Program Review: Computers, Networks, and Emerging Technology

Program Description and Scope:

- *Program Review Title:* Computers, Networks, and Emerging Technology
- *Academic year:* 2016/2017
- *Review Type:* Instructional Disciplines
- *Program/Departments:* Computer Networks Emerging Technologies (07081)
- *Authority Code:* 53-Dean, Business, Technology, and Learning Resources
- *External Regulations:* Yes
  Industry Academy contracts with Microsoft, Cisco, Oracle, CompTIA, and VMWare
- *Provide a brief narrative that describes the instructional program/discipline:*
  Ohlone's Computers, Networks, and Emerging Technology A.S. Degrees and Certificates prepare students for employment in the field of Information and Communication Technologies (ICT) as database administrator, systems administrator, support specialist, network technician, computer engineer, web developer, or related positions. Students may also prepare for a variety of certifications, such as Cisco Certified Network Associate (CCNA), Cisco Certified Network Professional (CCNP), CompTIA A+, Network+, Security+, Cloud+, Linux+ and Healthcare IT Tech, Microsoft Certified IT Professional (MCITP), Oracle Certified Professional (OCP) and VMWare Certified Professional (VCP).

College Mission:

- *Mission Statement:*
  Ohlone College responds to the educational needs of our diverse community and economy by offering high quality instruction supporting basic skills, career development, university transfer, and personal enrichment and by awarding associate degrees and certificates to eligible students in an innovative, multicultural environment where successful learning and achievement are highly valued, supported, and continually assessed.
- *Program Relation to College Mission:*
  - Career Entry (CTE)
  - Economic Development
- *State Your Program Mission/Purpose:*
  The Computers, Networks, and Emerging Technology (CNET) program mission is to provide career-entry training, education and economic development.
- *Briefly Describe Program Accomplishments:*
  Implemented cyber security program
  Initiated (WIP) for IT healthcare and a new Cyber program
  Revamped windows courses
  Expanded embedded tutor program
  Engaged in industry partnership with Palo Alto networks

Will apply for CNET to be Ohlone College representative for the Strong Workforce

Marketing - revamped new flyers

Partnership with industry and arranged tours for our students to visit Silicon Valley companies

Established advisory councils with industry experts to advise our CNET programs

Achievement and Resource Data Analysis:

12. *Research Questions:*
    1. Success rates are below the college-set minimum of 70.0%. What can be done as a part of the PIO process to identify and address these low success rates?
    2. CNET is notably an older, male department. What can be done to attract more younger and female students?

Resource Assessment Summary:

1. *Academic Year:* 2015-2016
2. *Activity Center Fund 10 Budget Allocation:* $535738.00
3. *FTES:* Fall: <u>61</u> Spring: <u>69</u> Summer: <u>0</u>
4. *WSCH/FTEF:* Fall: <u>444</u> Spring: <u>477</u> Summer: <u>0</u>
5. *Course Sections Offered:* Fall: <u>28</u> Spring: <u>28</u> Summer: <u>0</u>
6. *Sections Taught FT Faculty:* Fall: <u>0</u> Spring: <u>0</u> Summer: <u>0</u>
7. *Sections Taught PT Faculty:* Fall: <u>15</u> Spring: <u>10</u> Summer: <u>0</u>

Human Resources:

1. *# of FT Faculty:* 1
2. *# of PT Faculty:* 15
3. *# of Classified Staff:* 0
4. *# of Administrators:* 1
5. *% Faculty release/reassigned time:* 0%
6. *Technology:*
   - Specialized Software
   - Simulation
   - Technology Enhanced Instructional Equipment
   - Laptops
   - Tablet
   - Desktops
7. *Physical Resources:*
   - General Classrooms
   - Specialized Labs
   - Tutoring/Learning Center

- Program Analysis PSLOs - Student Learning:
  (Key: I-Introduced, P-Practiced with Feedback, M-Demonstrated at the Mastery Level)
  1. *PSLO Matrix:*

Course	PSLO-1	PSLO-2	PSLO-3
CNET 105	I	I	P
CNET 107			P
CNET 108			P
CNET 120	I	M	I
CNET 122A	P	P	P
CNET 122B	P	P	P
CNET 132			P
CNET 135	I	I	P
CNET 136	P	P	P
CNET 137	P	P	P
CNET 138	M	M	P
CNET 140	P	P	P
CNET 141	M	M	P
CNET 146	I	I	P
CNET 155A	I	I	P
CNET 155B	M	M	P
CNET 156A	P	P	P
CNET 156B	M	M	P
CNET 160A	I	I	P
CNET 160B	M	M	P
CNET 162	I	M	P
CNET 164	M	P	P
CNET 166	M	M	P
CNET 170	I	I	P
CNET 172	P	P	P
CNET 173	P	P	P
CNET 174	M	M	M
CNET 184	P	P	P

  2. *Please Indicate the PSLO(s) which you are reporting on:*
     - Student AS degree recipients will demonstrate oral and written communication skills.

- Demonstrate techniques to troubleshoot situations that impact the operation of a computer (client or server); stand-alone or network application; and/or networking system.
- Demonstrate confidence to work independently to setup, configure, and maintain: a computer (client or server); stand-alone or network application; and/or networking system.

3. *Analyze and summarize your assessment findings â?? What in the data jumped out?*

    After reviewing the student success rate data, we noticed that students tend to do better (above 75%) in the classes that do not require utilization of the CNET lab. For the courses that require hands-on practice of latest infrastructure/tools the student success rate, is lower (below 70%). One way to correct this issue, and to improve the overall success rate is to upgrade our outdated infrastructure, expand the tutoring program, and provide (hire) a dedicated system administrator to support and maintain our CNET lab infrastructure environment. The CNET Lab environment is critical in providing hands-on practice for our students and to reinforce what they learn from the lectures.

4. *Give examples of assessments used for your PSLO analysis:*
    We utilize final exams, lab assignments, and tests throughout the semester to assess our students' progress according to SLOs. We design our test questions and test format to be similar to the industry certification test so that we can prepare our students for industry certifications. We also rely on Work Experience employer feedback.

5. *Describe input from Program Advisory Committee (if applicable):*
    Business Industry Advisory Committee Meeting
    1/22/16
    Industry Trends – information gathering about what skills would be necessary in the future workforce:
    - Cyber Security- the future
    - Big Data, the future and higher ed-Maybe intro courses?
    - Business Analysis
    - Source code management
    - Program/project management, presentation skills
    - Platform: Window, Linux/Unix, Cloud, Open Source
    - Programming trends and technologies
    - Virtualization, cloud computing
    - Importance of hands-on and practical training/experience
    - Develop Fundamental & practical skills
    - Cloud services and technologies
    - Understand "real-world" issues
    - Keep up with industry trends and direction
    - Industry compliance

6. *Comments:*
   The SLO Matrix and accompanying choices of levels (I-Introduced, P-Practiced with Feedback, M-Demonstrated at the Mastery Level) works well for the CNET program's first three SLOs. There are CNET courses that do each of the following: introduce, allow for practice, and provide for mastery. Many of our individual certificates of accomplishment include courses which help to prepare students for all three levels. All of our courses allow for AS degree seeking students to practice their oral and written communication skills.

   The SLO Matrix and accompanying choices of levels (I-Introduced, P-Practiced with Feedback, M-Demonstrated at the Mastery Level) works well for the CNET program's first three SLOs. There are CNET courses that do each of the following: introduce, allow for practice, and provide for mastery. Many of our individual certificates of accomplishment include courses which help to prepare students for all three levels. All of our courses allow for AS degree seeking students to practice their oral and written communication.

Program Improvement Objectives

1. *Based on the program data analysis and PSLO analysis, identify your Program Improvement Objective(s): What are you going to do? Why are you going to do it?*
   Offer additional Certificates of Accomplishment in Business Analysis & Health Care IT to increase certificates awarded and to motive students to achieve additional awards.

   Notes (optional): Please include any notes related to your PIO. (2500 Character limit)
   Please see attached file (CNET_IT_JobMarketData) for more information.

   Program PIO will address the following:
   ▪ Student Learning & Achievement
   ▪ Increase Program Enrollments
   ▪ Increase Degrees/Certifications
   How will you assess the effectiveness of your PIO:
   Our overall CNET enrollment has been declining for the past 3 years. CNET had an enrollment of 1336 in 2012, 1211 in 2013, 957 in 2014 and 869 in year 2015. One of the major goals of the CNET program is to teach our students the latest computer technologies and tools, as well as to keep pace with industry trends and needs. Many of our CNET program courses are outdated, and we do not offer enough courses (new course content) that reflect industry technology trends and needs. However, CNET does have some very good courses that keep up with technology, such as our successful Cisco Networking courses. Using Strong Workforce (http://doingwhatmatters.cccco.edu/StrongWorkforce.aspx) funding we could develop more courses and/or update existing course materials/contents that reflect industry trends/needs such as Big Data, Cyber Security and Health IT.

PIO Action Plan:

How will you accomplish this?
Develop new (industry demand) courses and certificates, review/modify existing courses to reflect new content based on industry needs, and implement them through the Curriculum approval process.

What is your timeline?
Students can take new courses once they are approved by the curriculum committee (which is expected to take place in the fall of 2017).

Who is going to do this?
Full time faculty.

PIO Status:
- ▪ Revised

Closing the loop - Describe the results of your PIO implementation or completion:

Conclusion: Complete if PIO has been completed

Fiscal Resources Status:

PIO Resources:
- ▪ Resource: People Time
  Description: Develop curriculum

Attached Files:
- DEAFTECRESULTSFP161.pdf
- 2016PIOST1ed.docx
- CNET_IT_JobMarketData.docx