HAWAI`I COMMUNITY COLLEGE
AY 2006 ANNUAL INSTRUCTIONAL PROGRAM REVIEW

BEAT: Information Technology

APRIL 2, 2007

Annie Brown / Kent Killam

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I. Narrative and Analysis of Data

a. The Information Technology (IT) Program's Mission is to assist students to learn and develop skills, competencies, and values required by employers and necessary to become contributing members of a technological society.

b. The IT program includes a combination of business, computer, and information technology courses. Campus-based computer and networking projects, faculty supervised laboratories, and workplace internships provide hands-on experience designed to prepare students for positions in computer support, programming, network administration, or systems development in a business information technology system.

c. Program Goals

Associate in Science Degree

Provide course work that prepares employable graduates with quality entry-level skills for positions in computer support, network administration or system development by teaching the

Basic concepts of programming in a business environment,
Fundamentals of data communications in a business environment, and
Knowledge and problem solving skills required to provide hardware and software computer support.

Certificate of Achievement

Provide course work that prepares students to function with the basic skills required in IT positions by teaching the

Functions of computers and the components of computer systems,
Use of business software applications to carry out basic functions in the workplace, and
Basic programming functions used in common business applications.

d. Analysis of the program data reflects a decrease in the number of majors and an attendant increase in the program costs. Charts of representative data values are included below. (Previous AY data is taken from the IT Comprehensive Program Review dated February 8, 2007.)

This declining enrollment trend is not unique to Hawaii Community College or the Big Island as there has been a decline in the enrollment of Information Technology and Computer Science majors throughout the country and the state.

The American Association of Community Colleges, Advanced Technical Education National Principal Investigators Conference held in October 2005 addressed this concern in Session 11: Declining IT Program Enrollments – Who Moved My Cheese?

Description:
Declining IT enrollments is a national trend at colleges and universities. Based on this trend this session addressed the process of curricula and degree program change. Common approaches to the learning of basic IT skills were discussed stressing the importance of domain or contextual knowledge for employability of technicians across IT and IT enabled sectors. Also discussed were common approaches to the learning of basic IT skills across different program areas.

Summary:
Most of the attendees expressed concern about declining enrollments in IT programs and wanting to improve their programs by designing/offering new programs and needing new strategies to connect their graduates to employers who seem to prefer hiring graduates from 4-year degree programs. There was also general interest in defining what we mean by core IT skills, cyber security, and scenario-based learning.

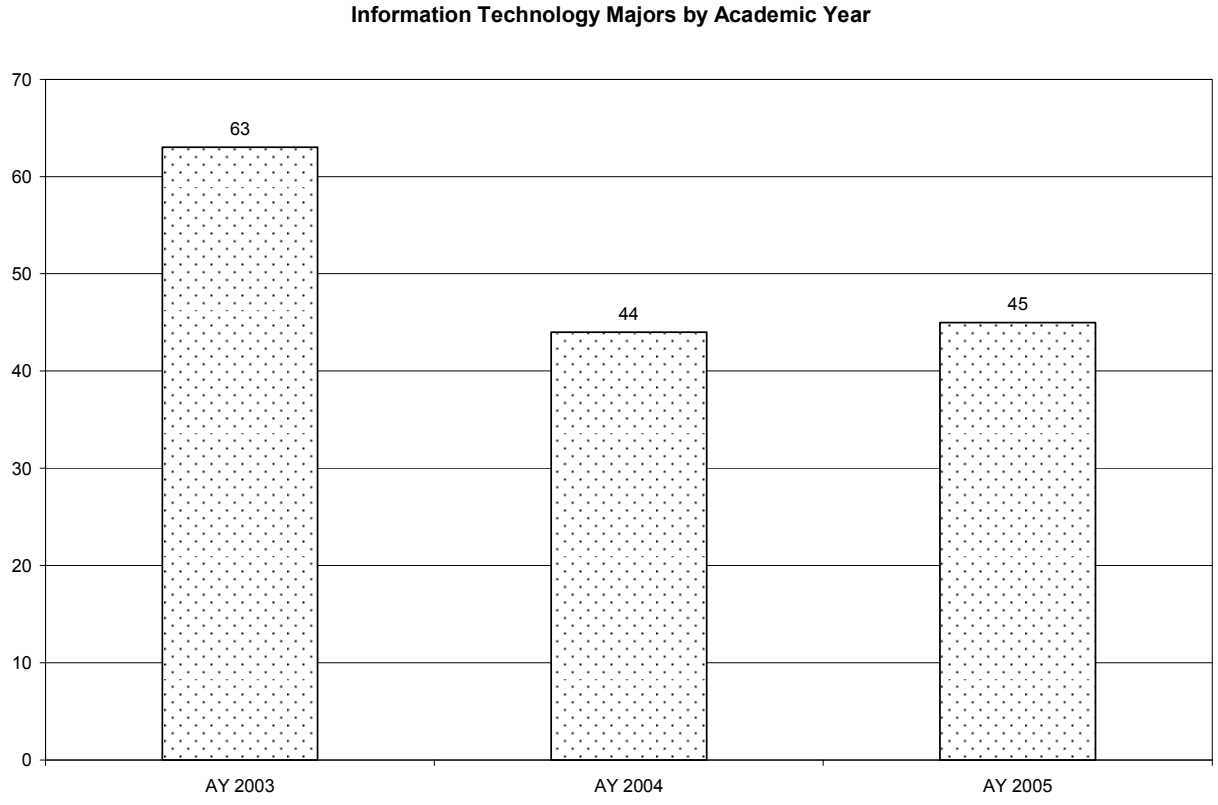
Conference Link:
http://www.aacc.nche.edu/Content/NavigationMenu/ResourceCenter/Projects_Partnerships/Current/AdvancedTechnologicalEducation/2005ATEPresentations.htm
Session Link:
http://www.aacc.nche.edu/Content/NavigationMenu/ResourceCenter/Projects_Partnerships/Current/AdvancedTechnologicalEducation/11_Summary.pdf

Other Links on this topic:

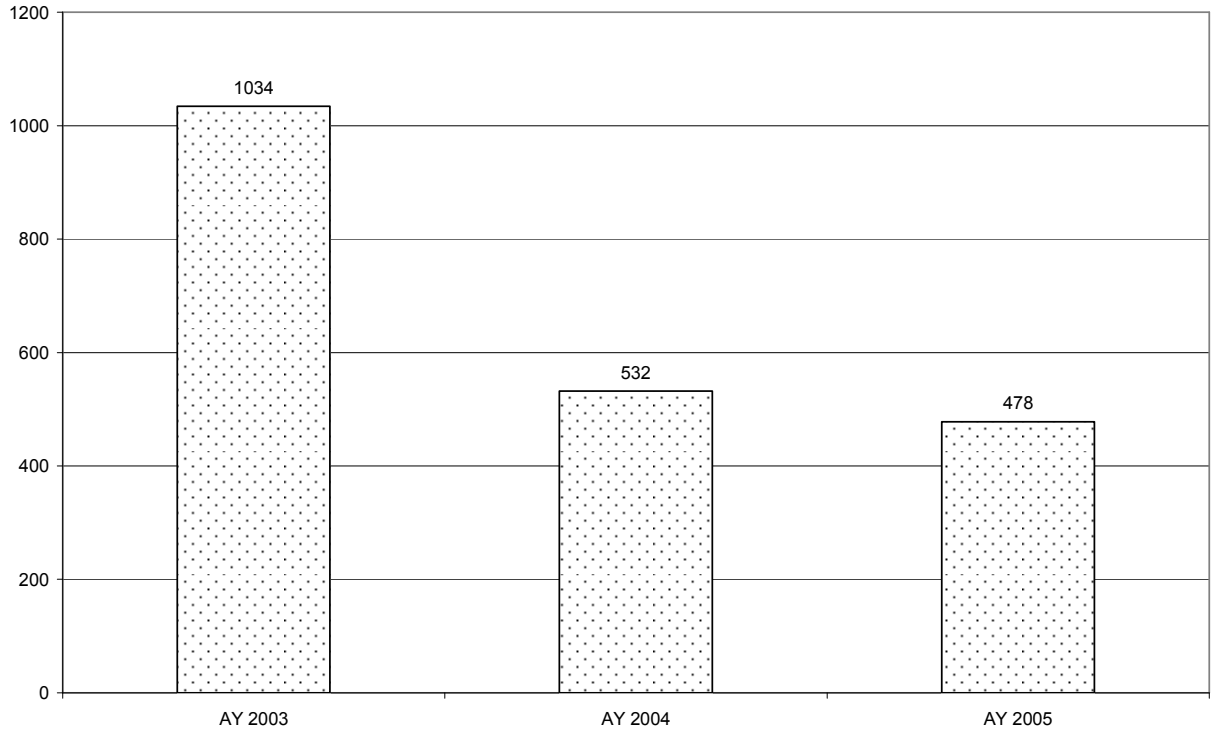
Exploring Declining CS/IS/IT Enrollments	http://www.aitp.org/isedj/isecon/2005/3124/ISECON.2005.Lenox.txt
Students saying no to computer science	http://news.com.com/2100-1022_3-5306096.html
As outsourcing gathers steam, computer science interest wanes	http://www.computerworld.com/printthis/2006/0,4814,111202,00.html

In Hawaii a decline in the enrollments has also been experienced in the Information Technology Programs at the community colleges. According to a Head Count Enrollment by Program at the University of Hawaii Community Colleges from Fall 1995 to Fall 2005 the enrollments in IT Programs increased to 807 majors in Fall 2000 and then declined to 320 majors in Fall 2005.

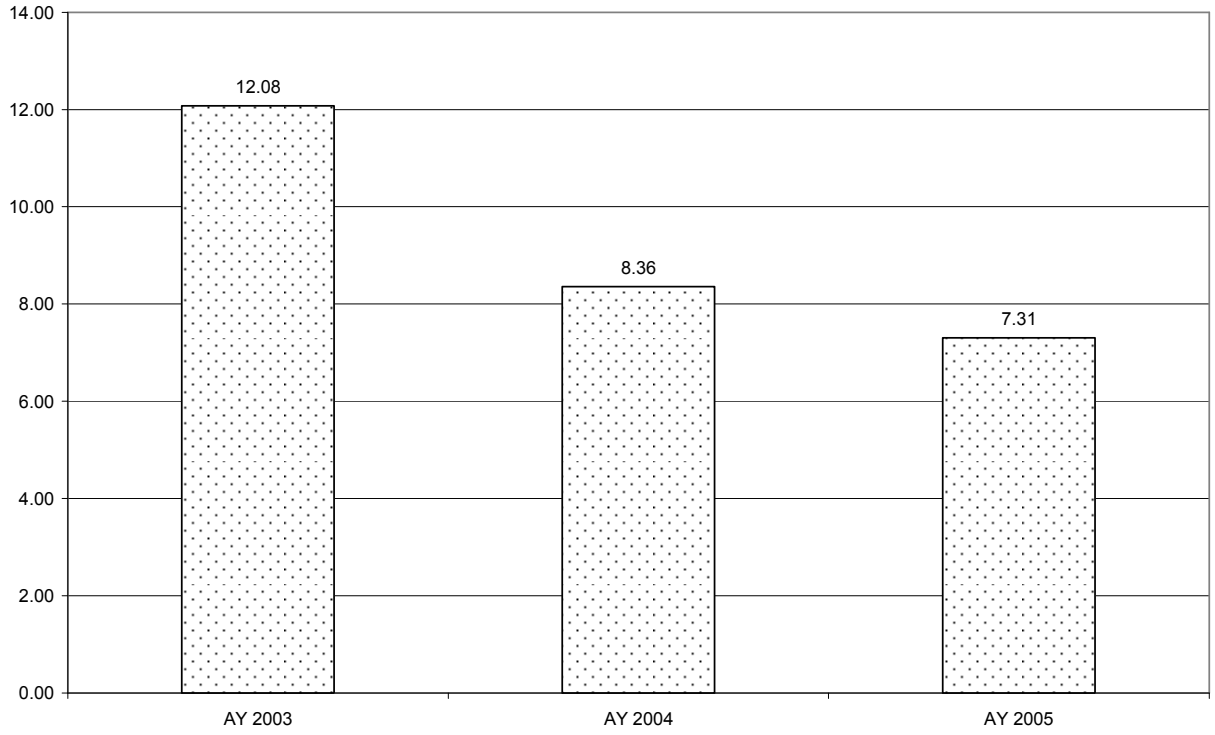
While the decline in IT majors is certainly a challenge that reaches beyond the campus of Hawaii Community College it is expected to stabilize as the national and state economies recover strength over the next few years. Future employment in the field of computer and information technology will be more competitive and will require an increasingly complex set of skills and knowledge that may be acquired only through extensive baccalaureate level courses, on-the-job training, and an Associate in Science degree.

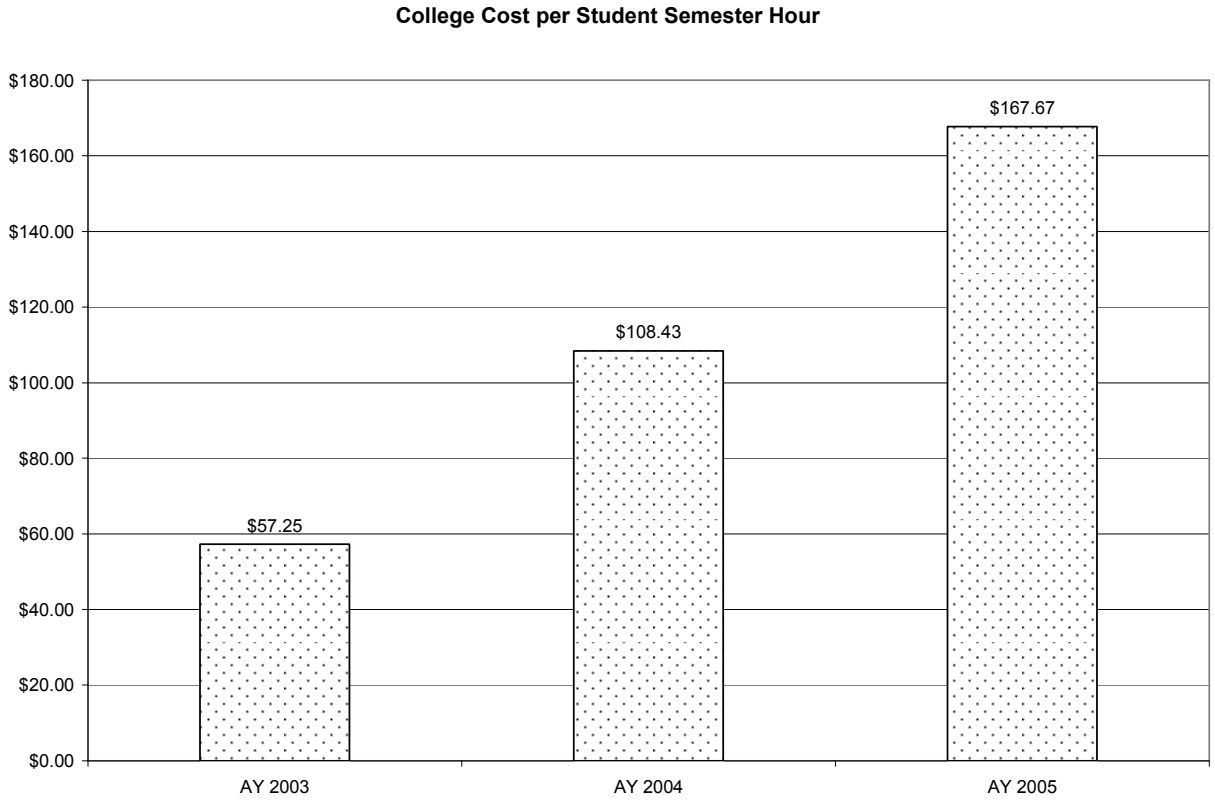


Student Semester Hours by Academic Year



Average Class Size by Academic Year





The efficiency of the IT program has been decreasing during this review period. Average Class Size and Student Semester Hours are trending lower. As a result the Percentage of Small Classes and Cost per Student Semester Hour are both increasing. During this review period there has been a significant drop in the number of students entering the program. Small cohorts of students have occurred in fall 2004 – 8 and fall 2005 – 4. Attrition rates of 25-35% have been experienced with each starting group. While there are more majors declared for the program, many students are not ready for the college level courses required for the Associate in Science degree. For example, in fall 2005 there were 41 declared majors. While about 10 – 12 of these were second year students of the remaining approximately 30 students only 4 met the prerequisites for ICS 101 and ITS 103.

The IT program courses are offered on a Fall/Spring rotation to maximize class enrollment and distribute course assignments between the two IT faculty members. There are no courses that have multiple sections and each faculty member has three or four course preparations each semester.

e. **Information on external factors affecting the program**

The decline in enrollments is attributed to the complexity of the program, the need for entrance requirements – preparation for college level reading, writing, and

mathematics, and the fact that many of our students are not able to meet the math prerequisite – completion of Math 25X or Math 26, or placement in Math 100 or higher. Many of our students do not have these basic skills and become discouraged while taking courses to develop these skills.

In addition to small cohort size, there are two factors that contribute to even smaller class sizes in the second, third, and fourth semester courses. First, students fail to satisfactorily complete prerequisite courses and are unable to continue a program thread in the later semester. (The program consists of three threads: computer support, networking, and database programming. A student is not able start one of these threads if they have not passed the prerequisite course(s): computer support – ICS 101 and ITS 104; networking – ITS 108; and database programming – ITS 103 and ITS 118.) The second factor is students choosing to take the threads serially, rather than in parallel, because of the course workload. Many of our students are working in outside jobs and do not have sufficient time to satisfactorily complete course requirements. The program is demanding and students will take one set of courses and then take another set of courses the following year. Several of our students have spent three to four years completing all of the program requirements.

f. **IT Program Health Indicators Report is attached.**

II. Program Plan of Action

a. This is the first annual program review for the IT program.

b. Program Strengths

The vast majority of graduates have found good jobs and they are very satisfied with their experiences in the program.

Employers are satisfied with the quality of the graduates they have employed, making future hires likely.

Students receive current information in the IT field and have the opportunity for extensive hands-on experience in their course work.

c. Program Weaknesses

Need to better balance program selectivity and rigor with ability to increase enrollment and retention, and to help students complete the degree program within a two year period.

Need better assessment tools for overall student learning outcomes from the program, including adding a self-assessment report from all students as they complete program requirements.

d. Program goal/plans for the next review period

Action Plan Tasks	Year	Responsible Party
Survey needs of present students	2007	Annie Brown / Kent Killam
The proposed Action Plan tasks are designed to address weaknesses and increase strengths of the IT Program in the next two years. We will survey our present students concerning their needs, including optimal course scheduling, time for completion of program, prerequisite courses, and prerequisite skills. Results of the survey will be used in detailed planning for Program improvement.		
Establish certificates of completion in Information Technology.	2007	Annie Brown / Kent Killam
Establishment of the Certificate of Completion in IT will permit students who cannot take the full two-year course of study for the AS degree in IT to receive sufficient training for employment in basic entry-level IT jobs. This will also permit students with marginal skills to obtain remedial training and then obtain a credential in IT within a reasonable period of time.		
Offer more sections of a college information technology service course including adding the requirement of an information retrieval/computing literacy course for the AA liberal art students.	2008	Annie Brown / Kent Killam
Creation of a requirement for information retrieval computer literacy for all HawCC AA seeking students will provide our students with skills necessary for all educated people in the twenty-first century with these skills especially necessary in the workplace. The current IT Program faculty will be able to cover many of the sections necessary for this requirement because of available seats in our introductory courses. It may be necessary to hire lecturers to cover additional sections of those courses depending upon enrollment patterns. Students' exposure to the introductory course is likely to aid in the program's recruitment of IT majors.		

Action Plan Tasks	Year	Responsible Party
Review the similarities and differences between technical programs on campus to strengthen complementary requirements and reduce duplication.	2008	Annie Brown / Kent Killam / Other individuals as assigned by the VCAA.
A review of the technical programs at HawCC – IT, Cisco, and ETRON – is required to develop areas of mutual support and complimentary courses. There are not enough students to offer duplicative, competing technical courses such as Website Development and Computer Support. There is a need to identify a single program to offer IT courses and IT related curriculum for the college. The technical courses offered should also support the state's initiative to create technical academies.		
Participate in a campus supported pilot program for electronic portfolios.	2008	Annie Brown / Kent Killam / Other individuals as assigned by the VCAA.
Electronic portfolios are envisioned as a way to have students demonstrate their accomplishments in the IT program to possible employees, other students, and faculty reviewers. A subset of the required course deliverables will be required to be included in the student's portfolio. This will increase competition among students and have the course products available to advertise the IT program. The hosting of the e-portfolios is a considerable task and must be part of a college-wide program. The IT program would volunteer to be an early participant in the program.		

Quantitative Trend Data Chart (as of 10-5-06)

Program: BEAT: Information Technology

	Fall 2005	Spring 2006	AY 2005
#1 Number of Unduplicated Majors	41	28	45
#2 Total Student Semester Hours	253	225	478
#3 FTE Student Majors	16.87	15.00	15.93
#4 Number of Graduates			2
#5 Number of classes	7	6	13
#6 Avg Class size	8.43	6.00	7.31
#7 Avg Class fit	42.1%	30.0%	36.5%
#8 FTE of BOR Appointed Program Faculty			2
#9 Number of FTE Faculty based on credit hours (FTE = 27)			1.74
#10 Student semester hours for all PPC class enrollments	134	96	230
#11 Student-Faculty Ratio			4.40
#12 PPC Credits Earned Ratio	.66	.87	.77
#13 Non-PPC Credits Earned Ratio	.58	.69	.64
#14 PPC Avg GPA	2.31	2.23	2.27
#15 Non-PPC Avg GPA	1.99	2.71	2.35
#16 Budget			$18,031.71
#17 College Cost per SSH			$167.67

The Program Health Indicators Review provides a comprehensive, empirically based review of academic programs. Major sections of the report provide descriptive information about the development and history of a program, goals, faculty and advisory committees, admission and degree requirements, and graphic representation of the program's standing. The major clusters of program health indicators are program demand, program efficiency and program outcomes. Hawai'i Community College uses five data elements to develop these clusters: number of applicants and majors (program demand), class fit and average class size (program efficiencies) and graduates (program outcomes).

Chancellor: Rockne Freitas
Dean of Instruction: Doug Dykstra
Division Chair: Joni Onishi

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PROGRAM DESCRIPTION

The Information Technology program is a career-ladder, competency-based program that provides training in the use and support of business-related computer systems, data communication networks (including local area networks), and the development of business computer information systems programs using procedural, event-driven and object-oriented programming techniques. Upon satisfactory completion of 66 credits, the student earns an Associate in Science degree in Information Technology and is prepared to function in an entry-level position as a Computer Support Specialist or Computer Programmer.

The program includes a combination of business, computer, and information technology courses. Campus-based computer and networking projects, faculty supervised laboratories, and workplace internships provide hands-on experience designed to prepare students for positions in computer support, programming, network administration, or systems development in a business information technology system. The program focuses on computers and information technology as tools to solve business problems.

PROGRAM GOALS

Upon successful completion of the Associate in Science degree in the Information Technology program the student is prepared to function in an entry-level position in computer support, network administration, or systems development and should be able to:

- Demonstrate an understanding of the functions of a computer and its components. (ICS 101 and ITS 104 and 108)

- Demonstrate an understanding of information systems in a small to medium size business. (ICS 101, ITS 104, 108, 215, and 284)

- Use command language and/or operating system (e.g. MSDOS, Windows, UNIX, etc.) on a microcomputer or a computer workstation to create files, perform system functions, establish command programs, manipulate queues, list files, sort files, edit files and compile programs. (ITS 103, 104, 108, 118, 121, 151, 215, and 221)

- Analyze, design, program, debug, and implement business system specification in both procedural and object-oriented programming environments. (ITS 103, 118, 121, 151, and 221)

- Describe the function and use of data communications in a business environment. (ITS 104, 108, 215, and 284)

- Implement the hardware, software and application components of a data communication system. (ITS 104, 108, 215, and 284)

- Communicate in written or oral form, a system solution, its documentation, and its training modules. (ITS 118, 121, 151, 218, and 221)

- Value quality work, have self-discipline, and be a responsible member of the profession. (ITS 103, 104, 108, 118, 151, 193, 215, 218, and 284)

PROGRAM HEALTH INDICATORS

INDICES	MINIMUM LEVEL	ACTUAL LEVEL	SATISFACTORY LEVEL
PROGRAM DEMAND/CENTRALITY: Fall 2006			
Number of Applicants	15	20	20
Number of Majors	30	28	40
Student Semester Hours (ITS, ICS)	228	190	380
Class Credit Hours	24	23	30
Number of Classes Taught	6	6	8
PROGRAM EFFICIENCY: Fall 2006			
Average Class Size	12	8	20
SSH per FTE Faculty	90	85	185
Equiv CCH per FTE Faculty	12	11.5	15
Percentage of Small Classes	10%	67%	0%
PROGRAM OUTCOMES: Fall 2006 (See Perkins III Core Indicators on Page 5)			
Credits Earned Ratio (General Education)		00%	
Credits Earned Ratio (Vocational Education)		00%	
Non-Traditional Program Participation – Males		N/A	
Non-Traditional Program Completion – AY 2000-2001		N/A	

2005-2006 PERKINS III CORE INDICATORS

Core Indicators	# in Denominator	# in Numerator	Adjusted Level	Actual Level
Academic Achievement	6	10	81.92%	66.67%
Vocational Skills	6	6	90.00%	100.00%
Degrees & Certificates	6	4	37.33%	66.67%
Placement/Employment	6	5	71.72%	83.33%
Retention/Employment	5	4	92.00%	80.00%
Nontraditional Participation				
Nontraditional Completion				

OCCUPATIONAL DEMAND **State and County of Hawai'i – 2005-2011**

Occupational Title	State 2005	County 2005	County New	State Replacement	County Replacement
15-1041 Computer Support Specialists	***1983**	**179**	**25**	**142**	**13**

ANALYSIS OF THE PROGRAM

Program Demand/Centrality

The national demand for Information Technology (IT) workers has decreased and continues to decline with the economy and the outsourcing of IT services overseas. It is expected to stabilize as the national and state economies recover strength over the next few years. Future employment in the field of computer and information technology will be more competitive and will require an increasingly complex set of skills and knowledge that may be acquired only through an extensive baccalaureate level program and on-the-job training. In addition to the program schedule of courses, students must also be equipped with the skills necessary to continue self-study and life-long learning in this rapidly changing field.

This declining enrollment trend is not unique to Hawaii Community College or the Big Island as there has been a decline in the enrollment of Information Technology and Computer Science majors throughout the country and the state.

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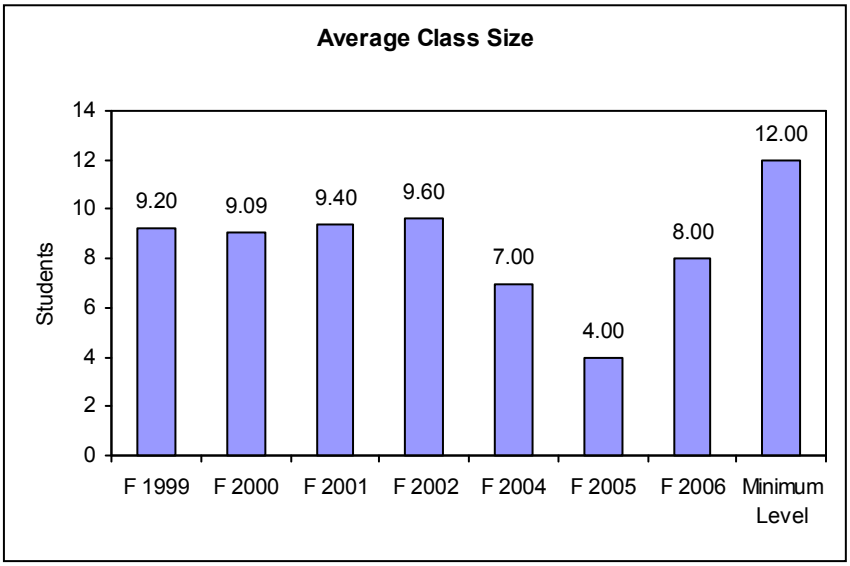
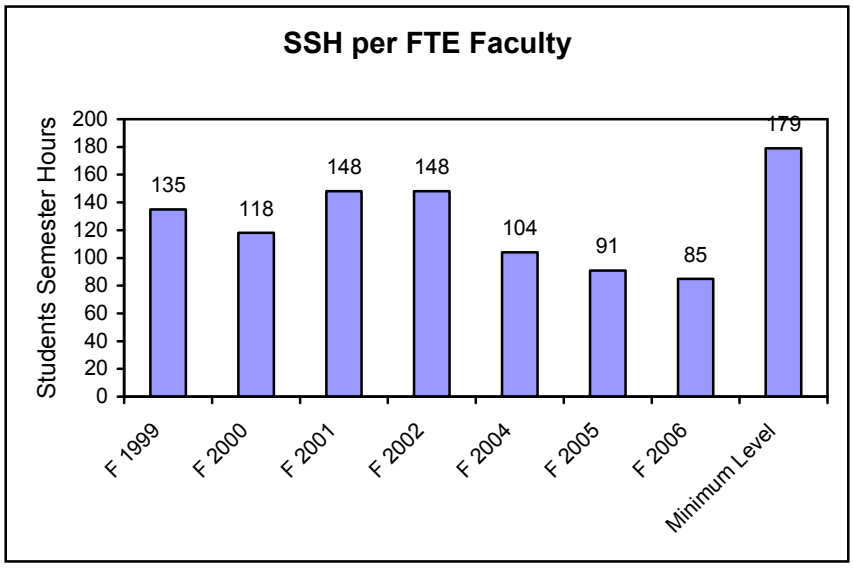
enrollments in IT Programs increased to 807 majors in Fall 2000 and then declined to 320 majors in Fall 2005.

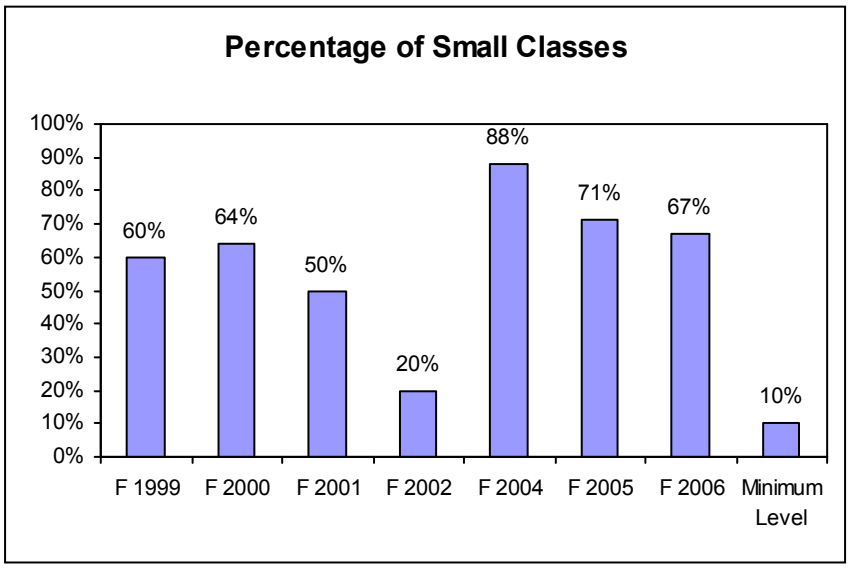
While the decline in IT majors is certainly a challenge that reaches beyond the campus of Hawaii Community College it is expected to stabilize as the national and state economies recover strength over the next few years. Future employment in the field of computer and information technology will be more competitive and will require an increasingly complex set of skills and knowledge that may be acquired only through extensive baccalaureate level courses, on-the-job training, and an Associate in Science degree.

Program Efficiency

The efficiency of the IT program has been below the minimum level for the past seven years. Average Class Size, Student Semester Hours, and Percentage of Small Classes are all below the minimum levels. Class sizes were tending toward the minimum values until Fall 2004 when there was a significant drop in the number of students entering the program. A small cohort of eight students began in Fall 2004; six students remain at the end of Spring 2005. In Fall 2006 there were only four students in the first semester classes. While there are applicants for the program many students are not ready for the college level courses required for the Associate in Science degree. Class size will be below minimums for at least the next year.







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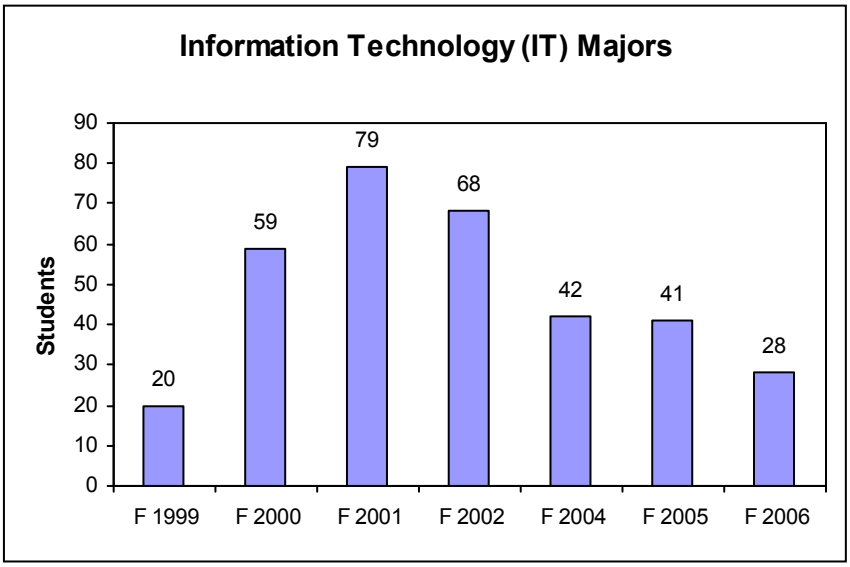

The decline in enrollments is attributed to the complexity of the program and the need for entrance requirements – preparation for college level reading, writing, and mathematics. Many of our students do not have these basic skills and become discouraged during taking courses required to develop these skills. This is borne out in the decrease in the number of declared majors shown above.

n addition, there are two factors that account for the small class sizes in the second, third, and fourth semester courses. First students fail to satisfactorily complete prerequisite courses and are unable to continue a program thread in the later semester. (The program consists of three threads, computer support, networking, and database programming. A student is not able to start one of these threads if they have not passed the prerequisite course(s): computer support – ICS 101 and ITS 104; networking – ITS 108; and database programming – ITS 103 and ITS 118.) The second factor is students choosing to take the threads serially, rather than in parallel, because of the course workload. Many of our students are working in outside jobs and do not have sufficient time to satisfactorily complete course requirements. The program is demanding and students will take one set of courses and then take another set of courses the following year. Several of our students have required at least four years to complete all of the program requirements.

Program Outcomes

There are currently three students forecasted to graduate in May 2006. Again while the number of graduates has not been large they have been successful. As indicated in the table on the next page the majority of our program graduates have obtained employment and most of them in the field of Information Technology.

Information Technology Graduates Since 2001			
Name	Graduated	Employed	Continued study
	Spring 2001		
Irene Ellorin		Hilo Med. Center	No
Robinson Baldos		OCET – Senior Net	No
Danilo Padilla		Kam School - IT Specialist	No
Kelvin Ono		County of Hawaii – IT Specialist	No
	Spring 2002		
Juan Mao Hunt		Tourist Industry – Oahu	No
Cathy Hayashi		County of Hawaii – Tax Office	No
Leila Wakida		Water Dept.-IT	No
	Spring 2003		
Christopher Barteluce		Unknown	No
Christian Boado		Consulting	Electronics-HawCC
Jeremy Delima		Maui High-IT Technician	No
Bryan Shirota		Flight School on the Mainland	No
Andrea Silva		Imaging Center-Health Care	UH-Hilo (Biology/Business)
Milagros Soares		Unknown	
	Spring 2004		
Monte Anderson		Real Estate Investment	No
Dylan Borges		Sales – IT	No
Paul Bueltmann		Helco –IT Network Administration	No
Ann Coleman		Mainland - California	No
Easten Cueva		Computer Technician	Yes (UH-Hilo)
Brandon Delima		Real Estate Investment	No
Christopher Nagahiro		Relocated to Wisconsin	No
Janice Ohia		Title Three Hawaiian Program	No

Brandon Torres		Sales, and IT consulting – Kitagawa Autos	No
Shane Vasconcellos		Started own IT business	No
	Fall 2004		
Ross Kuhnle		Mainland – Arizona	No
	Spring 2005		
Ross Kudo		San Diego Law Firm – IT Tech Support	Graduated from San Diego Technical School
Victoriya Matsui		HI Island Board of Realtors – Executive Assistant	No
Derek Ogawa		Hilo Bay Clinic – part time IT technician and HawCC – part time IT technician	UH-Hilo Business Administration
	Spring 2006		
Hauoli Sayles		Unknown	No
James Shoemaker		Saint Joseph School – IT Coordinator	
	Summer 2006		
Gabriel Pakani		Started own IT Business	No
Leleiohoku Stafford		Elementary School in Kona – IT Technician	UH-Hilo Computer Science

Plan of Action 2006-2007

The decline in enrollments is a continued concern. While other IT programs on Oahu and the Mainland are experiencing similar decreases in enrollments, all indications are that this trend will reverse itself in the next few years

A further review of the program curriculum is required. While the program has made curriculum adjustments in response to student, industry, and academic requirements effective each fall following its establishment in 1999 the demand for currency is ongoing. Several national curriculum models were reviewed to ensure the A.S. degree at Hawaii Community College is current. A new advanced topics course ITS 221D Information Security was offered in Spring 2006. Also changes are being made in ITS 103 Introduction to the Programming Process, in Fall 2006 to add additional emphasis to algorithms and problem solving. While the programming thread ITS 103, ITS 118, and ITS 151 is very difficult for many of our students it is a mandatory part of the Associate in Science degree.

Majors are being advised; all courses have been developed and are now being refined. We are continually updating the content and presentation of the courses to reflect industry standards.

Response to last year's plan of action

Curriculum review continues to ensure that the IT program is current and applicable to our students and the employers on the Big Island.

Program Plan of Action

Program Strengths

The vast majority of graduates have found good jobs and they are very satisfied with their experiences in the program.

Employers are satisfied with the quality of the graduates they have employed, making future hires likely.

Students receive current information in the IT field and have the opportunity for extensive hands-on experience in their course work.

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Need to better balance program selectivity and rigor with ability to increase enrollment and retention, and to help students complete the degree program within a two year period.

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Appendix A: History and Admission Requirements

Program History

The Information Technology program was established effective fall 1999 by Board of Regents' action that approved the modification of the existing A.A.S. degree in Data Processing to an A.S. degree in Information Technology. The establishment of the modified program included increasing program entrance requirements and course prerequisites, making extensive revisions to the program curriculum, and changing the program name to Information Technology

Program Admission Requirements

The IT Associate in Science Degree Program requires that students be prepared to begin college level reading, writing, and mathematics courses - English 102, English 100, and Math 100 at the time they begin their IT program courses. These courses are included in the first year of the program to provide the skills necessary for students to succeed in the IT technical training courses. These entrance requirements to the Information Technology program were established to facilitate student success in the program curriculum. The curriculum requires a firm foundation in reading, quantitative reasoning, and writing before beginning IT program courses. Through prerequisites to the first semester courses and in foundation support courses during the first and second semesters students will obtain the skills required to successfully complete the course work in the third and fourth semesters.

Appendix B: Degree Requirements (as of Fall 2004)

First Semester		**CA**	**AS**	
ICS 101	Microcomputer Applications Software	4	4	
ITS 103	Introduction to the Programming Process	4	4	
ITS 104	Computer Hardware Support	4	4	
Acc 201	Elementary Accounting I	3	3	
Eng 102	College Reading Skills	3	3	
	TOTAL	**18**	**18**	

Second Semester		**CA**	**AS**	
ITS 108	Computer Software Support	3	3	
ITS 118	Visual Basic Programming for Business Applications	4	4	
ITS 121	Computing Topics	3	3	
Eng 100	Expository Writing	3	3	
Math 100	Survey of Mathematics (Math 100 or Higher)		3	3
	TOTAL	**16**	**16**	

Third Semester		**CA**	**AS**	
ITS 151	Applied Database Programming in an Object Oriented Environment	-	4	
ITS 215	Network Administration	-	4	
ITS 218	Help Desk Support	-	3	
SpCom 151	Intro to Speech and Communications	-	3	
Elective	Humanities, Natural Sci.†, Social Sci.	-	3	
	TOTAL	**-**	**17**	

Fourth Semester		**CA**	**AS**	
ITS 193	Cooperative Education/Internship/Practicum		-	3
ITS 221	Advanced Computing Topics	-	3	
ITS 284	Data Communications Fundamentals	-	3	
Elective	Humanities, Natural Sci.†, Social Sci.	-	3	
Elective	Humanities, Natural Sci.†, Social Sci.	-	3	
	TOTAL	**-**	**15**	
	TOTAL	**34**	**66**	

Additional Requirements

- Earn a "C" or better in all ICS and ITS courses.
- Earn an overall GPA of 2.0 or better.

†Any Natural Science elective other than ICS 100.

Appendix C: Faculty

Regular Faculty

Name	Tenure Status and date	Degrees/Prof. Lic. Held	Rank
Annie Brown	Tenured, 1994	BA, M.Ed.	C-4
Kent Killam	Tenured, 1993	BS, MS	C-5

Part-time Faculty

Name	Tenure Status and date	Degrees Held	Rank

None

Appendix D: Advisory Committee

Jim Kennedy; Gemini 8M Telescope Project

Linda Nako; Systems Analyst II, State of Hawai`i Police Department

Danilo Padilla; ITD – Networks Services; Kamehameha Schools Hawai`i Campus

Lon Taniguchi; Vice President of Information Systems; KTA Superstores

Clayton Yugawa; Manager; Department of Data Services; County of Hawai`i

Appendix E: Definitions of Data Elements (All data includes West Hawai‘i)

A. Program Demand/Centrality:

1. Number of Applications: Total number of applications received complete and incomplete.

2. Number of Majors: Major declared/on file during the semester.

3. Student Semester Hours: Total number of semester hours based upon class credits and student enrollment. Sum of all class credits multiplied by the enrollment for each class. Includes practica and other classes where 5 students = 1 semester (credit) hour. Excludes cancelled, 99V, 199V, 299V, and all CVE classes.

4. Class Credit Hours: Sum of credits of all classes offered within the program/with the program/major code/alpha. Includes practica and other classes where 5 students = 1 semester (credit) hour. Excludes cancelled, 99V, 199V, 299V, and all CVE classes.

5. Number of Classes Taught: Total number of classes conducted/run within the program/with the program/major code/alpha. Includes practica and other classes where 5 students = 1 semester (credit) hour. Excludes 99V, 1 99V, 299V, and all CVE classes.

B. Program Efficiency:

1. Average Class Size: Average class size of all classes conducted/run within the program/with the program/major code/alpha. Includes practica and other classes where 5 students = 1 semester (credit) hour. Excludes 99V, 199V, 299V, and all CVE courses. Total enrollment in each class excludes students with "DR" and/or "W" grades.

2. Student Semester Hours per FTE Faculty: Total student semester hours from A.3. divided by analytical FTE Faculty.

    a. Analytical FTE Faculty: Teaching based upon a full load (15 or 12 credits depending upon the contact hours.) Division Chairpersons are assigned an analytical FTE Faculty equivalent of 0.70 FTE.

    b. Each full-time faculty within a program is considered to be 1 FTE. FTE based upon lecturers are calculated by the number of credits each are assigned to teach.

    c. Assigned time is to be extracted from FTE calculations… similar to calculating the FTE for a Division Chair. For example, if a Full-time faculty received 3 credits assigned time (out of a regular 15-credit load) it would be considered a .8 FTE rather than 1.

3. Equivalent Class Credit Hours per FTE Faculty: Total class credit hours from A.4. divided by total analytical FTE Faculty.

4. Percentage of Small Classes: Percent of classes within the program/with the program/major code/alpha that had less than 10 students. Includes practica and other classes where 5 students = 1 semester (credit) hour; however, these classes are considered to be Low-enrolled only if there are less than 5 students or between 6 and 9 students. Excludes 99V, 199V, 299V, and all CVE classes.

C. Program Outcomes:

1. Credits Earned Ratio (Remedial/Developmental): Percentage of program majors enrolled in ESL 9, ESL 13, ENG 20R, ENG 20W, ENG 51, LSK 51, MATH 22, and MATH 50 who passed with a grade of A, B, C, D or CR.

2. Credits Earned Ratio (General Education): Percentage of program majors enrolled in all LBART courses (excluding those in C.1.) who passed with a grade of A, B, C, D or CR. Includes practica and other classes where 5 students = 1 semester (credit) hour. Excludes 99V, 199V, 299V, and all CVE courses.

3. Credits Earned Ratio (Vocational Education): Percentage of students enrolled in vocational courses who passed with a grade of A, B, C, D or CR. Includes practica and other classes where 5 students = 1 semester (credit) hour. Excludes 99V, 199V, 299V, and all CVE courses.

4. Credits Earned Ratio (Overall): Combination of C.1., C2., and C.3. above.

5. Graduate Placement Rate: Students who graduated with a certificate/degree in the PAST academic year and found work in that field.

6. Degrees Awarded: The number of certificates and degrees awarded during the PAST academic year.

7. Retention Rate: New students within a program/major continuing or retained in that program/major from the past two or more terms. (Students registered in Fall 2000 who started in Spring 2000 or Fall 1999. Students registered in Fail 2001 who started in Spring 2001 or Fall 2000.)