



## Information Technology

### PROGRAM REVIEW REPORT 2014 - 2015

#### Faculty and Staff (List all)

Full Time	Adjunct	Support Staff
Stoner, Bruce	Boyden, Pixie	James Lancaster, Dean
	Buchwald, Leigh	



## Info Tech

### I. Executive Summary

#### **Program Description:**

Information Technology, a career technical program, prepares students for a variety of entry-level occupations or advancement within this field with a focus on networks, security, internet protocol communications, project management, software support, device integration, and ethics. Students in the program have the opportunity to complete industry certifications from CompTIA, which include A+, Network+, Server+, and Security+. Information technology courses lead to a certificate of achievement in Information Technology.

The Advisory Council consists of 23 members including a chief information officer, the president of a software company, senior account executives from information technology firms, a systems engineer, and a human resources manager.

Courses in information technology are offered during the day and evening.

#### **Strengths/Effective Practices:**

The theory covered in the lecture and on demand videos on the web, and hands-on lab experiences, prepare students for industry certifications from CompTIA, entry-level employment or advancement in occupations that require critical thinking/problem solving, effective application, and communication skills.

Full time faculty are CompTIA certified in A+, Network+, Server+, Security+, and are CompTIA Academy Educators. The CompTIA Academy brings together educators, exhibitors and industry experts for peer-to-peer learning, interactive discussions with industry experts, and face-to-face networking. This helps in the preparing students for certification success from CompTIA, which include A+, Network+, Server+, and Security+.

Adjunct faculty are CompTIA certified in the courses they teach.

In the last five years, we have seen a steady increase in the number of certificates achieved.

#### **Weaknesses/Lessons Learned:**

Students can buy CompTIA vouchers to take the certification exams from the instructor. The exams are taken at VUE testing centers and results are private and not available for compiling. Since the tests are taken after the semester ends, or sometime after if the student feels that they

need more time to study before taking the test, their personal results reporting to the department are months afterward or not at all.

The current lab setting (PC 316) was not designed for instruction of IT courses. Therefore, the instructional space does not meet the needs of students. A redesign is warranted, and this need is identified in the goals section of this report.

### **Recommendations/Next Steps:**

The Information Technology program is in transition. The plan is to combine the courses offered in this program with courses offered in Computer Information Systems (CIS) to create a new program. With the planned retirement of the IT full time faculty member, and with current and emerging standards and expectations, the timing is ripe for this change.

#### Recommendation:

Create a new program in Information and Communication Technology through combining IT and CIS courses and through modification of courses and development of new courses. In spring 2015, present this recommendation to the Educational Resources Committee and the Academic Senate.

#### Rationale:

The Chancellor's Office and Statewide Sector Navigator are developing model curricula for ICT (Information and Communication Technology) in a process similar to the process of reviewing curriculum for the associate degrees for transfer. The draft curricula are posted on the C-ID site. At the same time, the LA Co Deputy Sector Navigator for ICT/Digital media and the Center of Excellence are in the process of defining criteria for effective programs in this changing discipline.

These groups work regionally with businesses and programs, and from this dialog, the idea of combining IT with CIS has emerged. The state and regions will set statewide models to avoid confusion for students and employers.

The goal is to align curriculum with emerging models so that Citrus College's programs continue to meet the needs of students and the community. This will require modifying the instructional laboratory to meet the ICT model curricula and new certificates requirements.



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### 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	
IT104 PC Hardware and Maintenance	S11	0	2	0	2	SP 2013
IT107 Network Technology	S11	0	2	0	2	SP 2013
IT108 Networking Operating Systems	S10	0	1	0	1	SP 2013
IT109 Network and Computer Security	S10	0	1	0	1	SP 2013
IT110 Virtual Computing	S10	0	0	0	0	SP 2013
IT 698B Cooperative Education		0	0	0	0	
IT 698D Cooperative Education		0	0	0	1	
IT 699B Cooperative Education		0	0	0	0	
IT 699D Cooperative Education		0	0	0	0	

### 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
Information Technology	C	2003	3	4	7	10

**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

Review the data sheet for section counts, which includes the following information by course category:

1. Section counts
2. Enrollment by student demographic
3. Success and retention

Provide a brief narrative analysis and describe any trends or concerns you noticed.

The IT program provided twelve course offerings in 2013 – 2014 – spread evenly among morning, afternoon, and evening time blocks. Some courses have been offered via distance education.

Daytime students can complete the program's certificate in two semesters. Offerings are scheduled so that students taking courses in the evening can complete the certificate in three semesters.

Enrollment in courses ranges from a low of 57 in the spring of 2009 to a peak of 137 in Spring 2012. Overall, enrollment has increased. In the most recent enrollment periods (fall 2013 and spring 2014) enrollment was steady at 117 and 120. Most students fall into the age ranges of 20 – 24 (48% in spring 2014) and 25 – 49 (33% in spring 2014).

Program level retention and success rates run below those of the collegewide student population, but it is important to note that the number of certificates has increased steadily.

#### V. Student Demographics

Review the data sheet for program enrollment, retention, and success which includes data on these metrics by student demographic

Provide a brief narrative analysis and describe any trends or concerns you noticed.

Overall, students are 13% female and 84% male with 1% of undeclared gender. The female success rate over the years ranges from a low of 40% to a high of 100%. The male success rate over the years) ranges from a low of 56% to a high of 92%.

Ethnically, the three highest populations are Hispanic, White, and Asian. The Hispanic success rate over the years ranges from a low of 44% to a high of 100%. The white success rate over the years ranges from a low of 52% to a high of 100%. The Asian success rate over the years ranges from a low of 36% to a high of 100%.

Ethnically, the majority of our students are identified as Hispanic, justifying Citrus's claim of being an Hispanic serving institution. Hispanic enrollment has increased significantly in recent years with the impact spread fairly evenly over other ethnicities whose percentages have remained relatively stable. The IT program has a larger percentage of students from non-traditional age groups (25 or older) than the college as a whole. This percentage has been slowly increasing since 2009.

As mentioned above, program level retention and success rates are below those of the collegewide student population. However, for certain student demographic groups, success rates exceed the collegewide results. For example, in fall 2009, Hispanic/Latino students had better success rates. In fall 2010, Asian, black, and Hispanic/Latino students performed better than the collegewide population. However, in fall 2013, only Hispanic/Latino students out-performed the college population. These results suggest closer analysis and research are warranted. For example, success rates in courses need to be analyzed more closely to see if there are particular courses that cause a roadblock for student success.

## VI. Student Accomplishments

Provide current, interesting information about accomplishments of students who have participated in this program.

Some students from the IT program have returned to share their experience of taking and passing their CompTia certifications. Two of them found employment with the BestBuy service center, repairing notebook computers. One student is working at Chaffy College IT department as an Apple/network tech and maintains the security cameras for the campus. Another certified student has completed training for the L.A. Sheriff's department and works with hard drive forensics. Several have started their own business in computer repair/networking.

Adjunct instructor Pixie Boyden, in collaboration with CTE Transitions, the division dean, and Northview Intermediate School, developed and deployed an extraordinary summer camp pilot. 21G-TECH summer academy encouraged the interest of underrepresented minority 7<sup>th</sup> and 8<sup>th</sup> grade girls to pursue career pathways and higher education in IT, computer science, and robotics. 21G-TECH included applied learning/lab activities, tablet and cloud computing technologies, classroom presentations and activities at Citrus College and two field trips to the University of Southern California.

## VII. Student Learning Outcomes Assessment Reflection

Academic Senate Approved 4/11/12

All SLOs for every course will need to be assessed at least once within the 5-year comprehensive program review cycle. Upon reflection with program colleagues (or self-reflection for programs with only one instructor), please provide a brief narrative to the following (at least one row for one SLO needs to be completed for each course at this time):

Complete SLO assessment and analysis in the table at:

<http://intranet/SLO/Pages/default.aspx>

DOCUMENT REFLECTION DISCUSSION BELOW (FOR BOTH SUMMER/FALL 2013 AND WINTER/SPRING 2014)

The students perform configuration tasks using computers, network devices and techniques that will result in a working LAN. Most students willingly work toward completion of required tasks. Students that let their lab partners do most of the work when they think the instructor is not watching them. Change: Challenge the watching student to perform the task and the partner to act as tutor, and help student that might be afraid to make mistakes. Lab handouts are continually updated with industry changes and language improved for clarity.

Students must give a verbal presentation of a submitted written analysis of importance of Personal Computers in the information technology field to class and instructor. Majority of students turned in professional level reports with using acronyms properly. Most students were not comfortable giving a verbal presentation. Change: start with smaller verbal presentation, with longer one later in the semester when student may be more comfortable with classmates.



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### VIII. Progress toward previous goals

During 2013-2014, we accomplished:

	Previous Goals	Progress/ Persons Responsible	Status	Institutional Goal
<b>Goal 1 EMP</b>	Collaborate with the facilities planners to create and/or modify facilities with appropriate space, infrastructure, and equipment <b>(Formerly Goal 4 2011)</b>	Bruce Stoner	Ongoing	EFMP 4
<b>Goal 2 2011, 2014</b>	Collaborate with the CTE Dean and facilities planners to create and/or modify facilities with appropriate space, infrastructure, and equipment	Remodel PC 316 - IT classroom & instructional area: The instructional area does not meet current fire code. This limitation forces a 32% reduction by limiting enrollment to 18 students per section. Therefore, PC 316 needs a remodeled to continue a minimum enrollment of 25 students per section. <ol style="list-style-type: none"> <li>1. Determine plausibility/necessity of moving instructional location. (Fall 2011)</li> <li>2. Determine plausibility of splitting max capacity for lab portions (similar to nursing/dental labs) to accommodate fire code requirements and continue to maintain student enrollment and access to instruction for spring 2012 schedule. (Fall 2011)</li> <li>3. Begin remodel planning for spring 2012 budget planning and approval process. (Fall 2011)</li> <li>4. Determine needs to meet fire</li> </ol>	Ongoing (FA 2014)	EFMP 4  1.1.1 2.2 3.1 5.2



		<p>code safety while maximizing available space and infrastructure. (Fall 2011)</p> <p>5. Determine infrastructure, furnishings, equipment estimates for remodel. (Winter 2011)</p>		
<p><b>Goal 3 2011, 2014</b></p>	<p>Increase Non-Traditional student participation and completer statistics according to district and state negotiated levels</p>	<p>1. Investigate opportunities to identify and encourage non-traditional student participation and completion to meet state and district negotiated core indicators levels which will also serve to grow the program. Suggestions include:</p> <ul style="list-style-type: none"> <li>a. The lack of tracking student progress and completion affects statistical outcomes and core indicator reporting. Track student progress, completion and placement. Determine how to collect this data.</li> <li>b. Investigate success tracking policy procedure with CompTIA exam vouchers and/or other instructor resources.</li> <li>c. CTE Counselor secondary/post-secondary class visits</li> <li>d. Increase or strengthen existing partnerships, and develop outreach with secondary partners; review course articulation and pathway potential.</li> </ul> <p>4. Participate in workshops or conference attendance addressing special populations and program growth. Utilize</p>	<p><b>On-going (FA 2014)</b></p>	<p><b>1.2 2.2.6 2.3 2.3.5 5.2.4</b></p>

		CompTIA Resource Center products for student recruitment, learning content, career guidance & pathways.		

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

	<b>Description</b>	<b>Actions / Target Date</b>	<b>Institutional Goal**</b>
<b>Goal 1</b>	Combine The IT and CIS programs to form new program to meet emerging needs identified in the State Model curricula in ICT and the LA Co Deputy sector navigator.	Spring 2015 – Submit proposal to Educational Programs Committee and Academic Senate.	EFMP 1 EFMP 3
<b>Goal 2</b>	Clean up and modernize equip and supplies to align with goal 1		EFMP 1 EFMP 3
<b>Goal 3</b>			

*\*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 – Collaborate with Computer Science and Information Systems to avoid redundancy while reflecting current industry needs.
EFMP 2 – Integrate virtualization technology across the curriculum
EFMP 3 – To respond to industry needs, expand curriculum to meet new certification requirements.
EFMP 4 – Collaborate with the facilities planners to create and/or modify facilities with appropriate space, infrastructure, and equipment.



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### 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
Full time faculty (1 FTEF) to replace full time faculty member retirement	Full time faculty improve oversight and review of program goals and student learning outcomes.	M, N, Q, F	1

#### Classified Personnel

Position	Discuss impact on goals / SLOs	Impact	Priority

#### Staff Development (Division)

Item	Discuss impact on goals / SLOs	Cost	Impact	Priority

#### Facilities (Facilities)

Describe repairs or modifications needed	Discuss impact on goals / SLOs	Building / Room	Impact	Priority
Remodel PC 316 – I.T.	Remodel PC 316 – I.T. instructional area to meet fire code safety and maximize available space and infrastructure.	PC 316	M, N, Q, F	1, 2, 3,

#### Computers / Software (TeCS)

Item	Discuss impact on goals / SLOs	Cost	Impact	Priority
Computers / Software	Faculty needs to identify equipment, software, and tools that need to be purchased or updated to include latest technology and a lab remodel.	\$30,000	M, N, Q, F	2, 3

#### Equipment

Item	Discuss impact on goals / SLOs	Cost	Impact	Priority

Workbenches for IT Lab	Faculty needs to identify equipment, software, and tools that need to be purchased or updated to include latest technology and a lab remodel.	\$10,000	M, N, Q, F	2, 3

**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.



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### X. Career Technical Education (not required for 2014)

TOP CODE: 70800

1. Advisory Committee meeting date(s): 6/13/12

\_\_\_\_\_

2. Advisory Committee recommendations

1.	
2.	
3.	
4.	
5.	

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

YES X NO \_\_\_\_\_

4. Vocational Funds

Source	Purpose	Amount

## 5. Labor Market Data 2008 – 2018

(California Employment Department Labor Market Information for Los Angeles County)

Occupation	Soc Code	Employment Estimated	Employment Projected	Change
Technical support specialist				%
Field service technician				%
IT support technician				%
IT support administrator				%
IT support specialist				%
				%

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.

## CORE INDICATORS

Indicator	2009-10 (Actual)	2010-11 (Actual)	2011-12 (Actual)	2012-13 (Proposed)	2013-14 (Planning)
1. Technical Skill Attainment	85.71	96.00	92.11	90.00	50.00
2. Credential, Certificate, or Degree	42.86	100.00	90.91	87.50	100.00
3. Persistence or Transfer	85.71	100.00	94.74	96.61	100.00
4. Placement	100.00	66.67	100.00	50.00	100.00
5. Nontraditional Participation	71.43	68.00	63.16	53.33	0.00
6. Nontraditional Completion	75.00	80.00	58.33	40.00	0.00

**Total Count is 10 or Greater**

*Total Count is Less Than 10*

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

Core 5 - Training Leading to Non-traditional Employment:

Source: CCCCO MIS Database, EDD Base Wage File, CSU Chancellor's Office, UC Office of the President, 2000 Census, Student Loan Clearing House

<b>CITRUS COLLEGE Negotiated Level</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
1. Technical Skill Attainment	92.46%	87.93%	88.81%	88.82%	87.27%
2. Credential, Certificate, or Degree	66.13%	78.95%	82.05%	80.93%	81.50%
3. Persistence or Transfer	82.18%	83.62%	85.96%	85.86%	86.50%
4. Placement	79.86%	80.33%	82.21%	81.48%	76.97%
5. Nontraditional Participation	12.58%	19.05%	20.37%	22.08%	22.60%
6. Nontraditional Completion	12.02%	19.72%	22.10%	25.00%	26.50%