Program Review Comprehensive Report

Program Review - Instructional: Electronics (ELE) and Electrician (ELC)

Supplemental Reports and Attachments

2014 - 2017

Comments or Notes: NCB ENTERED

Attachments:

2014-17_ELE_ELECTRONICS_DIGITAL_PLO_INSTRUCTIONAL.pdf
2014-17_ELE_ELECTRONICS_GREEN_TECH_PLO_INSTRUCTIONAL.pdf
2014-17_ELE_SLO_DISCIPLINE.pdf
2014-17_INSTRUCTION_ELE_ELC_ResourceRequests.xlsx
2014_17_ELE_ELC_CurriculumRPT.pdf
2014_17_ELE_ELC_SuccessEfficiencyRetentionRPT.pdf

2014 - 2017

Comments or Notes: This is for the unit of ELE/ELC & SCT within BEIT. It does not include shared resources, such as multiple IDS's, and others.

Program Trends and Updates

2014 - 2017

Program Update Section

Has your unit shifted departments in the PAST 4 years?: No--we are still in the BEIT Dept. But, we are going to follow the Schools model of organization, for the benefit of students.

Do you anticipate your unit will shift departments in the NEXT 4 years?: No, but my unit (discipline has been split into ELE and ELC, operationally). I was told we will remain in BEIT even after the change to Schools, and will also be a member of the School of STEM, where Electronics Technology falls under the "T" in STEM. It sounds like we will then be in a matrix management system, where we will attend meetings for each.

New certificates programs created by your unit in the PAST 4 years?:

of these affected the number of units in existing certificate/degrees, which then required re-approval. Some of these course revisions even required other disciplines to get their programs re-approved, due to unit changes, or course substitutions. One such program was Industrial Automation. And, the name of Supply Chain Technology was officially changed to Supply Chain Automation. I also made a change to the Electrician training program, by writing a new ENE-62 Math course, as an alternate requirement to the Trigonometry course. I did this in order to comply with industry advisors who said that Trig was not needed by their Electrician--only Algebra and Geometry were needed.

Substantial modifications anticipated to certificates/degrees in the NEXT 4 years.: Yes. I plan to rewrite most of our course SLOs to be harmonious with the new definition of SLOs that we received from the State Chancellor's Office, and remap them to the PLOs, which may also require substantial modification. In the new guidelines, it appears that what we were calling Outcomes are actually Objectives. So, we need to re-write many Course Outlines of Record to harmonize with the new guidelines, which should also be less onerous for student and faculty during assessments.

Activities in other units that impacted your unit in the PAST 4 years.: Yes, OSHA changed from the 30-hour card format, over to the 10-hour card format, which required a change in the total number of units in our pre-apprenticeship Electrician training certificate program. A new 3-unit ENE-62 engineering math course was written to replace trigonometry, per industry advice. So, changes in these courses affected certificates that included those modified or replaced courses. Also, it was suggested that we include GE specifications in several of our courses, so that some of our courses could satisfy GE requirement for transfer students, such as ELE-11 and ELE-13.

Activities in other units that impacted your unit in the NEXT 4 years.: Other than those mentioned above, there are none of which I am currently aware.

Previous Program Review Resource Requests

Resource Requests Received: This is only my second year of full-time work. So, I am aware of some, but not the previous funding sources, and requests. What I can say is that last year, we received everything for which we asked in program review, in the way of money: to replenish our expendable materials used in labs in four different teaching venues (STEM 302, IT-124, ATEC-119, and CACT-2); money for analog/digital trainers to replace many of our out-of-date Heath Zenith trainers for labs; and Fluke digital multimeters (DMMs) to upgrade our equipment, and allow us to teach in one additional classroom, without need to transport the DMMs back and forth across campus each week. We also were helped by additional funds from the TAACCCT and Perkins grants. All these sources combined to allow us to replenish many expendables, while replacing and upgrading equipment quality and quantity to meet our students' needs for continued and improved high quality education in Electronics (ELE) and Electrician (ELC) training. Because we are about to hire a full-time ELC instructor, I imagine that he/she will take over many of the responsibilities that I was handling before this, as we divide those task areas.

How did the resources received impact student learning?: All equipment and materials received, from all sources, have been utilized in such a manner as to enhance student learning and update our technology stance with respect to instruction. Some of these enabled instruction and demonstrations that would have otherwise been impossible with respect to hands-on lab opportunities. These additions/replacements brought real-world-like activities into the classroom to demonstrate greater relevance to our students and positioned them for better jobs. Hands-on opportunities were increased for students as we acquired more equipment upon which they could work, rather than needing to time-share so much as before this.

If you requested resources but did not receive them, how did that impact student learning?: One of my requests from last year was $10K for outreach and marketing effort, to get more women to enroll in Electronics. While $1K was granted through Perkins, I did not feel that was enough to create anything near parity between males and females in Electronics courses. But, it was a good start. We also need to have faculty trained to new female friendly modes of teaching, as through iWitts.com training. It is more than what we teach, and how we teach, that repels women--both internal and external issues. These include the delivery modes, group-work parameters, and the classroom environment. It can also be scheduling and childcare issues. There are multiple considerations that need to be addresses, beyond the desire for gender enrollment parity. We also need to be able to retain women in Electronics. For that, I feel we need in-class, as well as outside support systems, like those that are available to all ACE students--to help to enable them to be successful and feel supported in substantial and nurturing ways. We also need external programs to support women outside of the classroom.

IMPACT ON STUDENT LEARNING was more of an opportunity cost here. At a time when our enrollments are down (due to an improving economy), we have a unique opportunity to bring in women to both increase our total head-count, while striving for a 50/50 mix of men and women in Electronics. There is no good reason for women to be relegated to low-income jobs, when they are mentally and physically as capable as men in performing high technology Electronics jobs that are in such high demand in this strengthened economy. We can consider this an opportunity cost that was at least partially missed. Usually, females in Electronics classes are less than 5% of total enrollments. So, we had the opportunity to give those missing women training toward high paying, in-demand careers, but missed that opportunity.

Program Data Highlights Section

COR Review: In the process of cross-listing ELE courses with the newly approved ELC courses, I had to update and revise all 38 of them to get them approved through the Curriculum Committee, or they would not pass. So, I can safely say that they were all

updated in 2017, except for Work Experience. I was told to do nothing with that one, because there were major issues that needed to be worked out at pay-grades above mine. I was told to wait until the dust settled on those Work Experience decisions.

Courses and programs in ELE, ELC, and SCT (now SCA), are as up-to-date as possible.
Program Metric Highlights: I have established the metrics for measuring our ELE/ELC discipline performance to be equal to those of the 2014-17 Norco College average for all programs, where retention averages 86%; success averages 70%; and, efficiency averages 572. Keep in mind that that last parameter of efficiency varies wildly, even within the same school year. During this reporting period, we were in a valley, while the college was on a peak. But, our retention and success were well above the college averages for this reporting period.

Assessment Report Highlights: I am the only full-time faculty, leading three separate disciplines (ELE, ELC, and SCT), with many adjuncts working to cover courses in the ACE day-program, and our regular night and weekend courses in these different areas. For over two years, I have assessed 100% of all SLOs in every course I have taught. I have put those documents into the document repository inside TracDat. Also, I have made every adjunct aware of the vital importance of SLO assessment and reporting (SLO-A&R) needs. I have sent many emails to my associate faculty to get them to report 100% of all SLOs for each course they teach, and to send me copies when they turn-in grades and submit SLO reports through TracDat/Nuventive: Improve (TD/NI). I have done this for the first two years of my full-time work. Nobody has ever sent me a copy of their SLO assessment results since I was hired full-time; and, I began requesting copies, almost two years ago. That being said--I continue to email them seeking copies of their SLO results/reports. And, I have finally gotten two of my adjuncts to comply for the last 3 semesters.

I perceive my adjuncts as feeling pestered by this process that occurs infrequently in their teaching lives. They are mostly freeway fliers, who assess and report differently at each institution where they work. Some ask me each semester how to perform SLO A&R, even though they have supposedly done it here before. I believe we need expert-system software that will ask each teacher a series of questions to get the answers needed for reporting SLO assessment results in the proper format. Then, the process could be streamlined so that it would be effortless for teachers to comply. I wrote such an expert-system software package for a previous company. It reduced the complexity and time-involvement of that job so that virtually anyone in the company could easily perform those tasks in 12% of the original time, obtain correct answers within 15 minutes, instead of needing an expert to perform the same tasks over a much longer time. My expert-system software application saved 88% of the former time, allowed non-experts to perform the tasks that formerly required the expert, and saved much frustration.

I have been told that I can induce the adjuncts into submitting SLOs with promise of payment for a few hours per year. But, that has not been enough incentive to get them to comply. Only two of my adjuncts have entered data into TD/NI, according to the data. And, it has been entered in an incorrect format, or incompletely.

At an assessment meeting, where a person from the union was present, I asked if we could threaten adjuncts with the loss of their jobs if they did not comply with SLO assessment and reporting (SLO-A&R). The response was that I could not do that--it would be a union contract violation. I told the committee that unless we could put teeth in the request, such as to pre-pay everyone to comply with SLO-A&R, then we would very likely be out of compliance when it came to accreditation. I was told that it was against policy to pay instructors for work they had not already done. But, I responded that we would then have cause to fire them if they did not do what they had been paid to do (fraud). I said that something more than the current system needed to be established, even if through union negotiations, to force SLO-A&R compliance requirements into the teaching contract. Aside from that, all I can do is threaten them with not having them teach for us in the future if they do not comply. And, I was told that doing so would also be a point of contention with the union.

Program Goal: Increase enrollments, retention, and certificate and degree completions

Increase enrollments, retention, and completions in all ELE and ELC courses, and programs.

Goal Status: Completed
Goal Year(s): 2014 - 2017
Start Date: 02/17/2014

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Objective 6: , Goal 1 Objective 10: , Goal 3 Objective 1: , Goal 3 Objective 2: , Goal 3 Objective 3: , Goal 3 Objective 5: