network Solutions
* Liberty Dialysis - Hawaii
* Tropic Fish & Vegetable Center, Inc.
* Discount Electronics/E-Parts Hawaii
* Honolulu - Pacific Federal Executive Board

## DOE Connections

Standard KapCC connections.

## Distance delivered/Off Campus Programs, if applicable

ICS 100 3-4 sections each semester

ICS 101 3-4 sections each semester

# Part III. Quantitative Indicators for Program Review (No need to write this part. The data will come from the annual program reviews.)

## Demand/Efficiency

### Current and projected positions in the occupation (for CTE programs)

### Annual new positions I the State (for CTE programs)

### Number of applicants

### Number of majors

### Student Semester Hours for program majors in all program classes.

### Student Semester Hours for all program classes.

### FTE program enrollment

### Number of classes taught

### Average class size

### Class fill rate

### FTE of BOR appointed program faculty

### Semester credits taught by lecturers

### Percent of classes taught by lecturers

### FTE workload (Credits taught/full teaching load.) Note: Full teaching load is generally defined as 27 or 21 credits depending on program.

### Major per FTE faculty

### Number of degree/certificates awarded in previous year by major

### Cost of program per student major

### Cost per SSH

### Determination of program’s health based on demand and efficiency (Healthy, Cautionary, Unhealthy)

## Outcomes

### Attainment of student educational goals

### Persistence of majors fall to spring

### Graduation rate

### Transfer rates

### Success at another UH campus (based on GPA)

### Licensure information where applicable

### Perkins core indicators for CTE programs

### Determination of program’s health based on outcomes (Healthy, Cautionary, Unhealthy)

# Part IV. Assessment Results Chart for Program SLOs (3—5 year trend)

**Student Learning Outcomes:**

|  |  |
| --- | --- |
| 1. Design and develop software solutions for contemporary business environments by employing appropriate problem solving strategies. 2. Configure and administer database servers to support contemporary business environments. 3. Comprehend and resolve common desktop and network issues. 4. Analyze common business functions and identify, design, and develop appropriate information technology solutions (in web, desktop, network, and/or database applications) 5. Learn future technologies through acquired foundational skills and knowledge and employ them in new business environments. 6. Practice communication, problem solving and decision-making skills through the use of appropriate technology and with the understanding of the business environment. | |
|  | **Year/Semester of Assessment** |
| **SLO #1** | Spring 2009 |
| **SLO #2** | Spring 2010 |
| **SLO #3** | Fall 2011 |
| **SLO #4** | Fall 2009 |
| **SLO #5** | Spring 2011 |
| **SLO #6** | Fall 2010 |

## Changes made as a result of findings

In Spring 2009 the IT faculty designed and implemented a rubric to assess SLO #1. All subpoints of SLO#1 were met except for “documentation.” We immediately made a change in our curriculum to help assure that this necessary skill was addressed.

# Part V. Curriculum Revision and Review (Minimum of 20% of existing courses is to be reviewed each year.)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| SUBJ | CRS# | TITLE | Last Approved | ACTION\* | f09 | sp10 | f10 | sp11 | f11 | sp12 | f12 |
| ICS | 100 | Computing Literacy and Apps | 200230 | modify |  |  |  |  | X |  |  |
| ICS | 100B | Intro to Windows and the Web | 200430 | delete |  | X |  |  |  |  |  |
| ICS | 100BC | IntroWindowsWebWord&Powerpoint | 200430 | delete |  | X |  |  |  |  |  |
| ICS | 100C | Intro to Word and PowerPoint | 200430 | delete |  | X |  |  |  |  |  |
| ICS | 100D | Intro to Microsoft Excel | 200430 | delete |  | X |  |  |  |  |  |
| ICS | 101 | Tools for the Information Age | 200840 | modify |  |  |  |  |  |  | X |
| ICS | 102 | The Internet | 200340 | delete |  | X |  |  |  |  |  |
| ICS | 110 | Introduction to Programming through 3D Animations | 200840 | modify |  |  |  |  |  |  | X |
| ICS | 111 | Intro to Computer Science I | 200840 | modify |  |  |  |  |  |  | X |
| ICS | 141 | Discrete Math for Comp Sci I | 200730 | modify |  |  |  |  | X |  |  |
| ICS | 211 | Intro to Computer Science II | 200530 | modify |  | X |  |  |  |  |  |
| ICS | 212 | Program Structure | 200840 | modify |  |  |  |  |  |  | X |
| ICS | 241 | Discrete Math for Comp Sci II | 200730 | modify |  |  |  |  | X |  |  |
| ITS | 102 | Info Tech Tools for Business | 200530 | delete | X |  |  |  |  |  |  |
| ITS | 124 | Small Business Networking | 200730 | modify |  |  |  |  |  | X |  |
| ITS | 128 | Introduction to Problem Solving | 200730 | modify |  |  | X |  |  |  |  |
| ITS | 129 | Introduction to Databases | 200730 | modify |  |  |  | X |  |  |  |
| ITS | 144 | Business PC System Maintenance/Support and OS Installation | 200730 | modify |  |  |  |  |  | X |  |
| ITS | 148 | Visual Basic I | 200730 | modify |  |  | X |  |  |  |  |
| ITS | 149AD | Database Administration I | 200730 | modify |  |  |  | X |  |  |  |
| ITS | 155 | COBOL | 200530 | modify |  | X s |  |  |  |  |  |
| ITS | 220 | Topics in Networking Technologies | 200530 | delete |  | X |  |  |  |  |  |
| ITS | 220F | SmallBusWindowsServerAdmin | 200430 | delete |  | X |  |  |  |  |  |
| ITS | 220S | PC & Network Security | 200610 | delete |  | X |  |  |  |  |  |
| ITS | 221 | Topics in System Development | 200530 | delete |  | X |  |  |  |  |  |
| ITS | 221B | Systems Analysis | 200530 | delete |  | X |  |  |  |  |  |
| ITS | 221C | Java Applications Programming | 200530 | delete |  | X |  |  |  |  |  |
| ITS | 221D | C++ Applications Programming I | 200530 | delete |  | X |  |  |  |  |  |
| ITS | 221E | Web Devel-Active Server Pages | 200530 | delete |  | X |  |  |  |  |  |
| ITS | 221H | Java Apps Programming II | 200530 | delete |  | X |  |  |  |  |  |
| ITS | 221J | C++ Apps Programming II | 200530 | delete |  | X |  |  |  |  |  |
| ITS | 221K | Project Management | 200530 | delete |  | X |  |  |  |  |  |
| ITS | 221N | Dynamic HTML | 200530 | delete |  | X |  |  |  |  |  |
| ITS | 221O | Game Programming I | 200530 | delete |  | X |  |  |  |  |  |
| ITS | 221P | Game Programming | 200530 | delete |  | X |  |  |  |  |  |
| ITS | 221Q | AdvDatabase Programming withVB | 200310 | delete |  | X |  |  |  |  |  |
| ITS | 224 | Help Desk Support Practices | 200730 | modify |  |  |  |  |  | X |  |
| ITS | 227 | Web Site Development | 200730 | modify |  |  |  |  | X |  |  |
| ITS | 228 | Visual Basic II | 200710 | modify |  |  | X |  |  |  |  |
| ITS | 229AD | Database Administration II | 200730 | modify |  |  |  | X |  |  |  |
| ITS | 255 | Adv COBOL and Mainframe Apps | 200230 | modify |  | X |  |  |  |  |  |
| ITS | 293 | Information Technology Program Internship | 200730 | modify |  |  |  |  | X |  |  |

# Part VI. Survey results

## Student satisfaction

Although we did not conduct a “student satisfaction” survey other than the college’s End-of Semester Student Feedback Survey, we did conduct two separate “student interest” surveys to help ascertain student’s interest in pursuing a bachelor’s degree in Information Technology. Both surveys, conducted in 2007 and Fall 2009, showed great student interest, over 76%, in pursuing a Bachelor’s in Applied Science (BAS) degree, which would entail the creation of a third year advanced certificate at KapCC and an articulation agreement with the University of Hawaii at West Oahu.

## Occupational placement in jobs (for CTE programs)

2008-9 only: Goal—50% (Perkins); Actual—62.5%--See 2008-9 Annual Report Data for Information Technology.

## Employer satisfaction (for CTE programs)

(no data)

## Graduate/Leaver (for CTE programs)

(no data)

# Part VII. Analysis of Program

## Alignment with mission: Strengths and weaknesses based on analysis of data.

Currently, the Information Technology program’s operation is nearly in alignment with its mission. Although it has taken several years to get to this place, we are striving our very best to stay the course.

Our program’s three main missions are: 1) insuring that our graduates possess the necessary IT skills and knowledge to enter the workforce upon graduation, 2) preparing students and graduates to move seamlessly and successfully to UH Manoa, UH West Oahu, and other four year institutions, and 3) providing lifelong learning opportunities for Hawaii’s workforce that are designed to improve workforce skills and career progression and in a manner that is convenient to the incumbent workforce.

While our placement rate of 62.5% is clearly “healthy,” we believe we can do better. It will always be somewhat problematic to place our “C” students into upwardly mobile positions, it is still possible to place them into entry level jobs where they can learn and grow. Our “A” and “B” students have little trouble in placement; for example, we’ve placed graduates in C&C Honolulu, State of Hawaii, and US Federal positions regularly. We are healthy, but need to become healthier. We need to better help our struggling students become more proficient IT workers.

The SLO assessment will assist us in examining program and course outcomes. The assessments will be used to identify areas where we can increase proficiency in basic knowledge concepts, theory, and process and proficiency in application skills. This will lead to our students being more competitive in the marketplace.

For Mission #2, we have had some difficulty getting our AS IT students articulated with programs at four year institutions in Hawaii. We have made several overtures to UH Manoa’s Shidler College of Business’s Information Technology Management (ITM) Program. However, for various reasons, they have not accepted our students’ course work as we have always hoped for. At this time, our IT courses remain electives and do not fit into their requirements.

However, we have been making great strides in developing an articulation agreement with UH West Oahu. They have already articulated with Honolulu Community College’s CENT program and are eager to include another discipline into their BAS program. We received approval to plan an Advanced Professional Certificate (APC) from the Chief Academic Officers (CAO) of the UH System, and we have designed and proposed a streamlined third year APC in Information Technology that will “seamlessly” transfer to UHWO. The proposals are now in the KapCC curriculum committee, awaiting approval. However, all signs look extremely good.

For Mission #3, we are always updating our curriculum to reflect upgrades and trends in the industry. All courses teach the very latest in software tools from .Net Framework 3.5 to Oracle 11i. We are constantly keeping the pulse of industry and provide the most current applications that our budgets allow. In addition, we have created short tech specific certificates that attract people already in the workforce to come back and get a skills upgrade. In fact, we have many working IT professionals especially in the ITS 148, VB I course. We have certificates of completion in: programming, database administration, and help desk support services. We have also striven to schedule these courses in such a way to allow completion of the certificates in two semesters whenever possible.

## Evidence of Quality

There are several factors that would indicate a quality program: faculty with higher education credentials—minimum bachelor’s degree, most with master’s degree, and two with doctorates, many also with professional industry certifications; low turnaround of faculty; currency of program technologies; expansion to BAS; and even IT graduates GPA.

We have had a steady set of both full time and part time faculty teaching the various IT courses. This is a very positive reflection of the stability of the program and confidence in it of its faculty. Programs that are not doing well typically experience a high turn around rate with faculty leaving for more secure, comfortable pastures. We’ve experienced little of that in our program. This demonstrates a quality program.

As stated earlier, we have made a very concerted effort to maintain technological currency in our program. Both software and hardware are kept up to provide students with learning opportunities using the products they would most likely find in the workplace. This, too, demonstrates a quality program.

As technology changes and grows, so do the demands for increased training. This additional training almost always rests on the foundation of earlier, legacy technologies. Ultimately, the curriculum grows and we are forced to create a new pathway for IT workers who want to continue their studies. To this end, we have worked to develop an Advanced Professional Certificate that, along with our AS in IT, will transfer wholly to UHWO into their BAS with a Concentration in IT Program. This expansion also reflects a quality program, a program that is responsive to community and industry needs and grows at an appropriate rate.

Our IT graduates have been steadily improving, I believe, as a result of our tutoring/mentoring efforts. In the 2006-7 academic year, IT graduates averaged a 2.939 GPR. In 2007-8, they averaged a 3.107 GPR. Last year, 2008-9, they averaged 3.463.This is a steady improvement, as a result of, I believe, the extra learning opportunities we have provided our students via student tutors/mentors.

## Evidence of Student Learning

We are at just the beginning of our Student Learning Outcomes Assessment schedule. The program has written six SLOs that we have set into a three year schedule of assessment, commencing this past Spring 2009 (See Part IV above). Thus far we have only assessed one program SLO: ***Design and develop software solutions for contemporary business environments by employing appropriate problem solving strategies.***

The Rubric was designed and developed by Prof. Sandra Lai, who, then, trained the other IT faculty on its use. Other IT faculty (S. Singer, A. Seita, and K. Yokota) then applied the rubric to 9 anonymous student artifacts from a near final project in ITS 228 in May 2009. As this SLO has been further detailed into four components, we were able to examine each component: a) analysis, solution design—students consistently met this part of SLO. b) creation of appropriate user interface—students consistently exceeded SLO. c) connection of front-end to backend database—students consistently met SLO. and d) appropriate program documentation—students consistently did NOT meet SLO, and course changes were made as appropriate.

The next SLO assessment will be completed in Fall 2009 on SLO #4, ***Analyze common business functions and identify, design, and develop appropriate information technology solutions (in web, desktop, network, and/or database applications).***

## Resource Sufficiency

Although we have just recently hired an additional IT faculty, if our proposed 3rd year program gains in popularity and students opt for the UHWO BAS transfer, we may see an increase in enrollment that may require additional faculty positions “down the road.”

In any case, current faculty need to constantly keep up with trends in technology. To that end, the college needs to support these efforts through earmarked professional development funding for faculty to learn the latest technologies. In addition, equipment and software resources need to be maintained. Industry average is a 3 year cycle for both hardware and software. If we are to provide training for 21st Century IT workers, we need to train our students with 21st Century IT products. Nothing less will suffice. To this end, we are interested in learning how we might attach a “supply fee” or “technology fee” to courses to help offset the College’s expense in funding these expenditures over the long haul.

Although there has been a marked surge in distance education courses both offered and taken, the IT program has been hesitant to jump head first into this arena for fear of loss of quality in student learning. The intrinsic difficulty in learning much of the highly technical skill set of our courses plus the current limitations of distance education delivery have acted as huge “red flags” for our program distance education development. Advances in instructional delivery and support need to be embraced and supported by both the College and Program for the IT Program to move confidently into this area. We welcome and look forward to the time when these resources are made available.

If we are to support our current students and hopefully grow the program, we need to be sure to provide students with access to the necessary resources to be successful. These resources include, but are not limited to: a comfortable learning environment both in the classroom and in an “open learning” space; access to faculty and mentors for help and clarification; access to community resources for cultural foundation and growth.

## Recommendations for improving outcomes

In response to the one area in the one SLO that we have assessed: Documentation within the program will be taught more and emphasized.

Other recommendations are to continue our cycle of Program SLO assessment and modification of curriculum based on the results. In addition, we generally plan to stay abreast of current technologies and expand the program.

# Part VIII. Action Plan

We are on the cusp of a major growth spurt in IT. Industry indicators point to an increase in IT positions from database administrators to systems analysts. The Obama administration has committed funds to the IT industry, medical records, security, and so on, as well as to community colleges.

The KapCC IT program will:

* Continue its curricular expansion, IT Advanced Professional Certificate (APC) to articulated Bachelor’s of Applied Science (BAS) with a Concentration in Information Technology at the University of Hawaii at West Oahu.

This aligns with: Goal 3 and selected Objectives (3 and 4) of the Strategic Plan: **Goal 3 To Build A Learning, Partnering, and Service Network for Workforce and Economic Development**

1. Develop new degree programs (Associate, 3 year, and Baccalaureate) to meet the changing educational needs of our communities, with initial emphasis on a four year degree in Culinary and Hospitality Education.
2. Partner with other UH campuses to plan and develop four year degree programs, with initial emphasis on the health sciences and technology.

From the Action Strategies of Goal 3 detailed further in the document (page 18 onwards):

Objective 3:

* Develop new degrees based on relevant, exemplary models at other institutions.

Objective 4:

* Identify demand for four-year programs in health and technology.
* Establish a working relationship with UHM, UHWO, and UH Hilo to explore 2+2 degree partnerships.
* Continue to work with the College and specifically other programs within the Business Education Department in renovating our Kopiko Computing Center via the Title III Grant the Department has received is just starting on, as well as increase/improve the Kopiko Building classroom network..
* Continue to assess the SLO’s we have set for the program and make reasonable and timely adjustments to our curriculum and the assessment as a result of the analysis of the assessment.
* Continue our recruiting efforts through our service course offerings (ICS 100 and ICS 101) as well as through classroom banners, posters, and instructor efforts.
* Continue our retention efforts through instructional innovation and student support services, such as: tutoring, small group projects, and access to online instructional materials.
* Continue our efforts to stay abreast of current IT trends and technology by networking with our colleagues both in academia and industry.
* Explore new international business area of study.  (KCC Strategic Plan Goal 4, Objective 3, Action Strategy #2)

This aligns with KCC Strategic Plan Goal 4 – To Champion diversity in Local, Regional and Global Learning, Objective 3: Strengthen KCC as a leading institution in developing Intercultural and International curricula and programs, with an emphasis on Hawai`i as a bridge between Asia, the Pacific Islands, the Americas, and the world.

# Part IX. Budget Implications

(None)