

UNIVERSITY OF HAWAII COMMUNITY COLLEGES
ANNUAL INSTRUCTIONAL PROGRAM REVIEW
PROCEDURES, COMPONENTS, AND MEASURES

Information Technology

Introduction:

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.

Information Technology Associate in Science Program Outcomes:

Select and create software and hardware systems that meet unique information needs of an organization.

Implement the hardware, software, and procedural components of a data communication system in a business environment.

Display a professional attitude and abide by the legal and ethical guidelines of the information technology field.

Work both independently and cooperatively to meet an organization’s information technology goals.

Teach technical skills to others.

Organize and manage multiple tasks and co-workers making efficient use of time and resources.

Take advantage of opportunities for continuous learning and development in the information technology profession.

Part I. Quantitative Indicators for Program Review

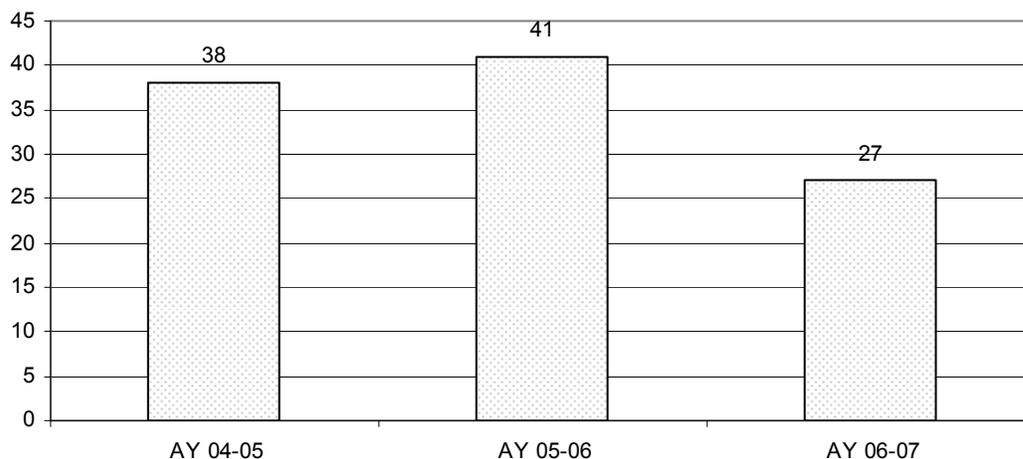
Information Technology (IT) – Revision 2	AY 04-05	AY 05-06	AY 06-07
1. Annual new and replacement positions in the State	5070	5070	5070
2. Annual new and replacement positions in the County	240	240	240
3. Number of majors	38	41	27
4. Student Semester Hours for program majors in all program classes	151	110	94
5. Student Semester Hours for non-program majors in all program classes	119	72	96
6. Student Semester Hours all program classes	270	182	190
7. FTE program enrollment	18	12.13	12.67
8. Number of classes taught	9	7	6
9. Determination of program's health based on demand (Healthy, Cautionary, or Unhealthy)			
10. Average class size	7.89	6.71	8
11. Class fill rate	48.97%	33.57%	40%
12. FTE of BOR appointed program faculty	2	2	2
13. Student/Faculty ratio	19:1	20.5:1	13.5:1

Information Technology (IT) – Revision 2	AY 04-05	AY 05-06	AY 06-07
14. Number of Majors per FTE faculty	18.36	22.78	17.65
15. Program Budget Allocation (Personnel, supplies and services, equipment)	\$97,654.10	\$84,826.00	\$72,230.90
16. Cost per Student Semester Hour	\$361.68	\$466.08	\$380.16
17. Number of classes that enroll less than ten students	8	5	4
18. Determination of program's health based on Efficiency (Healthy, Cautionary, or Unhealthy)			
19. Persistence of majors fall to spring	68.42%	58.54%	70.37%
20. Number of degrees earned (annual)	4	3	6
21. Number of certificates earned (annual)	1	0	0
22. Number of students transferred (enrolled) to a four-year institution	2	0	0
23. Perkins core indicator: Academic Attainment (1P1)	100.00%	84.62%	66.67%
24. Perkins core indicator: Technical Skill Attainment (1P2)	83.33%	100.00%	100.00%
25. Perkins core indicator: Completion Rate (2P1)	29.17%	40.00%	66.67%
26. Perkins core indicator: Placement in Employment, Education, and Military (3P1)	100.00%	100.00%	83.33%
27. Perkins core indicator: Retention in Employment (3P2)	100.00%	100.00%	80.00%
28. Perkins core indicator: Non Traditional Participation (4P1)	.00%	.00%	.00%
29. Perkins core indicator: Non Traditional Completion (4P2)	.00%	.00%	.00%
30. Determination of program's health based on effectiveness (Healthy, Cautionary, or Unhealthy)			
31. Determination of program's overall health (Healthy, Cautionary, or Unhealthy)			
32. Number of FTE faculty	2.07	1.8	1.53

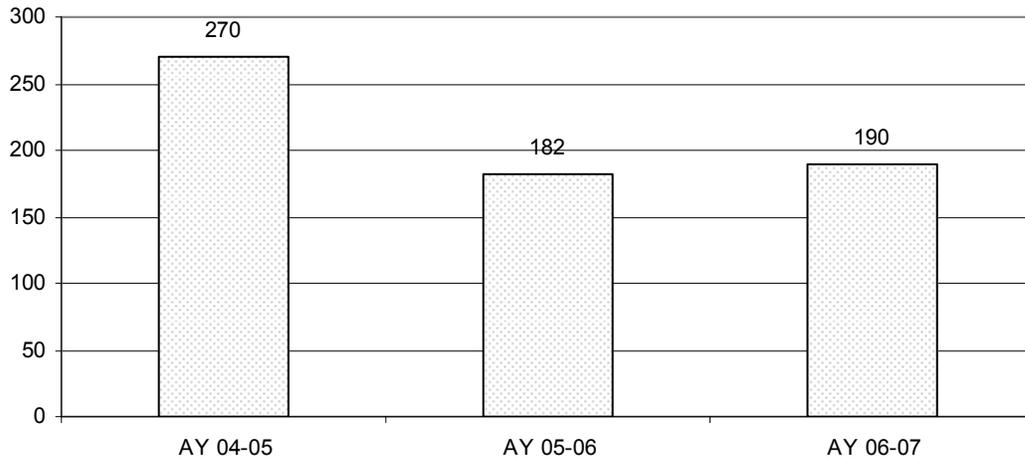
Part II. Analysis of the Program

Analysis of the data indicates a cautionary effectiveness and overall program health. Charts of representative data values are included below.

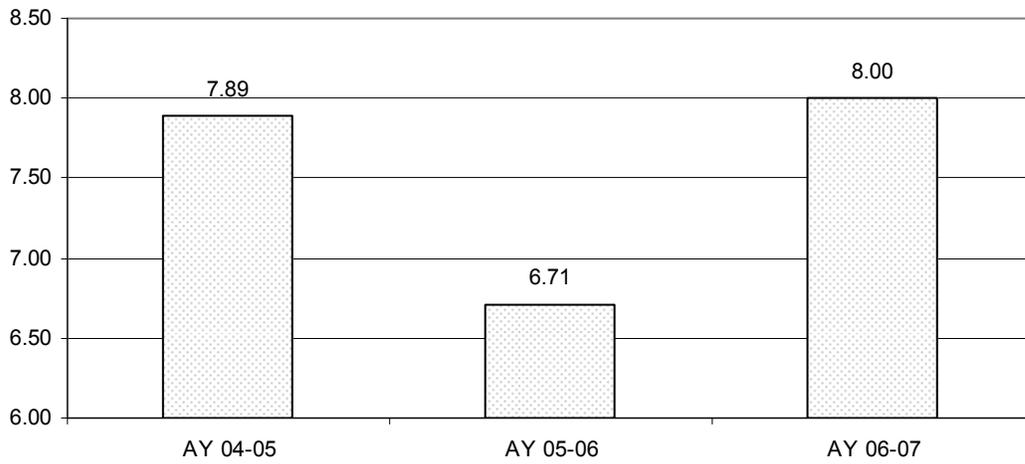
Information Technology Majors



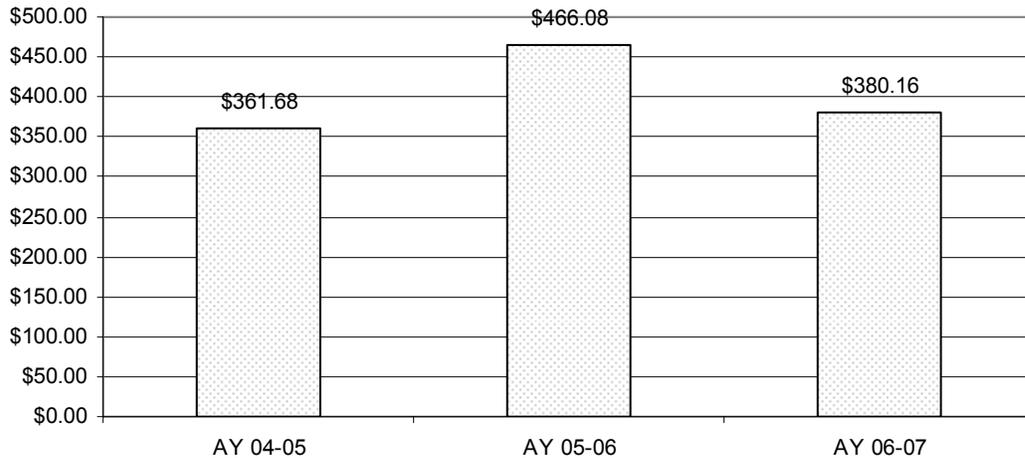
Student Semester Hours



Average Class Size



Cost per Student Semester Hour



These trends are not unique to Hawaii Community Colleges or the Big Island as there has been a decline in the number of Information Technology majors and graduates in community colleges throughout the country.

During her sabbatical in fall 2007, Annie Brown visited with Robert Schilling Jr. (full time faculty in Computer Information Systems) of Greenfield Community College in Massachusetts. The reason she picked this community college was that they offer an Associate of Science degree in Computer Information Systems (CIS) which is housed in the Business and Information Technology department. Ms. Brown thought that the similarities in organizational structure between the two colleges would provide insight in student recruitment, training, and retention. Greenfield's CIS degree offers three tracks of study: general, programming and networking tracks which align with HawCC's three tracks: support, programming, and networking.

Mr. Schilling revealed that well trained IT students are also in high demand in the state of Massachusetts; however, since they also maintain an open-door admission policy, they have also experienced poor student preparation and high attrition rates. According to Mr. Schilling only approximately 25% of their incoming students taking one or more computer courses in the first year return for higher level courses in a second year. While he could not give Ms. Brown exact figures for their annual graduation rate he estimated 8-9 students graduate per year. The average age of their general student population is around 29 years. Most of their students are also working and/or looking for work, and if job opportunities appear, they will suspend their academic pursuits and join the work force instead. Unfortunately, the ones who continue are mostly not prepared for the intensity of the CIS courses, or they have low motivation and self confidence.

This scenario is quite similar to our situation at HawCC and we are experiencing the same challenges.

The efficiency of the IT program has been fluctuating during this review period. Average Class Size, Student Semester Hours, the Percentage of Small Classes and Cost per Student Semester Hour have gone up and down although all measurements tend to be low.

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. Every effort is being made to maximize the efficiency of offering the program courses.

The most significant gains in program effectiveness and efficiency will come with an increase in the number of prepared, motivated, conscientious, and persistent majors. The IT program faculty continues to look at the content and packaging of program courses in an effort to attract and retain more students.

Part III. Action plan

The action plan tasks from the previous IT program review are included in the following table. A row has been added between the tasks to reflect the current status of action on the task.

Action Plan Tasks	Year	Responsible Party
Investigate the establishment of possible certificates of completion in Information Technology.	2007	Annie Brown / Kent Killam
A new certificate of completion in Computer Support will be proposed for Fall 2008. Other certificates are being considered to package existing courses in the IT AS degree program.		
Explore possibility of offering more college information technology service courses including the requirement of an information retrieval/computing literacy course for the AA liberal art students.	2008	Annie Brown / Kent Killam
Initial efforts to have ICS 101 satisfy a Social Science General Education requirement for the AA liberal arts degree have begun with the review of CCCM #6004. Efforts are underway to identify the course content which aligns with and supports the Social Science requirements of the degree.		
Participate in a review of 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.
Ongoing – no action to date.		

Action Plan Tasks	Year	Responsible Party
Investigate and participate in a campus supported pilot program for electronic portfolios.	2008	Annie Brown / Kent Killam / Other individuals as assigned by the VCAA.
Ongoing – no action to date.		
Review the current programming strand of the AS degree program to include course content, complexity, and ordering of ITS 103, ITS 118, and ITS 151.	2008	Annie Brown / Kent Killam
New Fall 2007. The programming strand is extremely difficult for most of our majors and causes problems for many students. While programming is traditionally part of an AS degree in IT we can review the course offerings to ensure appropriateness and applicability of the content and delivery.		

The equipping of the IT lab in Room 140 is an ongoing action. The network server for ITS 215 Network Administration has been relocated to this room and utilized for the fall 2007 semester.

Due to funding constraints, we were not able to acquire the computers planned for the rest of the hands-on lab. For spring 2008 we will borrow two computers from classroom 136 and utilize a faculty workstation to establish a hands-on network. A new course incorporating operating system concepts and the Linux operating system will be offered in spring 2009 as a topics course for IT majors. This course will also be available to Electronics majors to fulfill one of their required courses. It will also be offered to all students who meet the course prerequisite. The development of this course satisfies our previous year's plan to strengthen complementary requirements and reduce duplication within our college.

Our continuing plan is to request the funding required to establish a formal hands-on lab in Room 140 and to establish a more robust Linux operating system/networking lab for HawCC students.

Part IV. Resource Implications (physical, human, financial)

Recurring Instructional Costs	
MSDN Academic Alliance Program	\$415 per year
The Business Education and Technology Division participates in the Microsoft Development Network Academic Alliance Program. This program is designed specifically for academic labs, faculty, and students in curriculum areas of Computer Science, Engineering, and Information Systems to make it easier and less expensive to get Microsoft developer tools, platforms, and servers for instructional and research purposes. Annual membership currently costs \$415 and is a significantly reduced cost for Microsoft products used in instruction.	

Recurring Instructional Cost	
Novell SUSE Linux academic license	\$300 per year
Annual subscription fee to utilize Novell SUSE Linux in class and the network in Room 140.	

Budget Requests	
Equipment for Room 140	\$5,000 – 7,000
As requirements for the IT lab in Room 140 are refined equipment purchases will be required to complete the systems needed for instruction and extensive hands-on activities. It is estimated that this will require approximately \$5000 to \$7000.	