KAPIʻOLANI COMMUNITY COLLEGE

COMPREHENSIVE INSTRUCTIONAL PROGRAM REVIEW

Information Technology - Associate in Science Degree

Assessment Period: 2013-2016

College Mission Statement

Kapi'olani Community College

Mission Statement 2008-2015

- is a gathering place where Hawaiʻi's cultural diversity is celebrated, championed and reflected in the curriculum, pedagogy, support services and activities, students, faculty, staff, and administration.
- is a nurturing workplace of choice for strong and caring faculty, staff, and administrators committed to effective communication and shared vision, values, mission, and responsibilities.
- strives to provide the highest quality education and training for Hawaiʻi'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 associate and baccalaureate requirements and personal enrichment goals by offering high quality liberal arts and other articulated transfer programs.
- delivers high quality 21st century career programs that prepare students for rigorous employment standards and to meet critical workforce immediate and long-term needs and contribute to a diversifying state economy.
- prepares students for lives of ethical and social responsibility by offering opportunities for increased service-learning and community engagement.
- leads locally, regionally, nationally and internationally in the development of integrated international education, enriched through global collaborations.
- uses human, physical, technological and financial resources effectively and efficiently to achieve ambitious educational goals and generate a solid return on the public's investment for a sustainable future.
- builds partnerships within the University and with other educational, governmental, business, and non-profit organizations to support improved lifelong learning.
- uses ongoing cycles of planning, best practice research, budgeting, implementation, assessment, and evaluation to drive continuous program and institutional improvement.

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 Hawai`i'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, expanding the program 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 Description

History

The Information Technology program was established in 1966 as part of the Business Education Division at Kapi'olani Community College (KapCC). 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 was 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 Applications (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 the University of Hawaii at West Oahu (UHWO), we started the process to develop our own independent

agreement. To accomplish that end, we proposed an Advanced Professional Certificate (APC) in IT at KapCC composed of six 300-level IT courses that would cleanly and wholly transfer to UHWO. In addition, we worked with the other AS and transfer programs of the Business, Legal and Technology Education Department (BLT), formerly the Business Education Department, on a Title III Renovation Grant that would "makeover" our Computer Lab into a Business Education Collaboration Center.

In Fall 2010, we began our Advanced Professional Certificate by offering two 300-level ITS courses, ITS 327 and ITS 324. While we wanted to offer three ITS courses per semester at the 300 level to pace students through a one year completion of the certificate, because of various resource constraints we were only able to offer two courses in the first semester. However, in Spring 2011, we ramped up to speed and began offering three APC courses. All courses transferred to the UHWO Bachelor of Applied Science (BAS) with a Concentration in Information Technology. Enrollments in all courses were extremely high.

During the Summer of 2011, we moved out of our Kopiko classrooms and lab and into temporary quarters in the Mamane building to allow for the renovations of the Kopiko facilities.

In Fall 2011, we continued our stay in the temporary Mamane quarters. We tried to "make do" with a very inadequate, undesirable situation. Meanwhile, commencement of renovations on our Kopiko facilities was postponed for a variety of logistical, fiscal reasons. Still, we continued our AS IT courses, our APC IT courses, our pre-ICS courses, and our service courses. In addition, we hired a new full-time faculty to replace a recent retiree to teach our programming line of courses.

Though the campus overall experienced slight declines in enrollment, the IT Program courses experienced a modest increase in enrollment. Our 300-level courses, offered in the early evening to accommodate an already employed workforce as well as current students, continued their strong enrollments. As part of one of our 300-level courses, we began a collaboration with the Waikiki Aquarium to create a series of water-based keiki games for use on mobile devices. This coincided with a Perkins Left Over Grant of $15,000 we received to purchase 32 Android Tablets, which were used in the Aquarium project. In addition, we received a regular Perkins Grant of over $180,000 to purchase equipment and software to setup and use a Virtual Machine (VM) Server for classroom use and department support.

In Fall 2012, work began in earnest on the Kopiko renovations. We also hired our latest ICS/IT faculty from a vacancy from several years back. Our enrollments for all our courses—AS, APC, ICS, service—were up. Students in one of our 300-level security classes participated and placed nationally in the 2012 National Cyber Security Contest.

All programs emphasize the use of computers to support business and to develop business applications. As of Fall 2012, the program has six 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 Kapi`olani Community College 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

- 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)
- Michael Paulding, M.S. Instructor, probationary, 2015 (Teaches both ITS Programming courses and BUS Calculus classes)
- David Nickles, Ph.D., Instructor, probationary, 2016 (Teaches both ITS Programming and Web Applications, as well as ICS Programming and Discrete Math courses)

Lecturers

- Dale Nakasone
- Philip Lavoie
- Steven Takaki
- David Stevens
- Paul Poteete
- Robert Troyer
- Tom Moore
- Marie Gamez

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 BLT programs (Accounting, Marketing, and Paralegal)
- Four instructor workstations with projection capabilities, shared with other BLT programs
- One open lab, shared with other BLT 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 BLT programs
- Two counselors, shared with other BLT programs
- One lab manager, shared with other BLT programs
- One secretary, shared with other BLT programs
- One half-time clerical assistant, shared with other BLT programs

- Two to six student assistants to staff the open lab and assist the secretary, shared with other BLT programs.
- Special funding for lab renovations, shared with other BLT programs

Articulation Agreements

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

Community Connections, Advisory Committees, Internships, Coops

KapCC IT Advisory Board 2012		
First Name	**Last Name**	**Company Name**
Gordon	Bruce	C&C Honolulu
Debra	Gagne	State of Hawaii
James	Kadota	HMSA
Jeff	Gionet	Starwood Hotels, Director of Technology
Randolph	Batoon	Partners In Development Foundation
Chris	Radovich	First Insurance Company, ITS Operations Manager
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
Colbert	Seto	Hawaii Pacific Health, IT Dept.
David	Pai	UHWO BAS Coordinator
Brandon	Onishi	Hawaiian Telephone, Network Planning

Internships

- American Savings Bank
- Kaiser Permanente,
- University of Hawaii ROTC
- UH Foundation
- KCC - CELTT
- Red Cross
- Moanalua Middle School
- Epower Sports LLC
- Hawaiian Mission Houses
- Sheraton Hawaii
- Geek Squad
- Palolo Learning Center
- University of Hawaii - West Oahu

- Office of Hawaiian Affairs
- Cam Security
- Kaimuki High School
- Kuakini Health Systems
- Oceanic Time Warner Cable
- Clear Channel Radio
- Computer Doctor Hawaii
- Technology with K LLP.
- Department of the Navy
- Hawaii National Guard

DOE Connections

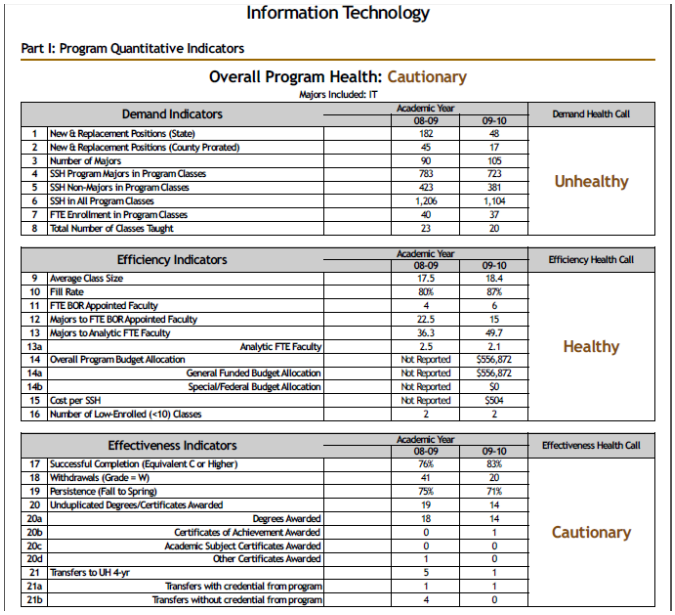
Standard Kapi`olani Community College connections.

Distance Delivered/Off-Campus Programs, if applicable

ICS 100, Computing Literacy and Applications, 3-4 sections each semester
ICS 101, Digital Tools for the Information World, 3-4 sections each semester
ITS 129, Introduction to Databases, 1 section each semester

Part III. Quantitative Indicators for Program Review

2010



Information Technology

Part I: Program Quantitative Indicators

Overall Program Health: Cautionary

Majors Included: IT

	Demand Indicators		Academic Year 08-09	Academic Year 09-10	Demand Health Call
1	New & Replacement Positions (State)		182	48	Unhealthy
2	New & Replacement Positions (County Prorated)		45	17	
3	Number of Majors		90	105	
4	SSH Program Majors in Program Classes		783	723	
5	SSH Non-Majors in Program Classes		423	381	
6	SSH in All Program Classes		1,206	1,104	
7	FTE Enrollment in Program Classes		40	37	
8	Total Number of Classes Taught		23	20	

	Efficiency Indicators		Academic Year 08-09	Academic Year 09-10	Efficiency Health Call
9	Average Class Size		17.5	18.4	Healthy
10	Fill Rate		80%	87%	
11	FTE BOR Appointed Faculty		4	6	
12	Majors to FTE BOR Appointed Faculty		22.5	15	
13	Majors to Analytic FTE Faculty		36.3	49.7	
13a	Analytic FTE Faculty		2.5	2.1	
14	Overall Program Budget Allocation		Not Reported	$556,872	
14a	General Funded Budget Allocation		Not Reported	$556,872	
14b	Special/Federal Budget Allocation		Not Reported	$0	
15	Cost per SSH		Not Reported	$504	
16	Number of Low-Enrolled (<10) Classes		2	2	

	Effectiveness Indicators		Academic Year 08-09	Academic Year 09-10	Effectiveness Health Call
17	Successful Completion (Equivalent C or Higher)		76%	83%	Cautionary
18	Withdrawals (Grade = W)		41	20	
19	Persistence (Fall to Spring)		75%	71%	
20	Unduplicated Degrees/Certificates Awarded		19	14	
20a	Degrees Awarded		18	14	
20b	Certificates of Achievement Awarded		0	1	
20c	Academic Subject Certificates Awarded		0	0	
20d	Other Certificates Awarded		1	0	
21	Transfers to UH 4-yr		5	1	
21a	Transfers with credential from program		1	1	
21b	Transfers without credential from program		4	0	

	Distance Education: Completely On-line Classes	Academic Year 08-09	09-10
22	Number of Distance Education Classes Taught	0	0
23	Enrollment Distance Education Classes	0	0
24	Fill Rate	0%	0%
25	Successful Completion (Equivalent C or Higher)	0%	0%
26	Withdrawals (Grade = W)	0	0
27	Persistence (Fall to Spring Not Limited to Distance Education)	0%	0%

	Perkins IV Core Indicators 2008-2009	Goal	Actual	Met
28	1P1 Technical Skills Attainment	90.00	83.33	Not Met
29	2P1 Completion	44.00	53.33	Met
30	3P1 Student Retention or Transfer	55.00	86.27	Met
31	4P1 Student Placement	50.00	91.67	Met
32	5P1 Nontraditional Participation	NA	NA	NA
33	5P2 Nontraditional Completion	NA	NA	NA

2011

Part I. Quantitative Indicators

Overall Program Health: Healthy

Majors Included: DBA,PROG,IT

	Demand Indicators	Program Year 08-09	09-10	10-11	Demand Health Call
1	New & Replacement Positions (State)	182	48	45	
2	New & Replacement Positions (County Prorated)	45	17	39	
3	Number of Majors	90	105	138	
4	SSH Program Majors in Program Classes	783	723	1,374	Healthy
5	SSH Non-Majors in Program Classes	423	381	3,414	
6	SSH in All Program Classes	1,206	1,104	4,788	
7	FTE Enrollment in Program Classes	40	37	160	
8	Total Number of Classes Taught	23	20	78	

	Efficiency Indicators	Program Year 08-09	09-10	10-11	Efficiency Health Call
9	Average Class Size	17.5	18.4	20.5	
10	Fill Rate	80%	87%	93%	
11	FTE BOR Appointed Faculty	4	6	5	
12	Majors to FTE BOR Appointed Faculty	22.5	15	27.6	
13	Majors to Analytic FTE Faculty	36.3	49.7	16.2	
13a	Analytic FTE Faculty	2.5	2.1	8.5	Healthy
14	Overall Program Budget Allocation	Not Reported	$556,872	$566,763	
14a	General Funded Budget Allocation	Not Reported	$556,872	$566,763	
14b	Special/Federal Budget Allocation	Not Reported	$0	$0	
15	Cost per SSH	Not Reported	$504	$118	
16	Number of Low-Enrolled (<10) Classes	2	2	3	

	Effectiveness Indicators	Program Year 08-09	09-10	10-11	Effectiveness Health Call
17	Successful Completion (Equivalent C or Higher)	76%	83%	72%	
18	Withdrawals (Grade = W)	41	20	168	
19	Persistence (Fall to Spring)	75%	71%	76%	
20	Unduplicated Degrees/Certificates Awarded	40	14	41	
20a	Degrees Awarded	15	14	16	
20b	Certificates of Achievement Awarded	1	1	2	Healthy
20c	Academic Subject Certificates Awarded	0	0	0	
20d	Other Certificates Awarded	43	0	60	
21	Transfers to UH 4-yr	5	1	7	
21a	Transfers with credential from program	1	1	3	
21b	Transfers without credential from program	4	0	4	

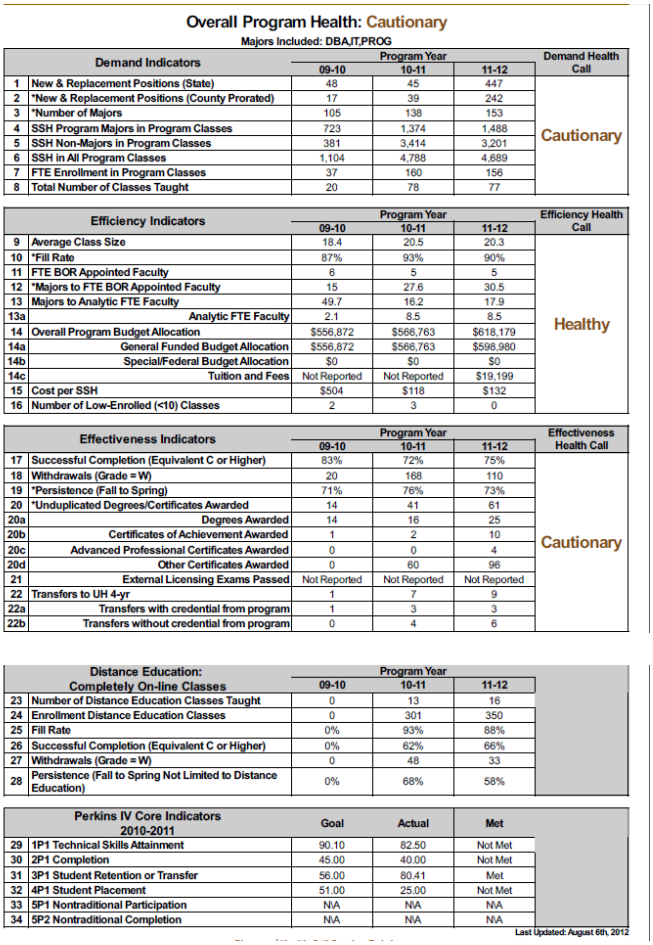
	Distance Education: Completely On-line Classes	Program Year 08-09	09-10	10-11
22	Number of Distance Education Classes Taught	0	0	13
23	Enrollment Distance Education Classes	0	0	301
24	Fill Rate	0%	0%	93%
25	Successful Completion (Equivalent C or Higher)	0%	0%	62%
26	Withdrawals (Grade = W)	0	0	48
27	Persistence (Fall to Spring Not Limited to Distance Education)	0%	0%	68%

	Perkins IV Core Indicators 2009-2010	Goal	Actual	Met
28	1P1 Technical Skills Attainment	90.05	100.00	Met
29	2P1 Completion	44.50	58.33	Met
30	3P1 Student Retention or Transfer	55.50	93.75	Met
31	4P1 Student Placement	50.50	53.33	Met
32	5P1 Nontraditional Participation	NA	NA	NA
33	5P2 Nontraditional Completion	NA	NA	NA

Last Updated: November 9th, 2011

Glossary | Health Call Scoring Rubric

2012



Overall Program Health: Cautionary

Majors Included: DBAJT,PROG

	Demand Indicators	Program Year 09-10	10-11	11-12	Demand Health Call
1	New & Replacement Positions (State)	48	45	447	Cautionary
2	*New & Replacement Positions (County Prorated)	17	39	242	
3	*Number of Majors	105	138	153	
4	SSH Program Majors in Program Classes	723	1,374	1,488	
5	SSH Non-Majors in Program Classes	381	3,414	3,201	
6	SSH in All Program Classes	1,104	4,788	4,689	
7	FTE Enrollment in Program Classes	37	160	156	
8	Total Number of Classes Taught	20	78	77	

	Efficiency Indicators	Program Year 09-10	10-11	11-12	Efficiency Health Call
9	Average Class Size	18.4	20.5	20.3	Healthy
10	*Fill Rate	87%	93%	90%	
11	FTE BOR Appointed Faculty	6	5	5	
12	*Majors to FTE BOR Appointed Faculty	15	27.6	30.5	
13	Majors to Analytic FTE Faculty	49.7	16.2	17.9	
13a	Analytic FTE Faculty	2.1	8.5	8.5	
14	Overall Program Budget Allocation	$556,872	$566,763	$618,179	
14a	General Funded Budget Allocation	$556,872	$566,763	$598,980	
14b	Special/Federal Budget Allocation	$0	$0	$0	
14c	Tuition and Fees	Not Reported	Not Reported	$19,199	
15	Cost per SSH	$504	$118	$132	
16	Number of Low-Enrolled (<10) Classes	2	3	0	

	Effectiveness Indicators	Program Year 09-10	10-11	11-12	Effectiveness Health Call
17	Successful Completion (Equivalent C or Higher)	83%	72%	75%	Cautionary
18	Withdrawals (Grade = W)	20	168	110	
19	*Persistence (Fall to Spring)	71%	76%	73%	
20	*Unduplicated Degrees/Certificates Awarded	14	41	61	
20a	Degrees Awarded	14	16	25	
20b	Certificates of Achievement Awarded	1	2	10	
20c	Advanced Professional Certificates Awarded	0	0	4	
20d	Other Certificates Awarded	0	60	96	
21	External Licensing Exams Passed	Not Reported	Not Reported	Not Reported	
22	Transfers to UH 4-yr	1	7	9	
22a	Transfers with credential from program	1	3	3	
22b	Transfers without credential from program	0	4	6	

	Distance Education: Completely On-line Classes	Program Year 09-10	10-11	11-12
23	Number of Distance Education Classes Taught	0	13	16
24	Enrollment Distance Education Classes	0	301	350
25	Fill Rate	0%	93%	88%
26	Successful Completion (Equivalent C or Higher)	0%	62%	66%
27	Withdrawals (Grade = W)	0	48	33
28	Persistence (Fall to Spring Not Limited to Distance Education)	0%	68%	58%

	Perkins IV Core Indicators 2010-2011	Goal	Actual	Met
29	1P1 Technical Skills Attainment	90.10	82.50	Not Met
30	2P1 Completion	45.00	40.00	Not Met
31	3P1 Student Retention or Transfer	56.00	80.41	Met
32	4P1 Student Placement	51.00	25.00	Not Met
33	5P1 Nontraditional Participation	NA	NA	NA
34	5P2 Nontraditional Completion	NA	NA	NA

Last Updated: August 6th, 2012

Part IV. 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 V. 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 separate “student interest” surveys to help ascertain

student's interest in the scheduling of 300-level courses in Information Technology. Surveys, conducted in 2010, showed great student interest, over 77% were interested in taking 3 or more APC classes each semester, which also counted in pursuing a Bachelor's in Applied Science (BAS) degree. They also showed that cost was a major factor in not taking summer classes towards their degree. Most students preferred to take classes either in the evening, online, or via hybrid delivery. The surveys also showed most IT majors were more interested in the programming line (than the networking or database lines) and had the BAS as their educational goal.

Occupational placement in jobs (for CTE programs)

2010—(uses data from 2008-09) While our goal was 50% placement, we were able to place 91.67% of our students in jobs.

2011—(uses data from 2009-10) While our goal was 50% placement, we placed 53.33%, thereby continuing our trend of more than meeting our placement goals.

2012—(used data from 2010-11) While our goal was 51% placement, we were only able to place 25%. Although we are unsure of the exact reasons for this low placement, two explanations readily come to mind: 1) the economic downturn finally reached the IT sector. 2) the vast majority of our IT AS students were continuing on towards their APC in IT and BAS in IT.

Employer satisfaction (for CTE programs)

(no data)

Graduate/Leaver (for CTE programs)

(no data)

Part VI. Analysis of the Program

1. Alignment with mission

We are in perfect alignment with both the program and college's mission. Specifically, we are in alignment with the following college mission statements:

- prepares students to meet rigorous associate and baccalaureate requirements and personal enrichment goals by offering high quality liberal arts and other articulated transfer programs.

(We have 44 students who have moved from KapCC's IT Program to UHWO's BAS in IT.)

- delivers high quality 21st century career programs that prepare students for rigorous employment standards and to meet critical workforce immediate and long-term needs and contribute to a diversifying state economy.

(Our students are sought after in the local IT community. Some students are even hired before graduation (much to our consternation as we would like them to graduate, too).

- prepares students for lives of ethical and social responsibility by offering opportunities for increased service-learning and community engagement.

(We offer service learning opportunities in several of our IT courses. In fact, our internship course--ITS 293 requires that students intern in an IT capacity somewhere in the community. This requires that both students and faculty remain connected to the community. This, along with our IT advisory board, assures substantial community involvement. If things work out as expected, once our renovated lab becomes available, we will be able to expand these opportunities to allow additional community interaction.)

- uses human, physical, technological and financial resources effectively and efficiently to achieve ambitious educational goals and generate a solid return on the public's investment for a sustainable future.

(We have both a robust AS and APC program with over 140 majors using only 6 full-time faculty, 6 part-time faculty, 4 networked class/labs and 1 open lab. We do this in collaboration with our other BLT programs and do so under budget.)

- builds partnerships within the University and with other educational, governmental, business, and non-profit organizations to support improved lifelong learning.

(We have a strong articulation agreement with UHWO and have nonprofit organizations, many local small to large businesses and government organizations connected to the program via our IT Advisory Board and IT Internship Hosting programs.)

- uses ongoing cycles of planning, best practice research, budgeting, implementation, assessment, and evaluation to drive continuous program and institutional improvement.

(We are 100% compliant in assessing all of our Program Learning Outcomes as well as our Course Learning Reports. We have revised over 80% of our curriculum within the past 5 years and are working on the remaining 20%).

In addition, we are full alignment with our own mission:

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, *(our graduates get full time IT positions in both the public and private sectors. We receive very favorable comments from their employers tell us our students are well prepared for their work.)*
- preparing students and graduates to move seamlessly and successfully to UH Manoa, UH West Oahu, and other four year institutions, *and (According to David Pai, BAS Coordinator at UHWO and Joanne Itano of UHCC VP's Office, we have 44 students who have moved from KapCC to UHWO.)*
- 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. *(Our APC is designed and offered at a time to allow for current IT workforce members to upgrade their skills by taking 1-3 advanced level IT courses.)*

2. Current Situation

Internal

Demand

Demand Indicators for the Information Technology (IT) Program are cautionary. This is in direct response to one factor: The numbers of New and Replacement Positions for both the county and state have increased dramatically as a result of UHCC changing the coding system it uses to identify and count positions in vocational fields. The basis for estimating demand changed from Standard Occupational Classification (SOC) code of 11-3021, (Computer and Information Systems Managers) to a CIP (Classification of Instructional Programs) code of 11.0103, (Information Technology), which is a much more general category. Changing to a more general occupational code significantly increases the size of the occupational field. This change makes program analysis and year-to-year comparisons difficult until the program can absorb the impact of the change. The program has grown dramatically, with 2011-12 enrollment up 45.7% over 2009-10; however this dramatic increase in enrollment is overshadowed in this analysis by the tenfold increase in new and replacement jobs caused by the change in codes.

Efficiency

The program is rated “Healthy” in terms of efficiency. The program's classes enjoy a 90% fill rate, showing that it has been successful in matching the number of courses and sections offered to the true demand for those classes. Counselors and faculty have worked cooperatively to both recruit students and match them with appropriate courses. The reported FTE faculty (5) includes four who teach ITS and one who teaches only ICS courses. If only the IT faculty were counted the ratio would be a little higher than that reflected in the data.

Effectiveness

Effectiveness indicators, while mixed, are certainly suggested areas in which the program can improve. The Successful Completion rate of 75% reflects an increase from the year before; however, some students are still not adequately prepared for the rigors of the IT field. In response, the program will continue efforts to provide tutoring services. The decrease in withdrawals is most likely a reflection of the effectiveness of our tutoring services. ICS 100 and ICS 101 are now all included in these numbers though not all students in these courses will be IT majors; and these courses have historically been labeled as "Gatekeeper" courses as success rates for these students often fall

below the 70% mark. However, the number of certificates, degrees awarded, and transfers have improved nicely, reflecting increased enrollment, increased number of certificates offered (new Advanced Professional Certificate), and new pathways for transfer (UHWO articulation). Our first effectiveness indicator regarding the ratio of degrees and certificates to number of majors is 40%, double that needed to be considered Healthy. The second indicator, the ratio of degrees and certificates to positions is at "0.25", which is clearly "Cautionary." However, this too is in response to the change from SOC to CIP codes that dramatically increased the number of positions counted. The third indicator on persistence is 73%, 2% less than that needed to be considered healthy, and is an area that we will address through continued tutoring services.

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 made great strides in developing an articulation agreement with UH West Oahu. They already articulated with Honolulu Community College's CENT program and were eager to include another discipline into their BAS program. We got approval for our Advanced Professional Certificate (APC) from the Chief Academic Officers (CAO) of the UH System, and we have designed and articulated this third year APC in Information Technology that "seamlessly" transfers to UHWO. In addition, we have started a second transfer line with UHWO that would allow our students to pursue a BAS in Information Assurance. This is part of a system wide set of collaborations between the UH System and PACOM.

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 4.5 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, Visual Studio 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 as well as UHWO's new

BAS in Information Assurance. 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. Typically we have two tutors dedicated to working with IT students. During the past three years we paid tutors: 2009-10: 539 hours; 2010—2011: 444 hours; and 2011-2012: 148 hours. During the past year we had 21 students, 20 of which were IT majors, receive tutoring services. Obviously, as our tutoring budget has been reduced, so has the number of students we've been able to service.

Tutored IT Students: PASS/FAIL Data and Analysis

1. Figure 1: Pass/fail rates: AY 2009-2010 versus AY 2010-2011 tutored IT students

	AY 2010-2011 Tutored IT Students (22)	**AY 2011-2012** Tutored IT Students (21)
Passing Grades	**82%** (18)	**85%** (18)
Failing/W/IF Grades	**18%** (4)	**15%** (3)

2. Figure 2: Breakdown of pass/fail rates: AY 2010-2011 versus AY 2011-2012 tutored IT students

Grade	**AY 2010-2011** Tutored IT Students (22)	**AY 2010- 2011** Tutored IT Students Pass/Fail Rates (22)	**AY 2011-2012** Tutored IT Students (21)	**AY 2011-2012** Tutored IT Students Pass/Fail Rates (21)
A	27.3% (6)	**82%** (18)	23.8% (5)	**85.8%** (18)
B	27.3% (6)		28.6% (6)	

C	27.3% (6)	*Passed*	33.3% (7)	*Passed*
D	0% (0)		4.8% (1)	
F	18.1% (4)	**18%** (4)	4.8% (1)	**14.2%** (3)
W	0% (0)	*Failed,*	4.8% (1)	*Failed,*
IF	0% (0)	*withdrew,*	0% (0)	*withdrew,*
		incomplete F		*incomplete F*

Tutored IT Students: PERSISTENCE Data and Analysis

3. Figure 3: Persistence rates: AY 2009-2010 versus AY 2010-2011 tutored IT students

	AY 2010-2011 Tutored IT Students (22)	**AY 2011-2012** Tutored IT Students (21)
Persisted to IT courses in subsequent semester; graduated; or completed CCID requirements and returned to home country	**91%** (20)	**85.8%** (18)
Did not persist	**9%** (2)	**14.2%** (3)

4. Figure 4: Breakdown of persistence rates: AY 2009-2010 versus AY 2010-2011 tutored IT students

	AY 2010- 2011 Tutored IT Students (22)	**AY 2010–2011** Tutored IT Students Persistence Rates (22)	**AY 2011- 2012** Tutored IT Students (21)	**AY 2011–2012** Tutored IT Students Persistence Rates (21)
Number of Students:				

Persisted to IT courses in subsequent semester	**86%** (19)	**91%** (20) *Persisted, graduated, completed CCID*	**76.2%** (16)	**85.8%** (18) *Persisted, graduated, completed CCID*
Graduated	5% (1)		9.5% (2)	
Completed CCID requirements and returned to home country	0.0% (0)		0.0% (0)	
Did not persist	**9%** (2)	**9%** (2) *Did not persist*	**14.3%** (3)	**14.2%** (3) *Did not persist*

There was a slight 5% decrease in persistence rates from AY 2010–2011 (91%) to AY 2011–2012 (85.8%). That being said, the deviation between the two figures is normal and a persistence rate of nearly 86% is still a notable figure, considering that many of the students seeking tutoring services are often struggling with the coursework. Although our tutors strive to assist their peers through ITS courses with 100% persistence rates, an outcome of 86% persistence is considered a healthy overall figure.

It should be noted that some of the contributing factors to such high persistence rates are due to the tutors' dedication to provide a warm welcome to all students, their inclusion in the classroom setting and a hospitable computer lab environment, where one of the tutors also served as a lab monitor. In addition, many of the tutoring sessions were brief (15-30 minutes) and repeated, which suggests that the tutors were approachable and answered questions efficiently.

In AY 2011-2012, there was one student who received tutoring services but failed the course, and did not persist in the IT program. However, this particular student only sought tutoring assistance on one occasion. It is strongly recommended that ITS faculty encourage early and frequent visitation of the tutors, especially for students who are academically at risk.

Evidence of Student Learning

Resource Sufficiency

Although we have just recently hired additional IT faculty, our 3rd year program has gained in popularity and students opt for the UHWO BAS transfer option, we are seeing 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.

Perkins

Perkins IV Core Indicators

Year/Core Indicator	2008-2009 (Goal/Actual)	2009-2010	2010-2011	Met vs Not Met (M/NM)
1P1 Technical Skills Attainment	90.00/83.33	90.05/100	90.10/82.50	NM/M/NM
2P1 Completion	44.00/53.33	44.50/58.33	45.00/40.00	M/M/NM
3P1 Student Retention or Transfer	55.00/86.27	55.50/93.75	56.00/86.41	M/M/M
4P1 Student Placement	50.00/91.67	50.50/53.33	51.00/25.00	M/M/NM

Using 2008-2009 data, we met all of our Perkins IV Core Indicators except 1P1 Technical Skills Attainment, where we fell shy of our goal of 90% of our students earning a "C" or higher with 83%. We are firmly committed to improving student success without sacrificing program integrity. We have implemented a tutoring service that has been warmly received and is showing great promise. In addition, we are constantly looking for innovative strategies to help students succeed in their courses. The program did not meet three of the four Perkins goals. Although 1P1 and 2P1 goals were not met, these are well within reach and will be addressed by action plans. Technical skills attainment and completion rates are high for a technical program, but just not enough to reach goals. Student

placement remains an area for continued focus and serious improvement. Having someone either within the college or department who focused on placement would help immensely.

Using 2009-2010 data, Perkins Indicators are excellent. The program has met and exceeded every goal. Student placement, however, remains an area for continued focus and improvement.

Using 2010-2011 data, the program did not meet three of the four Perkins goals. Although 1P1 and 2P1 goals were not met, these are well within reach and will be addressed by action plans. Technical skills attainment and completion rates are high for a technical program, but just not enough to reach goals. Student placement remains an area for continued focus and serious improvement. Having someone either within the college or department who focused on placement would help immensely.

External

The changes in the local, national, and international economies continue to play havoc with community college program enrollments. When the economy was down and sputtering, 2010, enrollments across the college were up. The IT Program was well positioned to take advantage of this surge by beginning a new APC program and signing an articulation agreement with UHWO. Labor force trends in IT continue to increase for IT workers with baccalaureate degrees. IT also continues to be a driving force in the economy in general. The IT students in general are well paid compared to most CTE graduates. It is a high skill, high demand, high pay field.

The articulation agreement with UHWO also works well for some of our other CTE programs. UHWO has started offering a couple of upper division BAS courses on our campus that allow KapCC students to move forward in their educational goals beyond an AS but still stay on the campus they love and are familiar with. Kapolei, where UHWO was recently built, is a growing second city on ʻOahu. By partnering with them, we are also attracting young adults in this area to consider coming to KapCC initially for our IT technology courses and then finish at a campus near their home

3. Assessment Results for Program SLOs

Program 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
PLO #1	Spring 2009
PLO #2	Spring 2010
PLO #3	Spring 2011
PLO #4	Fall 2009
PLO #5	Fall 2011
PLO #6	Spring 2012

Changes made as a result of findings

In Spring 2009 the IT faculty designed and implemented a rubric to assess SLO #1," Design and develop software solutions for contemporary business environments by employing appropriate problem solving strategies." 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. The need for this was further reinforced through comments made from our advisory board.

In Fall 2009 the IT faculty designed and implemented a rubric to assess PLO #4, "Analyze common business functions and identify, design, and develop appropriate information technology solutions (in web, desktop, network, and/or database applications)." We came to four primary conclusions:

1. Artifacts used were appropriate.

2. A more detailed scale for each sub question might have been more useful.

3. While most students seem to have met expectations, very few exceeded.

4. Given the experience and results of the SLO assessment and the fact that the IT program was expanding into a 3rd year Advanced Professional Certificate, the IT faculty thought a reexamination of the program SLOs would be appropriate. We have decided on the following changes:

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

In Spring 2010 the IT faculty designed and implemented a rubric to assess PLO #2, "Configure and administer database servers to support contemporary business environments. " As a result of this

assessment, we better understood students' need to know some basic linux commands as the OS for Oracle is dependent on students' familiarity with basic linux syntax and commands.

No PLO was assessed in Fall 2010 due to IT Program Coordinator illness.

In Spring 2011 the IT faculty designed and implemented a rubric to assess PLO #3, "Comprehend and resolve common desktop and network issues." As a result of this assessment, we came to the following conclusions:

1. Artifacts used were appropriate.
2. Assessment across faculty was extremely consistent.
3 .Most students seem to have either met or exceeded expectations according to the assessment scale.

The use of the Cisco Packet Tracer network simulation program for assessment was new for most faculty members, and it took a little time for each faculty member to get familiar with the software and the assignment. The assignment evaluated the each student's documentation of the problem and solution rather than their actual ability to solve the problem. The data that was provided proved to be extremely valuable and relied heavily on each student's ability to express technical concepts in writing. In future assessments, it might be valuable to evaluate each student's ability to solve the network problem and repair the network. This would be a closer approximation of what our graduates would typically have to do in the workforce.

The evaluators observed that in many cases a student appeared to understand the concept being tested but appeared to lack the ability to accurately describe the solution. We believe that this results from a lack of the technical terminology and vocabulary necessary to accurately express technical concepts. Further discussion led to the conclusion that communications and the ability to effectively and accurately articulate technical information using appropriate terminology appears a problem across the lower-level IT courses. This emphasizes the importance of soft skills in the IT program.

In order to address this need we intend to make communication of technical information and terminology a larger part of the course and course assignment grades. The following are examples of how we may achieve this in our classes:

- Requiring technical writing assignments.
- Emphasizing terminology by means of a list of important terms for each class meeting
- Giving the use of proper terminology more weight in grading of tests and assignments.
- Encouraging class discussions requiring technical terminology, and correcting any improper use of terminology.

In Fall 2011 the IT faculty designed and implemented a rubric to assess PLO #5, "Learn future technologies through acquired foundational skills and knowledge and employ them in new business environments."

Context: When the IT Program developed its current approved set of Program Learning Outcomes, it was an AS program that had written its outcomes in terms of the major pillars of the program (programming, networking, database administration, and web development), its business context, and its emphasis on lifelong learning. During the course of the past few years, the program has assessed all the major pillars of the program: programming, networking, and database administration as well as web development. To complete an iteration of PLO assessments, we still need to assess the business context outcome and the lifelong (beyond AS degree) learning outcomes.

After our current Program Learning Outcomes were last approved by the Faculty Senate, our program expanded. We added a third year Advanced Professional Certificate (APC) after the AS. The APC started Fall 2010, and we graduated our first group of students in Fall 2011. The APC in IT was constructed on the foundation we laid out in our AS in IT degree through our use of Topics in Information Technology courses: ITS 220 (alpha) and ITS 221 (alpha). These topics courses allowed the program to quickly develop courses on very current or "hot" technologies or topics, thereby giving our students a taste of what their "lifelong learning" might look like.

Now, the mighty successors of these courses comprise our Advanced Professional Certificate, which has now become the defacto “lifelong learning” extension of our AS program. Since we have not had an approval of any IT AS PLO changes, we will use the work done in our current 300-level courses as data to assess our Program Learning Outcome: Learn future technologies through acquired foundational skills and knowledge and employ them in new business environments.

Artifacts used: Course-level assessments for ITS 324, ITS 328, and ITS 347. All sub-PLOs but one were deemed having met expectations.

Though the assessments would seem to indicate excellent progress by our students, we all recognize that there is still room for improvement. We plan to improve students’ performance by doing such things as: incorporating service learning projects for local non-profits or campus services or expanding on lab activities that emphasize these concepts and skills.

In Spring 2012 the IT faculty designed and implemented a rubric to assess PLO #6, “Practice communication, problem solving and decision-making skills through the use of appropriate technology and with the understanding of the business environment.” Artifacts used to assess this PLO came from our BUS 120 class, which uses MyBizLab, an online simulation and assessment course management tool. Students made critical problem solving decisions through a series of simulated business scenarios. Student artifacts in the two sections of BUS 120 studied met the expectations of the IT faculty.

While we concluded that BUS 120 served the business context needs of the IT program well, we also understood it was critical we worked to provide real business opportunities for students in ALL of our courses. One course (BUS 120) was not enough to truly ingrain business intelligence into our students, a repeatedly noted needed soft skill.

Part VII. Tactical Action Plan—Business, Legal and Technology Education Department

1. Department Action Plan

A. Introduction. The merger of the Business Education and Legal Education Departments became effective on July 1, 2010. The merged "Business, Legal and Technology Education Department" (BLT) provides a wide range of career and technical programs that prepare our graduates with the necessary skills and knowledge for entry-level positions in the workplace, prepares students to transfer seamlessly and successfully into University of Hawai`i baccalaureate programs, and provides Hawai`i's workforce with lifelong learning opportunities to improve job skills.

The department offers four associate in science (AS) degree options in the program areas of Accounting, Information Technology, Marketing, and Paralegal and certificates of achievement (CA) options in Accounting, Information Technology, and Marketing. Each of the programs also offers short certificates of completion (CC) and/or competence (CO)--Payroll Preparer, Tax Preparer, Database Administration, Help Desk Services, Programming, Legal Secretary, Customer Service, Entrepreneurship, Management, and Retailing. The department also offers an Advanced Professional Certificate (APC) in Information Technology.

To provide transfer pathways to baccalaureate degrees, the associate degrees in Accounting, Information Technology, Marketing, and Paralegal articulate to the University of Hawai'i-West O`ahu towards the Bachelor of Arts (BA) in Business Administration with a concentration in Accounting; Bachelor of Arts (BA) in Business Administration with a concentration in Marketing; Bachelor of Applied Science (BAS) in Information Technology, and Bachelor of Arts (BA) in Public Administration.

B. Mission Statement. The mission of the Business, Legal and Technology Education Department of Kapi`olani Community College is to provide the opportunity for access to quality programs designed to meet the needs of students, industry, and community. Upon successful completion of these programs, students should possess the academic foundation and practical skills to apply quality accounting, information technology, marketing and paralegal skills essential in a rapidly changing world.

C. BLT Strategic Outcomes

1. BLT Strategic Outcome I: Increase student participation in 21st century business and technology career laddered degree and certificate programs. (Alignment with the 2009-2015 College's Strategic Outcome B: Hawai`i's Educational Capital: Increase the educational capital of the state by increasing the participation and degree completion of students, particularly from underserved regions.)

a. Performance Measures. Increase enrollment of majors in each program by 2% per year (KCC Performance Measure B1 increase total fall enrollment by two percent per year, from 7272 to 8918).

b. Strategies.

- Continue to work with faculty and counselors to market our programs to high schools, the business and legal communities, current KCC students, and other student populations.
- Continue to add distance education (e.g., online, cable TV courses to increase participation by techie students, nontraditional students, and off-island students.
- Continue to assist Western Association of Food Chains (WAFC) to initiate and support continuing educational programs for the food industry.
- Continue to work on and update vertical articulation agreements with DOE for the Marketing, Retail, and Entrepreneurship programs.
- Complete and update UH-West O`ahu articulation agreements.
- Revisit articulation agreements with Hawai`i Pacific University.
- Seek accreditation in Accounting, Information Technology, and Marketing programs with the Accreditation Council for Business Schools and Programs (ACBSP) to reinforce the programs' commitment to continuous improvement, innovation, and scholarship and to provide recognized and respected standards of practice.

c. Data to be gathered: e.g. ARPD, IEMs, CCSSE, program-specific data (Means of Assessment)

- Annual Program Review; OFIE tracking
- Signed MOAs and updated documents with UH-West O`ahu (UHWO), Hawai`i Pacific University (HPU), and the Department of Education (DOE)
- Join the Association of Collegiate Business Schools and Programs (ACBSP), attend ACBSP Conference on accreditation, complete preliminary accreditation questionnaire, and gather required documentation and data in preparation for accreditation

d. Positions Responsible.

Unit dean, department chair, program coordinators, counselors, faculty, OFIE staff, appropriate UHWO, HPU, and DOE personnel

e. Synergies with Other Programs, Units, Emphases and Initiatives.

OFIE, FYE, TYE, UHCC System CTE/Perkins Initiatives, CELTT, other CTE programs, Kuilei, Kahikoluamea, Pathways, etc.

f. Key Community Partners (if any).

Department of Education, UH-West O`ahu, UHCC System and other CTE related partners, advisory committee members (Accounting, Information Technology,

Marketing, Paralegal programs), Western Association of Food Chains (WAFC), Association of Collegiate Business Schools and Programs (ACBSP), Pacific Center for Advanced Technology Training (PCATT)

2. BLT Strategic Outcome II: Provide engaging and challenging learning and student support strategies that lead to successful graduation with high proficiency in knowledge, behavior and skills. (Alignment with the 2009-2015 College's Strategic Outcome D: Globally Competitive and Collaborative Workforce: Address critical workforce shortages and prepare students for effective engagement and leadership in a global environment.)

   a. Performance Measures. Increase number of degrees/certificates awarded per year and number of transfers to UH baccalaureate programs by 3% each year (KCC performance measure D1 increase by 3 percent per year the number of degrees awarded, and/or transfers to UH baccalaureate programs . . . ; performance measure D4 Increase degree completion in career fields with integrated technology . . . ; performance measure D6 Increase the number of globally competent and collaborative students through high quality, coherent curriculum aligned with general education learning outcomes . . .)

   b. Strategies.

      - Continue to assess program student learning outcomes on a regular basis
      - Develop student engagement activities to increase student retention and achievement
      - Assist students in understanding the value of short certificates, associate and baccalaureate degrees, and continuing education
      - Improve communication regarding BLT scholarship information and application deadlines
      - Merge BLT scholarship information with the UHCC scholarship initiatives
      - Continue program specific tutoring assistance and other learning support

   c. Data to be gathered: e.g. ARPD, IEMs, CCSSE, program-specific data (Means of Assessment)

      - Annual Program Review (certificates awarded, persistence, transfer); course/student data on retention, completion of course with passing grade; OFIE tracking
      - Program learning reports will identify improvements to be made; data from the next cycle of assessment will show results.

   d. Positions Responsible.

      Department chair, program coordinators, counselors, faculty, OFIE staff, BLT Scholarship Committee, BLT tutors, BLT lab manager and lab monitors

   e. Synergies with Other Programs, Units, Emphases and Initiatives.

SLO Assessment Committee, OFIE, FYE, TYE, Achieving the Dream initiatives, UHCC System CTE/Perkins initiatives, CELTT, other CTE and academic support units and other appropriate faculty/counselors, UH Foundation, Financial Aid Office, etc.

f. Key Community Partners (if any).

Department of Education, UH-West O`ahu, UHCC System and other CTE related partners, advisory committee members (Accounting, Information Technology, Marketing, Paralegal programs), business and legal professional organizations to identify industry standards and changing needs in the field, previous scholarship recipients.

3. BLT Strategic Outcome III: Increase support for faculty and staff resources (to include technology and professional development) to assure technological and globally rich instructional expertise and to expand instructional delivery systems. (Alignment with the 2009-2015 College's Strategic Outcome E: Resources and Stewardship: Recognize and invest in faculty and staff resources and develop innovative and inspiring learning environments in which to work.)

   a. Performance Measures. Increase funding and support for professional development and technology requirements (see attached BLT Technology Plan, May 2012-July 2015) per annual budget allocation as outlined by the BLT Technology Plan. Receive reasonable allocation from the College for professional development funding each academic year (KCC performance measure D4c Renovate existing classrooms and build additional labs, centers, and classrooms to support engaging pedagogies such as peer mentoring, community engagement, technology integration, . . . and career programs; E1 Recruit, renew, and retain a qualified, effective and diverse faculty, staff and leadership committed to the strategic outcomes and performance measures).

   b. Strategies.

      - Continue to investigate and obtain approval for a supply/course fee for appropriate courses or a technology fee for the department.
      - Submit budget allocation request via Dean to Vice Chancellor for Administrative Services in summer for the next academic year and each year thereafter to include professional development and scheduled hardware and software funding as outlined in the attached BLT Technology Plan 2012-2015.
      - Seek other funding resources for upgrading of technology/equipment to meet industry standards and/or professional development
      - Work with appropriate contacts related to the completion of the BLT Kopiko Learning Community renovation in fall 2013—including follow-up on funding sources for furniture, equipment, security system, networking, as well as faculty office pod moves, server move and setup from LCC, furniture/equipment move from Mamane. Work with appropriate contacts related to Phase II Kopiko renovations including courtyard, refreshment center, faculty office pod moves, etc.

- Recruit full-time faculty in Paralegal, and recruit full-time faculty and/or counselors to replace retired personnel in Accounting, Marketing, and other BLT programs as appropriate
- Mentor and assist probationary instructors and lecturers with the preparation of their syllabi, basic usage of Laulima's online tools as determined by the program coordinator, understanding the use and completion of college forms, grading, assessment for continuous improvement, working with students with disabilities, etc.

c. Data to be gathered: e.g. ARPD, IEMs, CCSSE, program-specific data (Means of Assessment)

- Obtain approval to assess supply/course fee or technology fee to support student learning and purchase updated technology to meet industry standards on a continuous basis
- Updated equipment purchased based upon industry standards and application integrated into curriculum
- Curriculum modification, changes to teaching methodology, and/or increased student proficiency levels, etc., due to professional development provided to instructors.
- Assess the results of the renovation project through lab usage data, student satisfaction survey, or higher course success rate
- Continued course assessment to determine student proficiency
- Recruitment and completion of hiring process
- Satisfactory peer evaluations, student evaluations, lecturer assessments and/or contract renewals

d. Positions Responsible.

Vice Chancellor of Academic Services, Vice Chancellor for Administrative Services, Director of Human Resources, unit dean, department chair, program coordinators, counselors, faculty, BLT technology committee, BLT lab manager, OFIE staff

e. Synergies with Other Programs, Units, Emphases and Initiatives.

OFIE, UHCC System, CTE/Perkins initiatives, CELTT, other CTE programs, hiring screening committee, KISC, auxiliary services, business office, etc.

f. Key Community Partners (if any).

UHCC System and other CTE related partners, advisory committee members (Accounting, Information Technology, Marketing, and Paralegal programs), etc.

2. Program Action Plan (based on ARPD results)

We are in 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 (IT) and Information and Security Assurance (ISA) 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**

  3. 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.
  4. 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. Legal and Technology Education Department in engaging our students in our recently renovated Kopiko Learning Community via the special funding the Department has received, as well as increase/improve the Kopiko Building classroom network. Also, improve local business to department and business to student interaction through the dedication of space within the new lab and by granting additional space on an "as needed basis" for said organizations (advisory board members, internship hosts, and the like) to provide "real world" enrichment activities for BLT students.
- 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.
- Continue our curriculum changes in response to industry trends. Specifically, work to guide students to develop mobile apps.

In addition, the IT Program would truly appreciate common CTE services, such as: CTE Placement Services—while IT faculty do their best to help students find jobs in the field, it would be very helpful if the program had access to a professional placement office. Most community colleges have such services; when we tell students we have none, they are surprised. Along with this, student tracking services. It is difficult to know how we are doing as a program if the data we receive is piecemeal or incomplete. Follow up surveys with employees who hire our graduates would give us additional data to help us know how we are doing. Currently, we have no systemic employee survey being conducted.

These are three intertwined services that would be extremely helpful for our students, our program, and for our future. We want to make appropriate course corrections, but it is sometimes difficult without adequate data input.

Part VIII. Resource and Budget Implications

The program and department will look to a combination of campus funds, general funds (faculty investment of time and energy), special funds, grants, private donations and other campus support services to ensure the achievement of our planned outcomes.

Strategic Outcome I

Marketing Materials ($500 per year)
DOE vertical articulation
ACBSP Membership Dues $1250 per year plus additional funding for accreditation
ACBP Conference Attendance – Title III Grant, cost to be determined
Release time to complete accreditation process – To be determined
ACBSP site visit expenses – To be determined, Chancellor's fund; dean's fund; department's fund, and faculty time

Strategic Outcome II

- SLO Assessment
- Student engagement activities and marketing
- Communications
- Tracking certificates, degrees, transfers
- Student tutors, peer mentors (See BLT Technology Plan) – additional funding for renovated lab and classrooms extended hours of usage

Strategic Outcome III

- Student fee collection – college and departmental support
- Equipment Supplies (See BLT Technology Plan)
- Professional Development - $5000 per program per year; college and department support (See also BLT Technology Plan)
- Kopiko and Mamane Renovations, Phase I and II – To be determined; capital improvement funding, campus funding, additional department funds)

We are looking forward to moving back into our renovated classrooms and lab and recognize that additional financial resources will be necessary to fully take advantage of our new facilities.

First, for the IT Program to continue to offer instruction in current high demand technologies, we must have these technologies and the equipment on which they run. Computers are to us, like stoves are to the Culinary Arts Program. They are the tools we use to do our instruction. We need current, state-of-the-art computers, software, and other high technology equipment. Culinary Arts cannot teach new chefs using antiquated equipment who would then go out into the workforce finding more current tools. We are the same. Computers have a turn around life of roughly three years. All instructor machines, all computers in our classrooms and lab should be on a three year replacement cycle (Please see BLT Technology Plan). For demonstration purposes, we may need to purchase other large touch screen displays to allow students to demonstrate their programming accomplishments.

In addition, for our students to be able to access the resources to do their homework, projects, assessments for their courses, the lab needs to be open. For the lab to be open, we need funds for staffing the lab. If we are to offer classes throughout the day to maximize facilities usage, we need to keep the lab open for those same students to do their homework either before or after class. In

addition, if we want to help students be successful and retain them for our program, we need to provide tutors to help them. Tutors have been a very valuable component of our success. IT can be a very demanding sector, which has several components. We provide a very broad exposure to much of IT and go into depth on programming, database administration, help desk services, and web application development. Many times, students are comfortable in some areas and a little uncomfortable in others. To help in those areas, we need to provide tutors. For both student monitors and tutors, we estimate:

For 2013—2014

Computer Lab Monitors (5)

Projected hours: 5200 X $11/hr = $57,200

IT Tutors (3)

Projected hours: 1200 X $11/hr = $13, 200

For 2014—2015

Computer Lab Monitors (5)

Projected hours: 5200 X $11.50 = $59,800

IT Tutors (3)

Projected hours: 1200 X $11.50 = $13, 800

Please refer to BLT Technology Plan in the Appendix for additional data and details on needed resources to support all the programs within the BLT Division.

Part IX. Evaluation of Data and Measurable Improvements

Evaluation of Data identified in Part VII-1-c, 2-c, 3-c

See: Part VI. Analysis of the Program above.

Improvements in Last 12 months (list)

- Hiring 6th Full-time IT Faculty
- Acquisition of Perkins Grant for VM Servers

- Setup and implementation of VM Servers
- Further expansion of collaboration with Waikiki Aquarium
- Significant progress in bottom floor Kopiko renovations
- Completion of one iteration of PLO Assessments
- Completion of assessment of at least one course SLO for every ITS/ICS course

Improvements to be made in the next 12 months (list)

- Move VM Servers from LCC to KapCC BLT facilities
- Move into renovated bottom floor of Kopiko Building
- Improved and expanded tutoring services for IT students
- Upgrading software to go along with our upgraded facilities and computers (Win 8, MS Office 2013, VS 2012)
- Pedagogical modifications to move Programming line of courses (ITS 128, ITS 148, and ITS 228) and Web Development line of courses (ITS 227, ITS 327) to Windows 8 App Development
- Continued CLR and PLO Assessments