# Course or Program Assessment Summary

**This form can be used to record SLO assessment plans and results for courses or programs.  It is recommended that this document be stored on a group drive, or in MyCuesta.**

*Division:*  Engineering & Tech          *Program:*   cnet          *Date:*   9/05/14                                    *v. 2 2014*

Courses in program, or course: _____CNET218_____

*Faculty involved with the assessment and analysis:  _____CHRIS AKELIAN_____*

Course to program outcome mapping document** is completed  Yes_____          No_____

| 1 | Student Learning Outcome Statements  ☐ Program  ☐ Course | STUDENT LEARNING OUTCOMES | |
|---|---|---|---|
| | | SLO1 | Utilize wireless theory for proper device selection, and test methodologies |
| | | SLO2 | Investigate how wireless devices fit within network standards |
| | | SLO3 | Configure and install wireless access points to industry standards |
| | | SLO4 | Perform site surveys with industry standard tools and methods |
| | | SLO5 | Implement wireless security based on industry standard models |
| | | SLO6 | Complete CWNA wireless certification objectives and tasks |
| 2 | Assessment Methods Plan (identify assessment instruments, scoring rubrics, SLO mapping diagrams) | 1. Student Survey of SLOs  2. Test & Lab data mapped to SLOs  3. Advisory committee feedback | |
| 3 | Assessment Administration Plan (date(s), sample size or selection of course sections, scoring procedures, etc.) | 1. Review New Student Survey Results for Spring 2012  2. Review SLOs and data through 2014  3. Review test and lab results and relate to SLOs  4. Industry feedback | |
| 4 | Assessment Results Summary (summarize Data) | **Student Survey Data Results:** | |

**Weighted Averages of SLO Data**

| Year | Responses | | SLO1 | SLO2 | SLO3 | SLO4 | SLO5 | SLO6 |
|---|---|---|---|---|---|---|---|---|
| 2010 | | 10 | 1.44 | 1.36 | 1.36 | 1.32 | 1.28 | 1.16 |
| 2010 | | 1 | 0.12 | 0.15 | 0.16 | 0.12 | 0.12 | 0.12 |
| 2013 | | 14 | 2.12 | 2.08 | 2.20 | 2.08 | 2.12 | 2.04 |
| Total | | 25 | 3.68 | 3.59 | 3.72 | 3.52 | 3.52 | 3.32 |
| | Total% | | 92.06 | 89.65 | 92.95 | 87.94 | 88.06 | 82.96 |

**Test Results**

| Test to SLO Map | |
|---|---|
| SLO1 | Q1+Q2+Q3 |
| SLO2 | Q2 |
| SLO3 | Q5+LAB |
| SLO4 | Q6+LAB |
| SLO5 | Q7+Q8 |
| SLO6 | FINAL+LAB |

| CNET218 TEST SCORES MAPPED TO SLOS | | | | | | | |
|---|---|---|---|---|---|---|---|
| | responses | SLO1 | SLO2 | SLO3 | SLO4 | SLO5 | SLO6 |
| F2010 | 12 | 39.81 | 41.68 | 40.51 | 39.84 | 40.00 | 40.67 |
| F2013 | 14 | 32.17 | 26.33 | 42.60 | 42.50 | 43.00 | 47.44 |
| Totals | 26 | 71.98 | 68.01 | 83.12 | 82.34 | 83.00 | 88.11 |

Weighted Average of all SLOs

| Total Average of SLOs | SLO1 | SLO2 | SLO3 | SLO4 | SLO5 | SLO6 |
|---|---|---|---|---|---|---|
| Total% based on weighted averages | 83.81 | 81.69 | 87.73 | 85.84 | 86.10 | 85.73 |
| total resp (survey + test) | 77 | | | | | |

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| Discussion of Assessment Procedure and Results, and Effectiveness of Previous Improvement Plans | SLO Assessment for survey data<br>All student survey are measured on a scale of 4 then were converted to a 100 percent scale.<br>SLO's Assessment of both sets of data: |
|---|---|

2010

| SLO1 | SLO2 | SLO3 | SLO4 | SLO5 | SLO6 |
|---|---|---|---|---|---|
| 87.59 | 87.47 | 86.69 | 85.83 | 85.39 | 83.45 |

2013

| SLO1 | SLO2 | SLO3 | SLO4 | SLO5 | SLO6 |
|---|---|---|---|---|---|
| 83.81 | 81.69 | 87.73 | 85.84 | 86.10 | 85.73 |

The SLO weighted average data compared to last data set showed a decrease in SLO 1 & 2. The students may have thought that they needed newer equipment to solve real world problems or that they didn't fully comprehend the lab problems they did do. Also the book we used is tied to the CWNA certification, but doesn't necessarily address the test questions that the students would see on the industry certification test. All other slo data sets showed an increase.

The SLO student survey data and the test results mapped-to-SLOs were relatively consistent. They indicated that the students basically achieved what they thought they learned. The results showed above 80% for nearly all SLOs in both sets of data. This result shows that the students are achieving the outcomes with good success.

| | | |
|---|---|---|
| | | One area that differed from the sets of data is that the students felt based on SLO6 of the new survey they didn't fully comprehend Wireless security.  Interestingly they did better on the actual testing results for SLO6 so the students may have comprehended more than they thought they did.  That said, Wireless security is the most complicated aspect of the course, |
| 6 | Recommended Changes & Plans for Implementation of Improvements | Network Security  was addressed at the 2014 advisory committee meeting and the advisory panel agrees security should be emphasized in the courses but that creating a new security course should not replace Bus 86 (this was the only course that could be swapped in the new degree pattern).<br><br>Newer equipment will be implemented in the spring of 2015 based on CTEA funds in 2014.  This should help with modernizing the curriculum to make it relevant to real world applications.  Also small wireless PDA devices should be incorporated into the curriculum since much of wireless is now using those devices these will need to be purchased with CTEA of foundation funds. |
| 7 | Description or evidence of dialog among course or program-level faculty about assessment plan and results | Alan Ross indicates the need for enhanced security instruction and incorporating small wireless PDA devices would be helpful for student success |

**Course and program level outcomes are required by ACCJC to be aligned.  Each program needs to complete a program map to show the alignment.  See examples of completed CPAS and program mapping documents are available at http://academic.cuesta.edu/sloa