**Department/Program Name: Computer and Information Technology**

**Last Review: February 2006**

**Current Year: 2012**

**Area Dean: Dr. Jonathan King**

**Author: J David Eisenberg**

**Summary of the Department/Program (“Program”)**

1. *Provide a brief summary of your program. Assume the reader does not know anything about it. Your explanation should include a brief history and a discussion of any factors that have been important to the program’s development. Please explain the purpose of your program, what students you serve, what services you provide and why these services are valuable.*

The Computer and Information Technology program was established in Fall 1997. Our course offerings start with CIT010, an introductory course that presents a wide variety of the aspects of the computer field. The other courses are oriented toward web design (JavaScript, HTML), programming (Introduction to Programming, Perl, Visual Basic, and Java), and UNIX/Linux(introduction, shell scripting, and system administration).

The mission of the program is to meet the changing needs of the business community and high tech industries in Silicon Valley, as well as provide students with the tools and technical competencies to obtain employment opportunities throughout the Bay area. The services that we provide are important for professionals who wish to update their skills and for entering students who need to be familiar with information technology in a world that is rapidly becoming more saturated with ubiquitous technology.

We currently have one A.S. degree under revision. Up until 2006, we had several certificates of specialization (UNIX system administration, Oracle database administration, Oracle applications developer, and web programming).These certificates have not been renewed, and, due to the downturn in the IT sector and economy in general, the Oracle classes have not been offered.

1. *How does your program define effectiveness, and what measures have you chosen to gauge it?*

Effectiveness is defined by success and retention rates, meeting industry standards, and meeting the training needs of our students. We teach to available industry standards and put them in our course SLOs where appropriate.

1. *Please summarize the results of any measures you have applied. What do these results mean for your program?*

Success and retention are within reasonable bounds. We do not use number of people obtaining certificates as a measure, because the majority of the students do not have a degree as a goal. Those students taking the introductory course primarily want to get an overview of the field. Those students taking other courses are either taking courses to fulfill a transfer requirement or are here primarily to refresh their knowledge or to learn a specific technology. SLOs are being measured starting during the Spring 2012 semester.

1. *Where would you like your program to be three years from now?*

* Offer one degree and at least three certificates
* Forge alliances with industry to provide internships and job paths for graduates
* Fill all offered courses
* Offer a week of “technology short courses” during the summer each year as community outreach.

**PART A: Overview of Program**

1. *Identify your program/department’s Commitments to Action (CTA’s) for this year.*

|  |  |  |
| --- | --- | --- |
| Area of Focus | Success Metrics | Commitments to Action |
| Access | * Grow Enrollment by 5% | * Fill all sections * Market outreach to high schools |
| Curriculum and Programs | * Approval of Associate’s Degree in CIT. * All outstanding courses approved by ACCC. | * Complete work on A.S. Degree * Update curriculum for SLOs * Investigate creation of new certificates |
| Services | * Increase retention/completion rate by 10% | * Use “early alert” consistently |
| Community Engagement | * Offer at least two free workshops for community during Summer 2012 | * Provide one day non-credit computer skills courses and presentations for the greater community |

1. *Please explain how your program’s CTAs are aligned with the goals of the College. How does your program help the College fulfill its Mission, Strategic initiatives, and Commitments to Action (CTA’s)?*

CIT’s commitments to action in areas such as growing enrollment, solidifying and expanding curriculum, and increasing retention and developing off-campus and non-credit programs are in line with EVC’s commitments to action.

CIT will begin marketing its classes to high school groups. We have already done demonstrations for the College Connections Academy. This is an Early College High School from grades 7 to 10, and was formed out of a partnership between EVC and the Franklin McKinley School District.

In the area of retention, we plan to aggressively use the “early alert” program to identify students who are at risk of falling behind in classes.

1. *Please state at least three recent accomplishments for your program which show how it contributes to the College’s success.*

One of the full-time CIT instructors created a schedule planner. This planner allows students to see time conflicts between course sections, and it permits them to print out a “day plan” for their courses. This software has met with great approval from both students and administration.

The CIT department has given demonstrations of beginning programming courses to students visiting from the College Connections Academy. This includes some 60 high school students and 120 middle-school students.

CIT Advisory Committee meetings have been held in spring and fall 2010. The Advisory Committee made several recommendations that have been reviewed by the faculty and management.

1. *State the goals and focus of this department/program and explain how the program contributes to the mission,comprehensive academic offerings, and priorities of the College and District.*

We provide courses that focus on problem solving skills for information technology professionals involved in a web-based environment, both on the client side (what users see in the browser) and the server side (accessing data and creating content).

The department is part of the effort, as stated in the accreditation self-study report, to help students who complete “vocational and occupational certificates and degrees demonstrate technical and professional competencies that meet employment and other applicable standards and are prepared for external licensure and certification.”

1. *Identify current student demographics. If there are recent changes in student Demographics, explain how the program is addressing these changes.*

The demographics listed here are from the Accreditation Self-Study report. The campus is 46% male, 54% female.

|  |  |
| --- | --- |
| Ethnicity | Percentage |
| African-American | 9% |
| Asian | 33% |
| American Indian/Alaskan Native | 1% |
| Filipino | 9% |
| Hispanic | 33% |
| Pacific Islander | 1% |
| White Non-Hispanic | 9% |
| Other non-white | 1% |
| Unknown | 9% |

1. *Identify enrollment patterns of the department/program in the last 6 years and provide an analysis of any notable trends or patterns*.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Ethnicity | F06 | S07 | F07 | S08 | F08 | S09 |
| African American | 66 | 67 | 65 | 37 | 16 | 6 |
| Asian (All other) | 73 | 79 | 73 | 77 | 30 | 39 |
| Asian/Cambodian | 13 | 9 | 9 | 7 | 4 | 7 |
| Asian/Chinese | 15 | 17 | 7 | 13 | 8 | 10 |
| Asian/Indian | 38 | 43 | 31 | 24 | 12 | 25 |
| Asian/Vietnamese | 199 | 174 | 197 | 183 | 75 | 63 |
| Filipino | 46 | 40 | 33 | 36 | 11 | 15 |
| Latina/o | 238 | 204 | 244 | 205 | 68 | 63 |
| Native American | 2 | 5 | 8 | 6 | 9 | 1 |
| Pacific Islander | 9 | 9 | 7 | 6 | 2 | 4 |
| White | 84 | 78 | 94 | 80 | 24 | 29 |
| Other/Unknown | 52 | 63 | 61 | 52 | 22 | 37 |
| TOTAL: | 835 | 788 | 829 | 726 | 281 | 299 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Ethnicity | F09 | S10 | F10 | S11 | F11 | % change |
| African American | 4 | 1 | 4 | 13 | 9 | -3.8% |
| Asian (All other) | 34 | 17 | 16 | 18 | 13 | -2.8% |
| Asian/Cambodian | 2 | 4 | 4 |  | 3 | -0.2% |
| Asian/Chinese | 7 | 5 | 8 | 6 | 7 | 1.4% |
| Asian/Indian | 4 | 10 | 12 | 9 | 8 | -0.9% |
| Asian/Vietnamese | 42 | 52 | 50 | 42 | 39 | -5.9% |
| Filipino | 15 | 15 | 19 | 18 | 19 | 3.2% |
| Latina/o | 44 | 42 | 36 | 64 | 45 | -7.9% |
| Native American | 1 | 3 | 2 | 1 | 1 | 0.2% |
| Pacific Islander | 2 |  |  | 3 | 2 | -0.2% |
| White | 26 | 22 | 13 | 24 | 16 | -2.7% |
| Other/Unknown | 34 | 48 | 34 | 51 | 56 | 19.5% |
| TOTAL: | 215 | 219 | 198 | 249 | 218 |  |

Note the large drop-off in enrollment starting in Fall 2008, when the economy worsened dramatically. The largest losses in enrollment have been in the Latina/o and Asian/Vietnamese population, with the largest gain in “Other/Unknown.”

1. *Identify department/program productivity (WSCH/FTEF).*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Fall 2006 | | Spring 2007 | | Fall 2007 | | Spring 2008 | | Change | | |
|  | **#** | **%** | **#** | **%** | **#** | **%** | **#** | **%** | **FA to FA** | | **SP to SP** |
| Capacity Percentage @ Census (CAP) |  | 57 |  | 51 |  | 72 |  | 48 | 15.40 | | -3.30 |
| Completion Rate (%) |  | 91 |  | 89 |  | 91 |  | 87 | -0.10 | | -2.40 |
| Awards | 7 |  | 0 |  | 2 |  | 2 |  | -5 | | 2 |
| WSCH | 4,680 |  | 4,351 |  | 4,343 |  | 3,380 |  | -336.6 | | -970.9 |
| FTES | 56.1 |  | 50 |  | 43.1 |  | 41.1 |  | -13 | | -8.9 |
| FTEF | 3.9 |  | 3.2 |  | 3.5 |  | 3.5 |  | -0.4 | | 0.3 |
| Productivity | 1,202.60 |  | 1,370.90 |  | 1,238.10 |  | 964 |  | 35.5 | | -407.4 |
|  |  |  |  |  |  |  |  |  |  | |  |
|  | **Fall 2008** | | **Spring 2009** | | **Fall 2009** | | **Spring 2010** | | **Change** | | |
|  | **#** | **%** | **#** | **%** | **#** | **%** | **#** | **%** | **FA to FA** | **SP to SP** | |
| Capacity Percentage @ Census (CAP) |  | 30 |  | 41 |  | 60 |  | 48 | 30.00 | 7.00 | |
| Completion Rate (%) |  | 82 |  | 90 |  | 84 |  | 83 | 1.70 | -7.70 | |
| Awards | 0 |  | 0 |  | 0 |  | 2 |  | 0 | 2 | |
| WSCH | 1,209 |  | 1,148 |  | 1,046 |  | 991 |  | -163 | -157.2 | |
| FTES | 25.6 |  | 23.8 |  | 27 |  | 25.1 |  | 1.4 | 1.3 | |
| FTEF | 1.3 |  | 0.9 |  | 1.2 |  | 1.2 |  | -0.1 | 0.3 | |
| Productivity | 942.8 |  | 1,311.60 |  | 854.1 |  | 819 |  | -88.7 | -492.6 | |

1. *Identify student success rate and patterns within the department/program paying particular attention to ourcollege’s target groups.*

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ethnicity | F06 | | S07 | | F07 | | S08 | | F08 | | S09 | |
| African American | 43 | 65% | 34 | 51% | 38 | 58% | 20 | 54% | 4 | 25% | 3 | 50% |
| Asian (All other) | 46 | 63% | 50 | 63% | 52 | 71% | 52 | 68% | 16 | 53% | 16 | 41% |
| Asian/Cambodian | 5 | 38% | 7 | 78% | 3 | 33% | 5 | 71% | 1 | 25% | 2 | 29% |
| Asian/Chinese | 10 | 67% | 11 | 65% | 5 | 71% | 10 | 77% | 3 | 38% | 5 | 50% |
| Asian/Indian | 28 | 74% | 29 | 67% | 20 | 65% | 13 | 54% | 6 | 50% | 13 | 52% |
| Asian/Vietnamese | 141 | 71% | 125 | 72% | 137 | 70% | 132 | 72% | 39 | 52% | 27 | 43% |
| Filipino | 27 | 59% | 24 | 60% | 19 | 58% | 20 | 56% | 5 | 45% | 4 | 27% |
| Latina/o | 131 | 55% | 113 | 55% | 146 | 60% | 91 | 44% | 29 | 43% | 24 | 38% |
| Native American | 2 | 100% | 3 | 60% | 4 | 50% | 0 | 0% | 3 | 33% | 0 | 0% |
| Pacific Islander | 3 | 33% | 4 | 44% | 4 | 57% | 4 | 67% | 1 | 50% | 1 | 25% |
| White | 52 | 62% | 42 | 54% | 62 | 66% | 50 | 63% | 10 | 42% | 10 | 34% |
| Other/Unknown | 41 | 79% | 38 | 60% | 30 | 49% | 35 | 67% | 7 | 32% | 17 | 46% |
| TOTAL: | 529 | 63% | 480 | 61% | 520 | 63% | 432 | 60% | 124 | 44% | 122 | 41% |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Ethnicity | S10 | | F10 | | S11 | |
| African American | 0 | 0% | 1 | 25% | 6 | 46% |
| Asian (All other) | 11 | 65% | 7 | 44% | 10 | 56% |
| Asian/Cambodian | 4 | 100% | 2 | 50% |  |  |
| Asian/Chinese | 3 | 60% | 4 | 50% | 2 | 33% |
| Asian/Indian | 5 | 50% | 9 | 75% | 7 | 78% |
| Asian/Vietnamese | 35 | 67% | 32 | 64% | 23 | 55% |
| Filipino | 6 | 40% | 8 | 42% | 13 | 72% |
| Latina/o | 22 | 52% | 20 | 56% | 37 | 58% |
| Native American | 1 | 33% | 1 | 50% | 1 | 100% |
| Pacific Islander |  |  |  |  | 1 | 33% |
| White | 13 | 59% | 7 | 54% | 15 | 63% |
| Other/Unknown | 26 | 54% | 23 | 68% | 31 | 61% |
| TOTAL: | 126 | 58% | 114 | 58% | 146 | 59% |

Overall, success rates tailed off badly starting in Fall 2008, and have never recovered. Since we cannot contact the students who are not attending to ask them why they aren’t, we can only speculate on the causes for this drop. Possible causes are the outsourcing of jobs combined with the economic downturn. In the Oracle (database) area, this effect of outsourcing was particularly severe; Prof. Shaner experienced a layoff as an Oracle database administrator during this period. She also commented that training for Oracle moved in-house to corporations, or they sent people directly to Oracle for training.

If the numbers seem to be “all over the map” from 2008 onwards, that is because the percentages are based on a much smaller sample size. (For example, in Spring 2010, there was only one African-American, so the success rate for that demographic would be either 0% or 100%.)

1. *If the program utilizes advisory boards and/or professional organizations, describe their roles.*

The CIT Advisory Committee meets with the CIT faculty twice a year during a joint advisory meeting for all of the departments in Business and Workforce Development. These meetings are normally held in October and May. The board members are professionals who work directly in the computer industry. CIT faculty selects members by contacting professionals who may be interested or have expressed an interest in the Advisory Board. These meetings normally start at 5:30 and end at 7:30 p.m. The CIT Advisory Committee discusses new job trends and employment projections, and makes recommendations for the development of courses, certificates, and degree programs that will prepare students for the workplace. These recommendations are recorded in the minutes of each meeting, and are subsequently reviewed by the Dean and faculty members. The Appendix contains minutes from previous Advisory Committee meetings.

**PART B: Curriculum**

1. *Identify all courses offered in the program and describe how the courses offered in the program meet the needsof the students and the relevant discipline(s).*

The courses currently offered on a regular basis are: CIT010, CIT020, CIT040, CIT041J, CIT042, CIT050, CIT052, and CIT052 (see B.3 for the full names of these courses).

1. *State how the program has remained current in the discipline(s).*

Course content has been modified to keep up to date with changes in the field

* CIT 040 (Web Design 1) assignments have been modified to include the new elements of HTML 5.
* CIT041J (JavaScript and Dynamic HTML) places more emphasis on the Document Object Model. This is essential for people who use the latest JavaScript libraries such as jQuery.
* CIT020 has switched to using the Processing programming language. Programmers can export their programs as Android applications, which gives them an easy entry point to developing mobile applications.

1. *All course outlines in this program should be reviewed and revised every six years. If this has not occurred, please list the courses and present a plan for completing the process, including timelines and dates for each course.*

|  |  |  |
| --- | --- | --- |
| Course | Last Update | Planned Update |
| CIT010-Introduction to Computing and Information Technology | 6 Oct 2003 | Fall 2011 |
| CIT020-Program Design and Development | 23 Feb 2011 | N/A |
| CIT024-Visual Basic Programming | 28 Feb 2001 | Fall 2011 |
| CIT030-Telecommunications and Computer Networks | 8 Sep 1998 | Deactivate |
| CIT040-Internet Publishing | 29 Apr 2011 | N/A |
| CIT041J-JavaScipt/Dynamic HTML | 29 Apr 2011 | N/A |
| CIT041X-Introduction to XML | 29 Apr 2011 | N/A |
| CIT042-Perl Programming | 3 May 2011 | N/A |
| CIT043A-PHP and MySQL | 11 Sep 2003 | Spring 2012 |
| CIT044-Java Programming | 27 Feb 2001 | Spring 2012 |
| CIT045-Advanced Java Programming | 27 Feb 2001 | Spring 2012 |
| CIT046-Object-Oriented Analysis and Design for Java Technology | 26 Mar 2001 | Spring 2012 |
| CIT050-Introduction to UNIX/Linux | 3 May 2011 | N/A |
| CIT052-UNIX/Linux Shell Programming | 3 May 2011 | N/A |
| CIT054-UNIX/Linux System Administration | 3 May 2011 | N/A |
| CIT055-Advanced UNIX System Administration | 18 May 1999 | Deactivate |
| CIT056-UNIX Network Administration | 13 Oct 2000 | Deactivate |
| CIT060-Introduction to Database Systems | 20 Nov 2003 | Deactivate |
| CIT061-Introduction to Oracle | 5 May 2005 | Deactivate |
| CIT061B-PL/SQL Programming | 5 May 2005 | Deactivate |
| CIT064A-Oracle Database Administration | 24 Oct 2002 | Deactivate |
| CIT064B-Advanced Oracle Database Administration | 24 Oct 2002 | Deactivate |
| CIT065-Oracle Performance Tuning | 24 Oct 2002 | Deactivate |
| CIT066-Oracle Forms: Build Internet Applications | 20 Nov 2003 | Deactivate |
| CIT071-Develop Database Applications with Java | 29 May 2001 | Deactivate |
| CIT072-Develop Enterprise Applications with Business Components | 25 May 2001 | Deactivate |
| CIT080-Introduction to Information Security | 11 Sep 2003 | Deactivate |
| CIT082-Security Management and Operations | 13 Jan 2004 | Deactivate |
| CIT084-Firewalls and Access Controls | 13 Jan 2004 | Deactivate |
| CIT086-Intrusion Detection, Platform and Applications Security | 10 Dec 2003 | Deactivate |
| CIT087-Computer Forensics, Law, and Ethics | 13 Jan 2004 | Deactivate |
| CIT090-Communications Skills for IT Professionals | 25 May 2001 | Deactivate |
| CIT097-Current Topics in CIT | 4 Feb 2005 | Spring 2012 |
| CIT138-Occupational Work Experience | 7 Feb 2008 | Spring 2012 |

1. *Identify and describe innovative strategies or pedagogy your department/program developed/offered to maximize student learning and success. How did they impact student learning and success?*

The lab in room RF-241 has iTALC (<http://italic.sourceforge.net>) installed. This software lets the instructor monitor all the student stations. The instructor can also remotely control their mouse and keyboard, and project a student’s session to all the other computers. Thus, if a student has a problem that may be useful for others to see, the instructor can assist the student in solving it and allow the other students to see the process.

1. *Discuss plans for future curricular development and/or program (degrees & certificates included) modification. Use a Curriculum Mapping form as needed.*

We are currently working with Ms. Sandy Jones of Los Medanos College to identify industry contacts and find out what their current and projected future needs are. This will drive future curriculum development. Our intention is to develop certificates that will allow people to obtain entry level jobs upon completion.

The current A.S. degree contains two deactivated courses. We plan to take two electives and make them required, and add further relevant electives from the BIS curriculum.

1. *Describe how your program is articulated with the High School Districts, CCOC (if applicable), and/or other four year institutions. (Include articulation agreements, common course numbering etc.)*

CIT010 and CIT040 are articulated with CCOC.

|  |  |  |
| --- | --- | --- |
| **EVC Course** | **Articulates with** | **Institution** |
| CIT010 | BUS 91L (Computer Tools for Business) | SJSU |
| CS 1020 (Introduction to Computers) | CSU East Bay |
| CMPE 3 (Personal Computer Concepts: Software and Hardware) | UC Santa Cruz |
| CMPS 2 (Computer Literacy) | UC Santa Cruz |
| CMPS 10 (Introduction to Computer Science) | UC Santa Cruz |
| CIT020 | CS 1160 (Introduction to Computer Science 1) | CSU East Bay |
| CST 231 (Problem Solving and Programming) | CSU Monterey |
| CMPS 12A (Introduction to Programming [Accelerated]) and CMPS 12L (Computer Programming Laboratory) | UC Santa Cruz |
| CIT020 / CIT024 | BUS92 (Introduction to Business Programming) | SJSU |
| CIT050 | CS72 (Unix and Unix Utilities) | SJSU |

1. *If external accreditation or certification is required, please state the certifying agency and status of the program.*

N/A

**PART C: Student Outcomes**

1. *On the course level, list all the courses that have current student learning outcomes (included in the course outline) and provide link to the course outlines for review purpose. Provide a plan and timeline to include student outcomes for the courses that do not have one.*

See the table for section B.3. All courses that have N/A for planned update already have SLOs. The timeline for updating other courses is the same as the timeline for updating the course outline. The course outlines are online at \\Do\_data\_whse\R&P\Curriculum\Course Outlines\6 - Final

1. *On the program level, list all programs (and degrees) that have current student learning outcomes*

The A.S. degree has been deactivated, due to the low number of graduates and per advice of the CIT advisory committee. The committee is currently working with faculty to determine which certificates would be reasonable for CIT to offer.

1. *List or describe all assessment mechanisms you are using to evaluate SLOs. Provide results of any analysis.*

All the SLOs are directly tested by course assignments and examinations; therefore, the proportion of students with B or higher grades should provide a reasonable evaluation of the SLOs. No formal analysis has been performed since the addition of SLOs to courses, though Fall 2010 and Spring 2011 show that 58% and 56% of the students have received A or B grades in those semesters. SLOs at the course level will be assessed starting in Spring 2012. As there is no longer a CIT degree, there are no program SLOs being developed.

**PART D: Faculty and Staff**

1. *List current faculty and staff members in the program, areas of expertise, and how positions contribute to the program success.*

***Full-time Instructors***

**J David Eisenberg**

B.S. Mathematics (Computer Science Minor), University of Illinois Urbana, 1974

M.S. Psychology (Applied Measurement Option), University of Illinois Urbana, 1975

*Areas of Expertise:*

* Programming languages (Intro to Programming—CIT020, Perl – CIT042, JavaScript – CIT041J)
* Web Design (HTML–CIT040, XML–CIT041X)
* Linux/UNIX (CIT050, CIT052, and CIT054)

*How position contributes to program success:* He has taught the above-mentioned courses since 2003. He has kept up to date with the latest versions of Linux, and has incorporated open source software into all of the courses that he teaches.

**Christina Shaner**

B.S. English and Spanish, University of California, Santa Cruz

M.B.A University of Santa Clara

*Areas of Expertise:*

* CIT10
* Previously all Oracle applications

*How position contributes to program success:* Experience in field of Business Database Programming for over 20 years

***Adjunct Faculty***

**Katie Layman**

B.S. Business Education, James Madison University, 1969

M.A. Education, Business emphasis, San Jose State University, 1975

*Areas of Expertise:*

* HTML
* Information Technology
* Introduction to Business Computing
* Business English/Writing
* Microsoft Office 2010 software
* Introduction to Business

*How position contributes to program success:* Prof. Layman has experience teaching and working with people from industry which keeps my business skills up to date. Being up to date with business skills assists her in teaching and meeting the current needs of students as they prepare and update their skills for the workplace.

**Vivian George Morgan**

B.S. Engineering, San Francisco State University, 1973

M.S. Engineering, San José State University, 1975

*Areas of Expertise:*

* Project management
* Computer Science
* Currently teaching CIT010

*How position contributes to program success:* Prepare and train the new high school graduate, as well as continuing students, in developing the academic foundation for a professional career.

1. *List major professional development activities completed by faculty and staff in this department/program in the last six years and state proposed development and reasoning by faculty in this program.*

Prof. Eisenberg has been attending the Southern California Linux Expo (<http://socallinuexpo.org>) on a regular basis for the past four years. He is also a contributor of tutorials for the Processing (<http://processing.org>) programming language, which he uses for the Program Design and Development course (CIT020). He is involved in open source software, and has set up a test site for distributed social networks (<http://dsn-test.com/>) and helps with documentation for one of the projects.

Prof. Layman is a member of the California and National Business Associations, and attends conferences that provide information to hone her teaching skills, especially in current technology. Also, she joins online webinars that contain information for current PC operating systems and application software. Recently, she wrote curriculum for combining application software and how to succeed with current technology. This curriculum also included the internet and the World Wide Web.

Prof. Morgan has completed the Introduction to Cisco Router Configuration seminar, a course on Wireless Local Area Networking (the course encompassed the design, planning, implementation, operation and troubleshooting of Wireless LANs), and a self-training course on Microsoft Office 2010.

Prof. Shaner has participated in the following activities and courses:

* California Great Teachers Seminar - 2008
* Introduction to Teaching with WEBCT CE6 (Blackboard Learning System CE) 2008
* Using Multimedia Tools to Enhance Teaching and Learning
* Online Course Pedagogy and Development
* Windows XP Digital Media
* Web/Database Interaction

1. *Identify current schedule for tenure review, regular faculty evaluation, adjunct faculty evaluation, and classified staff evaluation.*

No faculty members are currently scheduled for tenure review. Students do the faculty evaluation for adjuncts and full-time faculty once a semester, and faculty are peer-evaluated once a year.

1. *Describe the departmental orientation process (or mentoring) for new full-time and adjunct faculty and staff (please include student workers such as tutors and aides).*

Each new full-time faculty member on a tenure track is assigned a mentor, who is also on that person’s Tenure Review Committee The mentor guides the new faculty member until they are granted tenure. If the mentor retires or leaves before the new faculty member is tenured, a replacement faculty member steps in as the mentor until the tenure process is complete.

New adjunct faculty members are mentored by the Dean and a faculty member from the CIT department. Some of the mentoring is also shared by the CIT Lab Supervisor, who provides support services to all of the full- and part-time faculty members. Orientation sessions provided by the Teaching and Learning Center at the beginning of each semester provide new faculty with information about the resources available to them as employees of the San Jose Evergreen Community College District.

Classified staff members are trained by the area supervisor. The supervisor consults with the CIT instructors to determine the requirements for their classes. The lab supervisor, staff members, and instructors meet two to four times a year to discuss the instructors’ needs, and the services that staff and instructors will provide to each other. Hourly student workers are trained in the same manner with help from the classified staff and instructors in the area. At this time, there is one hourly assistant for CIT and BIS (Business Information Systems).

**PART E: Facilities, Equipment, Materials and Maintenance**

1. *Identify and discuss the facilities, equipment, equipment maintenance, and materials allocated to the program. Identify and explain additional facility needs and rationale.*

The CIT department currently has three labs, each with 30 computers. The computers in room RF-234 are used for CIT, Computer Science, and Business Information System courses. The computers in RG-240 are used for general lab purposes, and the computers in RF-241 are used for CIT020 and the Linux/UNIX courses.

All the computers are PCs of varying ages. As computers age, they are moved into RF-241, since Linux requires less memory and speed to get the same effective power.

From oldest to newest, the specifications of the computers are as follows:

* RF-241: Intel Pentium 4 CPU, 2.6 GHz, 1 GB of RAM
* RF-234: Intel Pentium 4 CPU, 3.0 GHz, 1 GB of RAM
* RG-240: Intel Core 2 Duo CPU, 3.0 GHz, 4 GB of RAM

1. *Describe the use and currency of technology used to enhance the department/program. Identify projected needs and rationale.*

Desktop computer technology is adequate for the department’s current needs, and also for the forseeable future. Since mobile computing is becoming more widespread, it will be useful to have tablet computers for student use.

1. *If applicable, describe the support the program receives from industry. If the support is not adequate, what is necessary to improve that support?*

Not applicable.

**PART F: Future Needs**

1. Current Budget
   1. *Identify the budget currently allocated for the department/program through the division budget (fund10). Discuss its adequacy in meeting your program’s needs.*

The Fund 10 budget is $402,664. This is adequate for our current needs.

* 1. *Identify any external (fund 17) funding the department/program receives, and describe its primary use.*

The Fund 17 budget is $12,422. VTEA is part of Fund 17, and it is used for equipment and supplies that further student learning.

* 1. *Explain any grants or other external funding sources (partnerships) for which your program is benefiting from.*

We currently have no external grants.

1. *Explain any grants or other external funding sources for which your program would be a good candidate. Do you have plans to apply for such sources?*

We are currently working with a consultant to identify grant opportunities.

1. *Please describe any unmet needs for your program and how you plan to address them. Are any additional resources needed to accomplish your program’s CTAs?*

Funds for training would be useful; this might be achieved via partnerships with industry standards programs.

1. *What faculty positions will be needed in the next six years in order to maintain or build the department? Please explain. What staff positions will be needed in the next six years in order to maintain or build the department? Please explain.*

We do not have the resources to hire any new CIT faculty unless we successfully grow the program over the next two to three years.

1. *Does your program require any additional facilities, equipment, and/or supplies over the next six years (above and beyond the program’s current budget)?*

As mobile computer becomes more widespread, it will be useful to have tablet computers at each workstation in the programming labs so that students who are learning programming can build applications to download to those devices.

Since most of our software is open source, it does not require as large a “footprint” as most proprietary software. However, software inevitably expands to fill available memory and CPU power, so it is essential that BIS computers that are being replaced are cycled through the CIT labs, where their lesser power is still sufficient for the needs of the program.

**PART G: Additional Information**

Please provide any other pertinent information about the program that these questions did not give you an opportunity to address.

**PART H: Annual Assessment: Program Faculty and PR Committee**

Please attach copies of any Annual Reviews that you have completed in the last six years (if applicable)

**PART I: Resource Allocation Table**

Program Reviews provide a valuable source of information for the College as it makes decisions on resource allocation, both in terms of funding and cuts. The following information, in table format, will be used by the College Budget Committee to help inform EVC’s Budget and Planning Process.

|  |  |
| --- | --- |
| Item Title | Response |
| Productivity (WSCH/FTEF) | 473.7 |
| Student Success Rate (Retention Rate) | 58.1% (81%) |
| Number of class sections offered by your program | 22 (Most recent academic year) |
| Changes in enrolment | Spring 2007-Fall 2007 to Spring 2010-Fall : -76% |
| Your Program’s Current Budget (from Fund 10) | $402,664 |
| Current External Funding (from Fund 17) | $12,422 |
| Future Needs: Faculty (Estimated Additional Cost) | No additional cost |
| Future Needs: Staff (Estimated Additional Cost) | No additional cost |
| Future Needs: Facilities (Estimated Additional Cost) | Tablet computers (30 @ $600 = $18,000) [if this can not be covered by existing funds] |
| Future Needs: Supplies (estimated Additional Cost) | No additional cost |

Appendix: Advisory Committee Meeting Minutes

Advisory Committee Minutes of 21 October 2008

Present at meeting:

Cecil Lawson (taught CIT/Business here; takes care of technology at SJPD.)

Hasmukh Shah (BAE Systems; with company 35 years; in systems engineering now)

Shahm Johari (management consultant; in industry for 32 years)

Bruce Pumplin (part time teaching here since 1994; off for 1.5 years)

Johnny Powell (taught database/Oracle at Evergreen 27 years part time; in industry since 1970)

Tom Thackrey (working for IBM for seven weeks; previous 38 years for various companies in industry. Current role is firmware design for mainframes)

Harry discussed the current faculty: Ken Tarquinio and Henry Estrada have gone to Psychology and Math full time. Tina Shaner is now doing business and CIT. Henry Gee teaches business courses. David is teaching CIT and one psychology course. Harry Lichtbach is teaching one Computer Science course and several lab sections. He also teaches Access and Excel. Our curriculum this semester: Harry was to teach Java and Visual Basic concurrently this semester. That class did not fill. We have a Perl class that went, and the Linux classes are active. David does a chat room every Thursday for the Linux classes, and will move to OpenMeeting later in the semester. Harry said that we wanted to video the lectures and make them available. David noted that Apple has a way to make lectures available.

We are presenting four one-day courses, probably on a Saturday. The last one, setting up a SOHO wireless network, is a topic that one of our instructors currently covers. After we cover the courses, we will have further discussion.

Bruce Pumplin asked what kind of discussion prompted the one-day courses. Mr. Shah said that one-day courses are very useful, and many people don't have time to do a 16-week evening course. The target audience is working professionals. Bruce said that, for as long as he's been teaching, he's volunteered at the Willow Glen Senior Center, and they have had courses structured as 8-week classes, 2 hours a week. He suggested that we look outside the normal student population. Mr. Shah said that this is a good starting point. The digital photography course should be appealing to many people. Harry said that the key is advertising. A couple of years ago, the college president was very interested in working with the Villages (senior living area). They have a lab over there already; he didn't think people would be interested in coming here, but would we be interested in going there. It takes finding the contacts. Mr. Shah: U C. Extension offers courses in the area; they're very attractive. They're on weeknights and closer to the industry. Harry: The California community colleges have a very broad job description. We're supposed to train students to transfer to upper division, but that's not all we do. Vocational education is also another one of our goals. A lot of our CIT students will transfer, but those students are taking Computer Science. Evening classes are people from industry who want to learn Perl. Community enrichment is also something else we should do as a goal.

Johnny Powell: likes the idea of digital photography; he's seen similar things in adult education flyers that he's seen. Harry also hopes that when they come here, some of them will get so much out of it that they'll take regular courses. Johnny Powell said that was an excellent idea, and said that as students leave the course, you need to tell the students about other offerings. Another possible course would be video creation and editing. Mr. Shah said that would be useful also, and a popular skill. Cecil Lawson said that, a few months ago, SJPD adopted Active Directory, and had to send people to certification classes. There are a couple of classes, and they are expensive. It ended up costing $6000 per person. It would be very much in demand to have certification classes. Harry followed up by saying that when the dot com bubble burst, we had a surge in enrollment. After a few semesters of still not getting a job, enrollment cratered. He asked if we might see that again. Mr. Johari said that the application rates at other schools have gone up greatly. David said that Open Source is becoming more popular with the economic downturn. Mr. Lawson said that in line with cutting costs, virtualization and open source would also be good areas to look at. He also said that engineering and computer science has been the wildest for a few years; they're looking for vetting, not just a degree. Job openings are more and more requiring certification, and private industry is using that to establish a level of certification. Harry said that Microsoft and Sun offer certifications. Harry said that the only job he got with his certification was the teaching job. He hasn't heard of any jobs needing it. Cecil Lawson said that the reason it's becoming more important is because of supply and demand. Understanding wireless and its security is becoming important. Schools aren't producing people who know about this; that's the early stages of a new discipline. There's convergence of VoIP and wireless in terms of security needs.

Harry noted that we don't train people at the bachelor's level, but we get people with degrees who want to learn things. Mr. Shah said that solar companies are coming along and growing in importance. He says there may be some science-related courses in this. Mr. Johari said that you could expand this to greening of IT. Designing a computer room without needing air conditioning is a growing area as well. Mr. Shah was thinking of working with leading companies and finding out what their needs for future employees are. Demand is coming up, but is the workforce ready for it? David said that one of our action items should be to contact Solyndra and Sun Power and see if we can meet their needs. Cecil Lawson said that SJPD is building a substation; in a meeting 3 months ago, a vendor was talking about electronic environmentals—how do you manage server rooms. This is also an area to look at. Mr. Johari noted that the Evergreen group is talking to companies to find out about installing solar on a large scale.

Harry asked about teaching OpenOffice.org. Johnny Powell worked at Sun and they had StarOffice. It had no pickup outside of Sun. He doesn't see anything changing with people wanting everything in Microsoft Office format. A short discussion ensued of how Google is trying to get a foothold with things like Google Apps.

Harry then moved forward to the course proposals, starting with Virtualization. His main questions were about the audience and the purpose. Mr. Johari asked if we knew why enrollment was down. Harry said that we've watched enrollment at other colleges as well. Initially everybody was down in enrollment. It was the industry, and many people got out of the industry. Mr. Shah said that because of outsourcing, the programming jobs are not in the US. Harry said our students are smart when it comes to the workplace, and they know where the work is. Mr. Johari said that no matter what job you have, you need to have some basis in IT. Harry's students are there for transfer purposes.

David noted that some of his psychology students don't know how to do Excel formulas, and that astonishes him. Harry said that Excel courses, both three-units and self-paced, are very popular. We come from a position that technology doesn't scare us; that's not universal. Mr. Johari said that we should teach people to not only use the formulas, but why and when. This is necessary, but it's easy for us as we are computer literate. Most students don't have that background. Bruce Pumplin asked if one of the other groups was BIS. Why aren't we hearing about web programming? He noted that Mark Gonzalez's classes emphasized design; the why and not just the how. David noted that he does introduce design elements with the HTML, and is conflicted about what level to use when teaching.

Tom said we're dancing around the main question: who is the audience? Mr. Shah said that the programming courses are extinct; there's no opportunity to use it. Tom asked if enough programming has moved offshore that there's very little demand, because he can't hire programmers here. Mr. Lawson said there's more demand for senior level programmers. Johnny Powell said that audience evolves over time. There was a great influx of Vietnamese in the late 70s and 80s; then we had a downturn in the late 80s and 90s, so professionals came here. You always have a growing, changing mix. He asked if there's a state organization that does that sort of survey. Harry said we had a research department, which David noted has been decentralized so that deans can research these questions on their own. Harry said that small companies need local computer support. How do you contact those businesses that hire people? Mr. Lawson said that there are companies that target businesses; we can develop things that are similar at less cost. Global Valley is such a company. Harry isn't sure at which level or how we can compete with industry. We have college credit, but that isn't important.

Mr. Shah said that in terms of advertisement, one place he doesn't see ads are in the Evergreen Times. An ad for the one-day photo course, we'd get enrollment. Harry said we're trying to get involved more with the community. Mr. Lawson said that the editor is receptive to new ideas.

Hacking the Playstation would be a great course, according to Tom. You can boot Linux on it and you can have a small supercomputer. Harry asked if we should do a Google Android course. Mr. Johari said he didn't think it's going anywhere. Tom said that a course on how to use your digital phone would be a good idea.

Before continuing with looking at the virtualization course, did we have an idea of the audience? Mr. Powell said that business was the main audience. He set up VM, but then what? Harry said that when people have problems, what do they do? The only thing Harry sees for SOHO is that if he had virtualization, he could install new versions of XP --- but that's pretty advanced. Mr. Powell said that, in terms of the audience, it should focus on small business. Mr. Lawson said that big business also needed it, but Mr. Powell said that the our college is more aimed at the small business. The SJPD has 1000 desktops; that's a big business. Mr. Lawson asked 3 guys to look at the market for a particular training, and come back with companies. He noticed that the companies they selected were: the farther the better. If pastries and coffee are included, that helps. They choose the one that benefits them the most. They didn't look at community college because they wanted a short course. They made decisions on frivolous things.

Tom put in a plug for teaching virtualization: that and security are the two hottest topics in the industry. If they come out with a little knowledge rather than no knowledge, it will make a difference in finding jobs. He thinks virtualization will take over; it solves problems all the way from fixing laptops to isolating your media server from your mail server, all on the same box. If you're going to be a professional; you need to know this, and it should be a credit course. Harry said we've tried teaching the Unix courses in 8 weeks rather than 16. He's not sure why we stopped doing that. Mr. Powell said that we might want to pursue virtualization on an introductory and advanced basis. This is aimed at a small to medium business. Large businesses will already have their in-house expertise, said Dr. Pumplin.

Dr. Pumplin said that we've hit on something important—they don't expect the frivolous items to come from the community college. We're trying to redefine our mission from transfer /remedial to this new mission. This is a big sales problem. Harry has a challenge: when we had these advisory meetings in the past, it was every so many years. We've done things like teaching a 3-unit course in 5 days. The committee is getting a feel for what we do. Harry would like a few extra people at the committee. Our charter, said David, is to do community involvement and vocational. Harry noted that SJCC has been more the vocational school. As the environment changes, we're being challenged to do more vocational training. With the current reduction in state funding, our reserves are good for this year and next, but beyond that we don't know. We make plans based on the February budget, and the things we've committed to doing aren't funded. That means eating into reserves.

Advisory Committee Minutes of 20 April 2010

Present: Shyam Johari, Hasmukh Shah, Johnny Powell.

Faculty: David Eisenberg, Harry Lichtbach

Shyam Johari noted that now was the time to ask VMWare about hardware and/or software donation. Johnny Powell noted that at Ohlone College, an instructor was able to obtain hardware by making requests of his former students who are now in industry. We discussed which products are available in that area. The main virtualization products are VMWare, Citrix, and Microsoft. Harry Lichtbach said that the deal EVC has with Microsoft for distribution of products to community colleges has not been as effective as it might be. David Eisenberg asked if Xen (an Open Source virtualization platform) would be useful for an introductory course, given that concepts are more important than learning how a specific vendor’s products work. Hasmukh Shah agreeed that making the students think is more important than teaching mechanical steps.

This led to a discussion of the lack of critical thinking skills shown by some students. Harry Lichtbach noted that there are 3 types of students:

1) Major requires computer competency; have had some programming.

2) Programmers who want to learn a new language

3) CIT majors who want an AS degree.

Hasmukh Shash then turned to the topic of green energy: if it gets big, the companies will need people with electromechanical skills as well as computer skills. Johnny Powell noted that a company in South Carolina that designs machine components requires its personnel have to have some programming and mechanical engineering background. Hasmukh Shah recommended that we go to solar energy companies to find out what CIT courses they need. David Eisenberg said that he would do this during the summer.

Harry Lichtbach said that there is a large market for smart phone applications. Johnny Powell suggested courses for programming the Android platform. He also suggested a concept course in cloud computing. Shyam Johari said that such a course should have a goal of “how to bring a business up to speed in the cloud.” Johnny Powell agreed, saying that the course should teach you what cloud computing is and how to deploy it.

Advisory Committee Minutes of 19 October 2010

Present: Harry Lichtbach, J D Eisenberg, Johnny Powell, and Tina Shaner

David reported that CIT020 is well-attended, Perl is at average levels. Internet Publishing is very under-enrolled. First Linux course is well-enrolled with 25 students. The more advanced courses don't have many people.

Johnny Powell commented that storage management and virtualization courses, as well as Android app courses, are filling up. Microsoft HyperV is also becoming popular. If GEICO replaces all their hardware with Microsoft in the next five years, that would be a big trend.

Smart phone programming is also an excellent opportunity. MPIC had classes in the summer for Android programming. They also offer computer forensics; this is also a possibility.

Gaming was also taught at MPIC. Any course, Tina said, must be part of a certificate or transfer program. Johnny Powell thought that programming smart phones was a sure winner.

Also: Social Networking concepts would be a good course. (Facebook, Twitter, MySpace, LinkedIn); then lead in to distributed social networks. This would be an elective.

Perhaps a “Living in a Digital Age” certificate would be useful, but it's personal enrichment rather than career or transfer.

Here is the list of suggested courses that would be useful for CIT to offer:

• Network Management

• Storage Management

• Virtualization (HyperV, VMWare, Zen, or Citrix)

• Smartphone Programming (iPhone or Android)

• Content Management (Drupal / Joomla / etc.)

• Social Networking

• Computer Forensics

• Scripting languages such as Python and Ruby

Advisory Committee Minutes of 15 Nov 2011

Hasmukh Shah was the only committee member in attendance, with David Eisenberg the sole representative of CIT.

David asked if it seemed reasonable to offer the Perl and UNIX classes as 8-week sessions instead of 16-week. Mr. Shah agreed that this might bring in more people who are already knowledgeable but are interested in learning specific skills quickly, as opposed to wanting a degree.

Mr. Shah commented that the mobile application area is expanding greatly. Although we cannot change the course titles, we can change the content of the JavaScript course to aim more towards web-based mobile applications.

David suggested that CIT 97 (Current Topics in CIT) be offered in Fall 2012, with its topic being development of mobile apps, probably for Android (as this requires no licensing, and tools are freely available).

Mr. Shah noted that he had taken some courses at Independence High School in past years; he had found out about them via a course catalog sent through the mail. The high school stopped publishing the catalog, and Mr. Shah doesn't take it on his own initiative to search the web, so he has possibly missed out on courses. This could be a problem for EVC, as we also have stopped publishing the course schedule. Mr. Shah suggested advertisement in the Evergreen Times and radio ads on local stations such as KLIV. Our target market (adult professionals) are more likely to be reading and listening to those particular media.

Mr. Shah also believes we should give half-day or one-day courses during the summer, and charge $25. In order of "drawing power," the topics we came up with were:

\* Editing photos

\* Editing videos

\* Uploading from digital cameras to YouTube

\* Using Facebook and Twitter

\* Introduction to Processing (this is aimed at high school students who want to learn programming)

\* Introduction to Mobile App Development (aimed at professionals with programming experience)

\* Introduction to Linux