Computer Information Systems (CIS)
PROGRAM REVIEW REPORT
2014 - 2015
Faculty and Staff (List all)

Full Time	Adjunct	Support Staff
Flores, Richard		
Mustain, James		
Solis, Roberto		

I. Executive Summary

Program Description:

The CIS program includes microcomputer applications, programming languages, web design, and computer support of business organizations. The program offers training in the use of business application software and hardware to prepare students for professional careers, transfer study, and/or personal use.

Strengths/Effective Practices:

The CS/CIS department has the ability to identify and communicate technological trends as they occur (to the extent supported by the college). In addition, faculty has practical business experience that allows the addressing of real world business issues.

Weaknesses/Lessons Learned:

Antiquated computer equipment results in:

- the inability to exploit current technology to the fullest.
- difficulty in training students to the latest industry standards.
- inability to use the latest software versions.

No WiFi in labs and classrooms

- with the advent of tablets, WiFi is essential to student connectivity to ELS (i.e., Blackboard) and other educational websites.

Non-current software

Recommendations/Next Steps:

The department is pursuing the philosophy of “bring your own device” (i.e. BYOD). This is impossible to achieve without WiFi and reasonably current hardware.

The CS department recommends that we invest in 20 new Mac Book Pro computer laptops to replace the aging laptops currently in its possession.

The CIS department recommends that we invest in 25 new android/Windows tablets to enhance classroom instruction and delivery.

Computer Information Systems

II. Curriculum

Course Number and Title (Courses must be reviewed every six years to remain active)	Date of last Curriculum Committee Review	2013 - 2014 Course offerings By Term and # of Sections				SLOs Assessed (Semester / year)
		Summer	Fall	Winter	Spring	
CIS 099 introduction to Windows and Personal computers	**S11**	0	2	0	2	**Outcomes 1 and 2 Fall 2013 and Spring 2014**
CIS107 Fund of Information Technology	**S11**	1	4	0	4	**Outcomes 1 and 2 Fall 2013 and Spring 2014**
CS111 Intro to Prog. Concepts/Design	**F09**	0	2	0	2	**Outcomes 1A, 2A, 3A, 4A, 4B, 5A (Fall 2013 and Spring 2014)**
CIS119 Intro to Web Programming	**F06**	0	0	0	0	
CIS130 Microcomputer Applications I	**F05**	1	5	1	6	**Outcomes 1 and 2 Fall 2013 and Spring 2014**
CIS150 Web Development (Dreamweaver)	**F08**	0	0	1	0	**Outcomes 1, 2, and 4 Winter 2014**
CIS162 Electronic Spreadsheets	**S09**	0	0	0	0	**NA**
CS225 Object Oriented Programming with C++	**S11**	0	1	0	1	**Outcomes 1A, 2A, 3A, 4A (Fall 2013 and Spring 2014)**
CIS 230 Microcomputer Applications II	**S11**	0	0	0	1	**Outcomes 1A, 2A, 3A, 4A, 5A (Spring 2013)**

III. Degrees and Certificates

Title	Type	Date Approved by Chancellor's Office	Number Awarded 2011	Number Awarded 2012	Number Awarded 2013	Number Awarded 2014
Biological and Physical Sciences (and Mathematics)	AS	1950	212	224	277	373
Business	AS	1965	170	159	144	127
Liberal Arts: Business Technology	AA	2009	8	13	5	32

TYPE: **AA** = Associate in Arts **AS** = Associate in Science Degree **C** = Certificate **S** = Skill Award
AA-T = Associate in Arts for Transfer **AS-T** = Associate in Arts for Transfer

IV. Sections Offered

Thirteen classes were offered in the Fall semester with at least one section offered in the evening and four sections offered in the Distance Education format. Fifteen classes were offered in the Spring semester with at least one section offered in the evening and six sections offered in the Distance Education format. Sections are offered at a variety of times and days and are typically fully enrolled at the start of each term. This represents a reduction of one class per semester when compared to the previous year and as many as six fewer classes when going back to 2009. It is believed that these reductions were heavily influenced by budget restrictions during the recent recession, but given our full enrollments, it would seem that there is an opportunity to add classes that will be fully enrolled.

Retention rates were 85% for theFall semester and 89% for the Spring semester. This reflects an improvement over the previous year, but is still slightly below the campuswide retention rate.

Success rates were approximately 63% for both Spring and Fall semesters compared to 57% for the previous year. This is a welcome improvement, but is still slightly lower than the campuswide success rate.

V. Student Demographics

The ratio of men to women in our department is about 3:2. This is somewhat higher than the campuswide ratio. Some investigation has been conducted into programs aimed at increasing the number of women in our department, but no definitive steps have been taken so far.

Success rates for men have improved approximately five percentage points over the last five years, but they remain slightly lower than campuswide rates. The average success rates for women over a five year period are about three percentage points higher than for men, but this is due largely to a highly successful Spring of 2011 and Fall of 2012. Success rates for women have dropped somewhat since those semesters.

Retention rates for men and women have dropped approximately eight percentage points over the last five years, but they correspond fairly closely with a similar drop in campuswide figures.

VI. Student Accomplishments

CS student Greg Kalaydgian founded his first company with a family friend as his business partner. Their first mobile app is called Chat Fly.

VII. Student Learning Outcomes Assessment Reflection

Semester exams continue to be refined to include additional SLOs

Lectures and classroom exercises are continually refined to improve quality of the delivery of course content and retention of material.

A peer review exercise has been implemented to increase student engagement and improve student performance.

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VIII. Progress toward previous goals

During 2013 - 2014, we accomplished:

	Previous Goals	Progress/ Persons Responsible	Status	Institutional Goal
Goal 1 EMP	Develop associate degrees in Computer Science ~~and Information Systems and Computer Science.~~	~~Flores, Mustain,~~ Solis	Ongoing	6.1.1
Goal 3 EMP	Modify curriculum as needed to align with degree patterns proposed in response to SB 1440	Faculty. These proposals, for CS, are now available.	Completed Spring 2014	6.1.1
Goal 1 2011	WiFi in CIS classrooms	Tech Service implementation. Target: Spring 2015	Ongoing	3.1.4
Goal 2 2011	Incorporate a student monitoring system	Tech Services implementation. Target: Spring 2015	Ongoing	3.1.4
Goal 3 2011	Develop new courses in response to current advances in technology	As soon as budget permits. Target: Fall 2015	Ongoing	
~~**Goal 1 2012**~~	~~Create a certificate of completion in Health IT~~	~~Actions: Develop curriculum Target Date: Fall 2014~~	~~Ongoing~~	
Goal 2 2012	~~Create a Mobile Apps degree~~	~~Actions: Develop curriculum Target Date: Fall 2014~~	~~Ongoing~~	

In addition to previous goals, during 2014 - 2015, we plan to:

	Description	Actions / Target Date	Data Index*	Institutional Goal**
Goal 1	Create Certificate of Completion in Web design	Action: Develop curriculum Target Date: Fall 2015	Ongoing	
Goal 2				
Goal 3				
Goal 4				

**For instutional goals visit link below.*
http://www.citruscollege.edu/admin/planning/Documents/StrategicPlan2011-2016.pdf

***For Educational and Facilities Master Plan, use table below.*

EFMP 1 – Develop associate degrees in Computer Science and Information Systems, Computer Science, Web Development, and Productivity Software.
EFMP 2 – Use technology to create real-time instruction in which faculty and/or students at off-campus sites are in the same learning environment.
EFMP 3 – Modify curriculum as needed to align with degree patterns proposed in response to SB 1440.

IX. Budget Recommendations for 2014 - 2015

(Add rows or attach additional pages as needed for complete description / discussion)

Certificated Personnel (FNIC)

Position	Discuss impact on goals / SLOs	Impact	Priority
NA			

Classified Personnel

Position	Discuss impact on goals / SLOs	Impact	Priority
NA			

Staff Development (Division)

Item	Discuss impact on goals / SLOs	Cost	Impact	Priority
Funding to attend NCWIT, MPICT, and BATEC conferences	The goal is to obtain the latest methods and procedures to augment instructor skills in the latest programs and technology	$3000	M, N, Q	High
Funding to attend Apple's WWDC (World Wide Developers Conference)	The goal is to obtain the latest developments in xCode for the development of apps of iOS devices.	$3000	M, Q	High
Funding to attend MacWorld	The goal is to obtain the latest technological advances in software development and applications for PC's and slate devices. This event also offers an excellent opportunity to form valuable contacts for future advisory board events.	$1500	M, Q	High
Funding to attend Adobe conferences	The goal is to obtain training in the various software products offered by Adobe.	$1500	M, Q	High
~~Funding for Health IT externship~~	~~The goal is to have a professor serve as an extern to obtain HIT technology training from a local hospital (e.g., City of Hope)~~	~~$10,000~~	~~M, Q~~	~~High~~
Funding for mobile devices externship	The goal is to have a professor serve as an extern to obtain mobile devices software development training from an iOS development software company (e.g., Blizzard in Irvine).	$10,000	M, Q	High

Facilities (Facilities)

Describe repairs or modifications needed	Discuss impact on goals / SLOs	Building / Room	Impact	Priority
Upgrade classroom technology	To improve technology support for teaching.	IS, PC	F	High
Mac-equipped classrooms	Allow CIS/CS faculty to teach Mac classes.	LB 204, IS, PC	F	Medium
WiFi in classrooms	Allow students to use laptops and slate devices.	IS, LB	F	High
Classroom tablets	Allow students to use tablet devices for web design compatibility	IS, PC	F	Medium

Computers / Software (Tecs)

Item	Discuss impact on goals / SLOs	Cost	Impact	Priority
Upgrade instructor computers and printers	Enhance technology available to instructors.	$10,000	F	High
MacBook Pro Laptops	The goal is to have a CIS/CS classroom that has Apple laptops that are wheeled into the class by the instructor, distributed to the students, and then collected by the instructor and the end of class. These laptops give the students the ability to run Mac OS, Windows OS, or any other operating system.	$160,000	F	High

Equipment

Item	Discuss impact on goals / SLOs	Cost	Impact	Priority
Faster internet speed in offices and classrooms	To enhance learning. With the advent of slate devices students need fast internet connectivity because they are downloading eBook information, PDF's, videos, etc. during the class session.	$8000/room based on Leigh's estimate	F	High
WiFi in CIS/CS courses	This is needed for the connectivity of laptops and slate devices (e.g., iPad's, iPhones, Android devices, etc.) to the Internet.	$8,000	F	High
LED Big Screen TV's	The goal is to replace the class room projectors with large LED big screen (70" or greater) displays.	$15,000	F	High
Apple TV modules	These are not television sets, rather they are media modules that allow wireless connection between the instructor's laptop/iPad to a designated display. Note that this	$2000.00	F	

	request is contingent on the purchase of the LED big screens tv's listed above.			
Apple Extended Warranty	This is Apple's parts and labor extended warranty that covers parts and labor for 3 years.	$350/laptop	F	

Supplies (Division)

Item	Discuss impact on goals / SLOs	Cost	Impact	Priority

General Budget Guidelines

Budget Preparation Tips:

- Include items on the budget form that are needed for program success even if there is no financial need associated with the request (ie training that could be accomplished with on-campus resources, sharing of resources with another discipline or department etc.)
- Whenever possible, obtain actual cost for the items / equipment you wish to purchase. This avoids situations where items are considered for purchase but it is determined that the actual cost greatly exceeds the original estimate.
- Identify unit cost (cost per item) and the number of units desired in requests.
- Indicate if there is a lower level of financial support that would be workable in your educational plan – if you request $30,000 for a classroom set of equipment (one item for each student), if $15,000 were available, would it be possible for two students to share an item? Is the request "All or nothing"?

Determining Budget Impact:

Indicate one or more of the following areas that your request will affect:

M = Mission: Does the request assist the program in meeting the District's mission and established core competencies and / or diversity?
N = Need: Does the request assist the program in addressing needs based on labor market data, enrollment, articulation, advisory committee, regional agreements, etc.?
Q = Quality: Does the request assist the program in continuing or establishing appropriate lecture/lab unit values? Will the request assist in the regular reviewed / updated of course outlines? Is faculty development adequate? Does program need support in addressing the State and District emphasis on critical thinking, problem solving and written expression? Does program need support to meet stated objectives in the form of SLOs? Do course pre-requisites and co-requisites need to be validated?
F = Feasibility: Does the request assist the program maintain adequate facilities, equipment, and library resources? Is there a need for repair or modification of facilities? Is there a need for new equipment or supplies? Are course offerings frequent enough for students to make adequate progress in both day and evening programs? Does the program have adequate communication with & support from Counseling?
C = Compliance: Does the request assist the program in meeting Federal, State & District requirements? (Do the course outlines meet state, district & federal regulations for content? Do vocational programs have regular advisory meetings?)

Budget Priorities:

When establishing priority, consider the following:

Priority 1: This item is mandated by law, rule, or district policy.
Priority 2: This item is essential to program success.
Priority 3: This item is necessary to maintain / improve program student learning outcomes.

X. Career Technical Education

TOP CODE: TOP CODE: 0702 COMPUTER INFORMATION SYSTEMS
TOP CODE: 0707 COMPUTER SOFTWARE DEVELOPMENT
TOP CODE: 0708 COMPUTER INFRASTRUCTURE AND SUPPORT

1. Advisory Committee meeting date(s): June 8th, 2012

2. Advisory Committee recommendations

1.	~~Create an Associate's degree for students who intend on transferring to a UC or private university~~
2.	Create an Associate's degree in accordance to SB1440
3.	~~Create a mobile devices software development associates degree~~
4.	~~Create a health IT associates degree.~~
5.	

3. Are these Advisory Committee minutes on file with Academic Affairs?

YES X NO _____

4. Vocational Funds

Source	Purpose	Amount
NA		

5. Labor Market Data 2008 – 2018

(California Employment Department Labor Market Information for Los Angeles County)
http://www.jff.org/sites/default/files/CTW_ExaminationInfoTechnJobMarket_071212_0.pdf

Occupation	Soc Code	Employment Estimated	Employment Projected	Change
15-1041	Computer support specialists	583,168	565,114	(3%)
15-1099	Computer specialists, all other	225,543	237,778	5%

6. Discuss demand for workers in this TOP code based on CA Employment Development Department Labor Market Information for Los Angeles County and Advisory Committee input. Describe the rationale for use of data regarding additional geographic areas.

Based on advisory committee input and the California EDD Labor Market Information for Los Angeles County for 2008-2018, in virtually every occupational sector for which data was provided (including computer systems design and related services, computer software engineers, computer applications, network systems, and data communications analysts), the current estimated employment for particular computer-related jobs in those sectors is lower (and in some cases significantly lower) than the estimates for projected future employment in those sectors and jobs. For that reason, it would appear that there is and will continue to be a demand for more employees in computer-related jobs for the foreseeable future. In addition, and for the same reasons that the LA County data was useful, similar statistical analyses for other California counties (and particularly for those in Southern California representing the Citrus College constituencies) might also be useful to effectively evaluate the prospective market needs for computer-related jobs in those counties.

CORE INDICATORS

TOP CODE: 0702 COMPUTER INFORMATION SYSTEMS

Indicator	Negotiated Level	2009-10 (Actual)	2010-11 (Actual)	2011-12 (Proposed)	2012-13 (Proposed)	2013-14 (Planning)
1. Technical Skill Attainment	88.81%	85.71	96.00	91.43	90.00	96.55
2. Credential, Certificate, or Degree	82.05%	42.86	100.00	90.91	87.50	94.74
3. Persistence or Transfer	85.96%	85.71	100.00	94.29	96.61	96.55
4. Placement	81.72%	100.00	66.67	100.00	50.00	25.00
5. Nontraditional Participation	20.37%	71043	68.00	60.00	53.33	62.07
6. Nontraditional Completion	25.99%	75.00	80.00	58.33	40.00	50.00

TOP CODE: 0707 COMPUTER SOFTWARE DEVELOPMENT

Indicator	Negotiated Level	2009-10 (Actual)	2010-11 (Actual)	2011-12 (Proposed)	2012-13 (Proposed)	2013-14 (Planning)
1. Technical Skill Attainment	87.27%	100.00	100.00	85.71	100.00	100.00
2. Credential, Certificate, or Degree	81.50%	100.00	80.00	100.00	100.00	100.00
3. Persistence or Transfer	86.50%	100.00	100.00	85.71	100.00	100.00
4. Placement	76.97%	0.00	100.00	100.00		
5. Nontraditional Participation	22.60%	0.00	0.00	0.00	0.00	0.00
6. Nontraditional Completion	26.50%	0.00	0.00	0.00	0.00	0.00

TOP CODE: 0708 COMPUTER INFRASTRUCTURE AND SUPPORT

Indicator	Negotiated Level	2009-10 (Actual)	2010-11 (Actual)	2011-12 (Proposed)	2012-13 (Proposed)	2013-14 (Planning)
1. Technical Skill Attainment	87.27%			50.00	100.00	50.00
2. Credential, Certificate, or Degree	81.50%			100.00	100.00	100.00
3. Persistence or Transfer	86.50%			75.00	0.00	100.00
4. Placement	76.97%			100.00	100.00	100.00
5. Nontraditional Participation	22.60%			25.00	0.00	0.00
6. Nontraditional Completion	26.50%			0.00	0.00	0.00

Core 1 - Skill Attainment, GPA 2.0 & Above:
Core 2 - Completions, Certificates, Degrees and Transfer Ready :)
Core 3 - Persistence in Higher Education :)
Core 4 - Employment: 79.86% Performance Goal