

**NORCO COLLEGE
ANNUAL INSTRUCTIONAL PROGRAM REVIEW**

**Discipline/Unit: Electronics and Electrician (ELE & ELC,
respectively)**

(If applicable) **Program or Certificate Green Technician, Digital Electronics, pre-apprenticeship Electrician,
Industrial Automation, and IBEW Union Electrician & IBEW Union Audio Apprenticeship**

Please give the full title of the discipline or department. You may submit as a discipline or department as is easiest for your unit

Contact Person: Glen Graham

Due: April 20, 2017

Please send an electronic copy in a word document to:
programreview@norcollege.edu



Form Last Revised: February 2017

Norco College

Web Resources: <http://www.rccd.edu/administration/educatoralservices/ieffectiveness/Pages/ProgramReview.aspx>

Preliminary

Annual Instructional Program Review Update

Instructions

***Please retain this information for your discipline's/department's use (or forward to your chair).**

The Annual Self-Study is conducted by each unit on each college and consists of an analysis of changes within the unit as well as significant new resource needs for staff, resources, facilities, and equipment. It should be **submitted by April 20** or the first working day following the 20th in anticipation of budget planning for the fiscal year, which begins July 1 of the *following* calendar year.

For Program Review data, please go to the following link:

<http://www.norcocollege.edu/about/president/strategic-planning/programreview/Pages/index.aspx>

The questions on the subsequent pages are intended to assist you in planning for your unit.

The forms that follow are separated into pages for ease of distribution to relevant subcommittees. **Please keep the pages separated** if possible (though part of the same electronic file), **with the headers as they appear**, and be sure to include your unit, contact person (this may change from topic to topic) and date on each page submitted. Don't let formatting concerns slow you down. If you have difficulty with formatting, Nicole C. Brown can adjust the document for you. Simply add responses to those questions that apply and forward the document to nicole.brown@norcocollege.edu with a request to format it appropriately.

If you cannot identify in which category your requests belong or if you have complex-funding requests, please schedule an appointment with your college's Vice President for Business Services right away. They will assist you with estimating the cost of your requests. For simple requests such as the cost of a staff member, please e-mail your Vice President. It is vital to include cost estimates in your request forms. Each college uses its own prioritization system. Inquiries regarding that process should be directed to your Vice President.

Norco: VP Business Services 951-372-7157

Mission

Norco College serves our students, our community, and its workforce by providing educational opportunities, celebrating diversity, and promoting collaboration. We encourage an inclusive, innovative approach to learning and the creative application of emerging technologies. We provide foundational skills and pathways to transfer, career and technical education, certificates and degrees.

Vision

Norco – creating opportunities to transform our students and community for the dynamic challenges of tomorrow.

Strategic Plan: Goals and Objectives 2013-2018

Goal 1: Increase Student Achievement and Success

Objectives:

1. Improve transfer preparedness (completes 60 transferable units with a 2.0 GPA or higher).
2. Improve transfer rate by 10% over 5 years.
3. Increase the percentage of basic skills students who complete the basic skills pipeline by supporting the development of alternatives to traditional basic skills curriculum.
4. Improve persistence rates by 5% over 5 years (fall-spring; fall-fall).
5. Increase completion rate of degrees and certificates over 6 years.
6. Increase success and retention rates.
7. Increase percentage of students who complete 15 units, 30 units, 60 units.
8. Increase the percentage of students who begin addressing basic skills needs in their first year.
9. Decrease the success gap of students in online courses as compared to face-to-face instruction.
10. Increase course completion, certificate and degree completion, and transfer rates of underrepresented students.

Goal 2: Improve the Quality of Student Life

Objectives:

1. Increase student engagement (faculty and student interaction, active learning, student effort, support for learners).
2. Increase frequency of student participation in co-curricular activities.
3. Increase student satisfaction and importance ratings for student support services.
4. Increase the percentage of students who consider the college environment to be inclusive.
5. Decrease the percentage of students who experience unfair treatment based on diversity-related characteristics.
6. Increase current students' awareness about college resources dedicated to student success.

Goal 3: Increase Student Access

Objectives:

1. Increase percentage of students who declare an educational goal.
2. Increase percentage of new students who develop an educational plan.
3. Increase percentage of continuing students who develop an educational plan.
4. Ensure the distribution of our student population is reflective of the communities we serve.
5. Reduce scheduling conflicts that negatively impact student completion of degrees and programs.

Goal 4: Create Effective Community Partnerships

Objectives:

1. Increase the number of students who participate in summer bridge programs or boot camps.
2. Increase the number of industry partners who participate in industry advisory council activities.
3. Increase the number of dollars available through scholarships for Norco College students.
4. Increase institutional awareness of partnerships, internships, and job opportunities established with business and industry.
5. Continue the success of Kennedy Partnership (percent of students 2.5 GPA+, number of students in co-curricular activities, number of students who are able to access courses; number of college units taken).
6. Increase community partnerships.
7. Increase institutional awareness of community partnerships.
8. Increase external funding sources which support college programs and initiatives.

Goal 5: Strengthen Student Learning

Objectives:

1. 100% of units (disciplines, Student Support Service areas, administrative units) will conduct systematic program reviews.
2. Increase the percentage of student learning and service area outcomes assessments that utilize authentic methods.
3. Increase the percentage of programs that conduct program level outcomes assessment that closes the loop.
4. Increase assessment of student learning in online courses to ensure that it is consistent with student learning in face-to-face courses.
5. Increase the number of faculty development workshops focusing on pedagogy each academic year.

Goal 6: Demonstrate Effective Planning Processes

Objectives:

1. Increase the use of data to enhance effective enrollment management strategies.
2. Systematically assess the effectiveness of strategic planning committees and councils.
3. Ensure that resource allocation is tied to planning.
4. Institutionalize the current Technology Plan.
5. Revise the Facilities Master Plan.

Goal 7: Strengthen Our Commitment To Our Employees

Objectives:

1. Provide professional development activities for all employees.
2. Increase the percentage of employees who consider the college environment to be inclusive.
3. Decrease the percentage of employees who experience unfair treatment based on diversity-related characteristics.
4. Increase participation in events and celebrations related to inclusiveness.
5. Implement programs that support the safety, health, and wellness of our college community.

I. Norco College Annual Instructional Program Review Update

Unit: Electronics (ELE) _____

Contact Person: Glen Graham _____

Date: 4-20-17 _____

Trends and Relevant Data

1. How does your unit support the mission of the College?

Whereas the overall mission of Norco College is to serve:

our students, our community, and its workforce by providing educational opportunities, celebrating diversity, and promoting collaboration. We encourage an inclusive, innovative approach to learning and the creative application of emerging technologies. We provide foundational skills and pathways to transfer, career and technical education, certificates and degrees.

The Electronics/Electrician (ELE) discipline could be described as serving:

Green Technician, Digital Electronics, pre-apprenticeship Electrician, Industrial Automation, and IBEW Union Electrician and Audio Apprenticeship students, our community, and its workforce by providing educational opportunities within the Electronics/Electrician fields of study. We encourage an inclusive, innovative approach to learning and the creative application of emerging technologies. We provide foundational skills and pathways to transfer, career and technical education, certificates and degrees.

Therefore, while focused specifically on the fields of Electronics/Electrician, our unit's functions are in full-alignment with, and supportive of, the mission of the College.

2. Have there been any changes in the status of your unit? (if not, please indicate with an "N/A")

a. Has your unit shifted departments?

No. But, Electronics has just been split into Electronics and Electricity disciplines.

b. Have any new certificates or complete programs been created by your unit?

Yes, Industrial Automation and the IBEW Union Audio Apprenticeship programs.

c. Have activities in other units impacted your unit? For example, a new Multi Media Grant could cause greater demand for Art courses.

Not directly. But, Supply Chain Automation is similar with Industrial Automation. Each has a different focus that warrants separate programs. It is too early to tell what impact these new programs may have on each other. However, Supply Chain Automation, formerly Supply Chain Technician, is primarily a night program, while Industrial Automation is a day program that serves the Accelerated Certificate and Employment (ACE) program. As such, it is doubtful that either program will draw students away from the other, but rather complement one another. There is not currently enough history to draw a conclusion—only time will tell us if there is any impact of these similar programs.

3. List and discuss your retention and success rates as well as your efficiency. If helpful, please note any differences between instruction delivery format (Online, Hybrid etc.)

What are the changes or significant trends in the data? To what do you attribute these changes?

All Electronics and Electrician courses are taught in the traditional Face-to-Face (F2F) format, although we are preparing to move courses with labs into the blended (hybrid) learning environment. Labs would be done on campus, while lecture portions would be conducted online.

Based upon Institutional Research reports, retention rates for the programs named above are listed herein, and shown on the graphs below for Digital Electronics (top) and Electrician (bottom) programs:

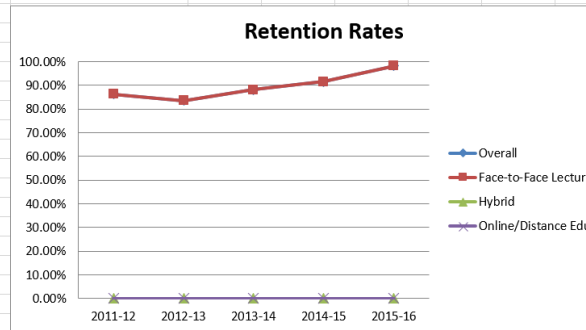
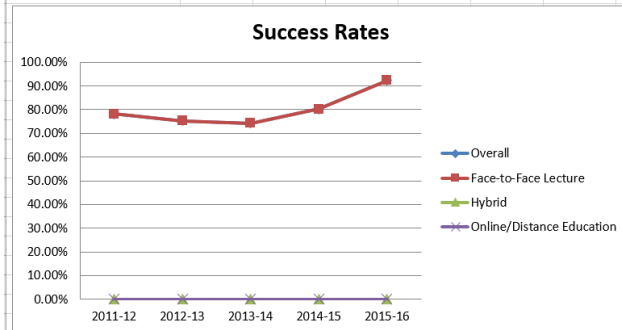
In 2015-2016 Norco College retention rates were overall 86.8% for all course modalities. Since 2011, except for a slight dip in 2012 to 2014, the retention rates for both Digital Electronics and Electrician programs have trended upward, with Digital Electronics at 98.2%, and the Electrician program at 100% retention for the latest reporting period, 2015-2016. It is speculated that the perfect retention rate of students in the Electrician program was due to the strategic work of our Career and Technical Education (CTE) Dean of Instruction, and the skillful ACE Program Director, with help of their caring, energetic staff. Together, they build partnerships with industry, and relationships with students, that lead to increased motivation, with effective student support services actively addressing issues before they become barriers to student success.

The success rate for Digital Electronics has also been on an upward trend, starting at 78.1% in 2011-2012, dipping in 2012 to 2014, and ending at 92.4% in the latest reporting period, 2015-2016. Our pre-apprenticeship Electrician program went from 71.4% in 2014 to 100% in 2015-2016.

Data for other programs, such as our Green Technician, Industrial Automation, International Brotherhood of Electrical Workers (IBEW) Union Electrician, and Audio, Apprenticeship programs is too new, and therefore not statistically meaningful, as compared to the more established programs reported within the Electronics/Electrician discipline(s).

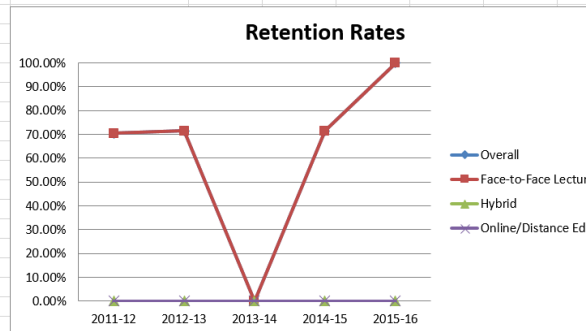
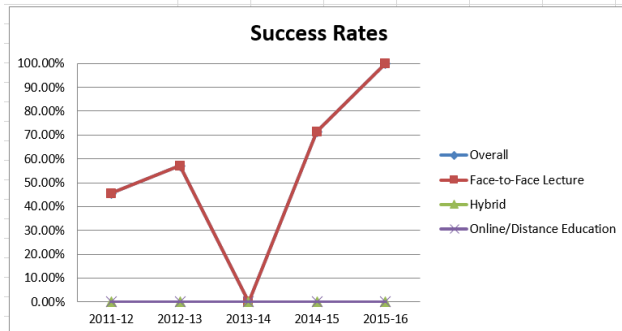
Success Rate NORCO	2011-12	2012-13	2013-14	2014-15	2015-16
Overall	78.14%	75.29%	74.29%	80.23%	92.36%
Face-to-Face Lecture	78.14%	75.29%	74.29%	80.23%	92.36%
Hybrid	0.00%	0.00%	0.00%	0.00%	0.00%
Online/Distance Education	0.00%	0.00%	0.00%	0.00%	0.00%

Retention Rate NORCO	2011-12	2012-13	2013-14	2014-15	2015-16
Overall	86.34%	83.53%	88.16%	91.53%	98.20%
Face-to-Face Lecture	86.34%	83.53%	88.16%	91.53%	98.20%
Hybrid	0.00%	0.00%	0.00%	0.00%	0.00%
Online/Distance Education	0.00%	0.00%	0.00%	0.00%	0.00%



Success Rate NORCO	2011-12	2012-13	2013-14	2014-15	2015-16
Overall	45.45%	57.14%	0.00%	71.43%	100.00%
Face-to-Face Lecture	45.45%	57.14%	0.00%	71.43%	100.00%
Hybrid	0.00%	0.00%	0.00%	0.00%	0.00%
Online/Distance Education	0.00%	0.00%	0.00%	0.00%	0.00%

Retention Rate NORCO	2011-12	2012-13	2013-14	2014-15	2015-16
Overall	70.45%	71.43%	0.00%	71.43%	100.00%
Face-to-Face Lecture	70.45%	71.43%	0.00%	71.43%	100.00%
Hybrid	0.00%	0.00%	0.00%	0.00%	0.00%
Online/Distance Education	0.00%	0.00%	0.00%	0.00%	0.00%



While retention and success rates were near perfection in the latest reporting period, enrollments have declined substantially in the year since then, which is not reflected on the included charts, up to 2016. Traditionally, unemployed workers go back to school when the economy is weak, and go back to work when it strengthens. We speculate that our 2016-2017 decline in enrollments is based on the strengthening U.S. economy, and the associated increase in demand for industrial workers. To see evidence of the enrollment trends, see the tables below for all ELE offerings, most of which are below capacity. This demonstrates the need for a strong, proactive marketing and recruitment effort to begin as soon as possible. This is necessary to support the educational goals of students who might otherwise find their pathways to certification and graduation obstructed by course cancellations, due to low enrollments beyond 2016. It should be noted that many of our Electronics (ELE) courses are cross-listed with other disciplines, such as Manufacturing (MAN) and Engineering (ENE). So, courses in those disciplines will also be seen in the tables below. Also, notice that the ELE-400-series of courses are taught at the IBEW Union Training Center, with Norco College credit given to those successful off-campus students.

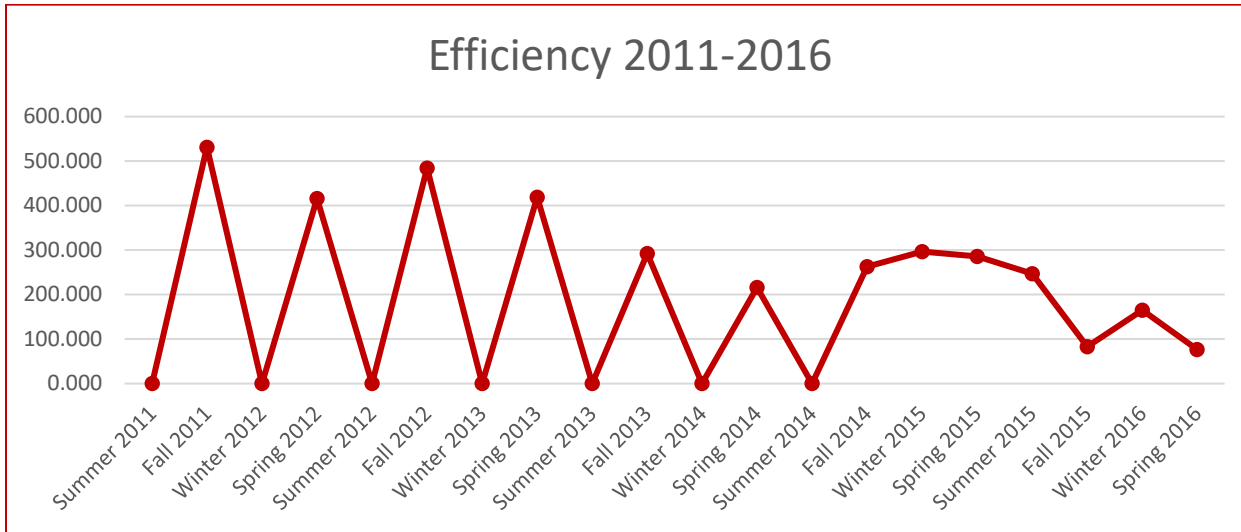
2074	12FAL	NOR	ELE	ELE-11	ELE-11-37032	DC Electronics	183.6	0.35
2075	12FAL	NOR	ELE	ELE-23	ELE-23-37033	Elect Devices & Circuits	170	0.35
2076	12FAL	NOR	ELE	ELE-27	ELE-27-37034	Technical Communications	95.2	0.2
2077	12FAL	NOR	ELE	ELE-64	ELE-64-37036	Programmable Logic Controller	124.2	0.2833
3245	13FAL	NOR	ELE	ELE-11	ELE-11-37255	DC Electronics	170	0.3
3246	13FAL	NOR	ELE	ELE-11	ELE-11-37799	DC Electronics	0	0.35
3247	13FAL	NOR	ELE	ELE-11	ELE-11-37800	DC Electronics	0	0.35
3248	13FAL	NOR	ELE	ELE-26	ELE-26-37649	Microprocessors, Microcontrol	176.8	0.35
3249	13FAL	NOR	ELE	ELE-27	ELE-27-37257	Technical Communications	87.88	0.2
3250	13FAL	NOR	ELE	ELE-28	ELE-28-37650	MultiSim CAD & PCB Design/F	101.34	0.2833
3251	13FAL	NOR	MAN	MAN-64	ELE-64-37258	Programmable Logic Controller	64.8	0.1417
3826	13SPR	NOR	ELE	ELE-10	ELE-10-32165	Survey Electronics	217.6	0.35
3827	13SPR	NOR	ELE	ELE-13	ELE-13-32595	AC Electronics	102	0.35
3828	13SPR	NOR	ELE	ELE-25	ELE-25-32597	Digital Techniques	136	0.35
3829	13SPR	NOR	ELE	ELE-91	ELE-91-32596	Fundamentals of Solar Energy	68	0.2
4505	14FAL	NOR	ELE	ELE-11	ELE-11-37980	DC Electronics	204	0.35
4506	14FAL	NOR	ELE	ELE-13	ELE-13-38454	AC Electronics	68	0.35
4507	14FAL	NOR	ELE	ELE-25	ELE-25-38453	Digital Techniques	0	0.35
4508	14FAL	NOR	ELE	ELE-27	ELE-27-37984	Technical Communications	30.42	0.1
5086	14SPR	NOR	ELE	ELE-10	ELE-10-32809	Survey Electronics	183.6	0.35
5087	14SPR	NOR	ELE	ELE-13	ELE-13-32810	AC Electronics	102	0.35
5088	14SPR	NOR	ELE	ELE-13	ELE-13-33279	AC Electronics	0	0.35
5089	14SPR	NOR	ELE	ELE-13	ELE-13-33280	AC Electronics	0	0.35
5090	14SPR	NOR	ELE	ELE-23	ELE-23-33249	Elect Devices & Circuits	74.8	0.35
5502	14SUM	NOR	ELE	ELE-27	ELE-27-35451	Technical Communications	0	0.2
5844	15FAL	NOR	ELE	ELE-11	37055	DC Electronics	183.6	0.35
5845	15FAL	NOR	ELE	ELE-13	37065	AC Electronics	88.4	0.35
5846	15FAL	NOR	ELE	ELE-13	38733	AC Electronics	105.37	0.35
5847	15FAL	NOR	ELE	ELE-23	37103	Elect Devices & Circuits	0	0.35
5848	15FAL	NOR	ELE	ELE-25	38734	Digital Techniques	88.4	0.35
5849	15FAL	NOR	ELE	ELE-26	37056	Microprocessors, Microcontrol	0	0.35
5850	15FAL	NOR	ELE	ELE-400	37108	Electrician Intro, Plus	0	0.3167
5851	15FAL	NOR	ELE	ELE-400	37110	Electrician Intro, Plus	0	0.3167
5852	15FAL	NOR	ELE	ELE-400	37111	Electrician Intro, Plus	0	0.3167
5853	15FAL	NOR	ELE	ELE-402	37112	Adv. DC, Basic AC, TE & NEC	0	0.3167
5854	15FAL	NOR	ELE	ELE-404	37113	Digital, Conductors & NEC	0	0.3167
5855	15FAL	NOR	ELE	ELE-404	37115	Digital, Conductors & NEC	0	0.3167
5856	15FAL	NOR	ELE	ELE-404	37121	Digital, Conductors & NEC	0	0.3167
5857	15FAL	NOR	ELE	ELE-406	37116	Grounding, Adv Prints & Motor	0	0.3167
5858	15FAL	NOR	ELE	ELE-406	37117	Grounding, Adv Prints & Motor	0	0.3167
5859	15FAL	NOR	ELE	ELE-408	37118	Transformers, TE, Grid Mgmt.	0	0.3167
5860	15FAL	NOR	ELE	ELE-71	37066	Residential Electrical Wiring	0	0.35

6480	15SPR	NOR	ELE	ELE-11	ELE-11-32081	DC Electronics	163.2	0.35
6481	15SPR	NOR	ELE	ELE-26	ELE-26-32083	Microprocessors, Microcontrol	0	0.35
6482	15SPR	NOR	ELE	ELE-26	ELE-26-32084	Microprocessors, Microcontrol	142.8	0.35
6483	15SPR	NOR	ELE	ELE-91	ELE-91-33623	Fundamentals of Solar Energy	51	0.2
6943	15SUM	NOR	ELE	ELE-11	35572	DC Electronics	164.63	0.35
6944	15SUM	NOR	ELE	ENE-27	35577	Technical Communications	16.65	0.1
6945	15SUM	NOR	ELE	ELE-64	35580	Programmable Logic Controller	0	0.2833
6946	15SUM	NOR	ENE	ENE-27	35576	Technical Communications	43.28	0.1
7060	15WIN	NOR	ELE	ENE-27	ELE-27-30626	Technical Communications	29.63	0.1
7061	15WIN	NOR	ENE	ENE-27	ENE-27-30627	Technical Communications	23.05	0.1
7327	16SPR	NOR	ELE	ELE-11	32310	DC Electronics	74.8	0.35
7328	16SPR	NOR	ELE	ELE-11	32897	DC Electronics	105.37	0.35
7329	16SPR	NOR	ELE	ELE-26	32899	Microprocessors, Microcontrol	98.78	0.35
7330	16SPR	NOR	ELE	ENE-27	32903	Technical Communications	16.59	0.2
7331	16SPR	NOR	ELE	ELE-28	32869	MultiSim CAD & PCB Design/F	0	0.2833
7332	16SPR	NOR	ELE	ELE-28	32870	MultiSim CAD & PCB Design/F	117.6	0.2833
7333	16SPR	NOR	ELE	ELE-401	32916	Basic Ele Theory, Math & NEC	0	0.3167
7334	16SPR	NOR	ELE	ELE-401	32917	Basic Ele Theory, Math & NEC	0	0.3167
7335	16SPR	NOR	ELE	ELE-401	32918	Basic Ele Theory, Math & NEC	0	0.3167
7336	16SPR	NOR	ELE	ELE-403	32919	AC, ELE Applications & NEC	0	0.3167
7337	16SPR	NOR	ELE	ELE-405	32920	Blueprints, Specs, & NEC	0	0.3167
7338	16SPR	NOR	ELE	ELE-405	32921	Blueprints, Specs, & NEC	0	0.3167
7339	16SPR	NOR	ELE	ELE-405	32922	Blueprints, Specs, & NEC	0	0.3167
7340	16SPR	NOR	ELE	ELE-407	32923	Motor Ctl, Gen, Supplies, NEC	0	0.3167
7341	16SPR	NOR	ELE	ELE-407	32924	Motor Ctl, Gen, Supplies, NEC	0	0.3167
7342	16SPR	NOR	ELE	ELE-407	32925	Motor Ctl, Gen, Supplies, NEC	0	0.3167
7343	16SPR	NOR	ELE	ELE-409	32926	Electrician Specialty Systems	0	0.3167
7344	16SPR	NOR	ELE	MAN-64	32905	Programmable Logic Controller	33.6	0.2833
7345	16SPR	NOR	ELE	ELE-71	32895	Residential Electrical Wiring	0	0.35
7346	16SPR	NOR	ELE	ELE-72	32886	Commercial/Industry Electrical	88.4	0.35
7347	16SPR	NOR	ELE	ELE-73	32896	Electric Mtrs for Electricians	0	0.35
7348	16SPR	NOR	ELE	ELE-77	32900	Survey of Electrical Trades	0	0.35
7844	16WIN	NOR	ELE	ELE-11	30839	DC Electronics	80.78	0.35
7845	16WIN	NOR	ELE	ENE-27	30757	Technical Communications	9.88	0.2
7846	16WIN	NOR	ENE	ENE-27	30758	Technical Communications	13.17	0.2

Efficiency

The efficiency data file provided on the Program Review web page was consulted. However, the data provided was simply too immense to be useful for analysis by heuristic means. It is requested that the Program Review Committee consider ways to make Efficiency data more informational in nature and practical for analytical purposes in the future. We have no idea how to use the data provided to make the determination of efficiency. We do not see any efficiency number indicated in the data provided. However, from the graph of efficiency for the ELE discipline that includes Electronics and Electrician programs it appears that average efficiency has been declining from the summer of 2011, when it measured 531.3, until

the winter of 2016 when it measured 164.8. This may have resulted from lack of leadership in the discipline, because it was run strictly with adjunct faculty since 1999. This graph depicts that trend:



		Annual 2013-2014	Annual 2014-2015	Annual 2015-2016
PROGRAM AWARDS - Norco College Total		1,148	1,090	1,116
Associate in Science for Transfer (A.S.-T) Degree Total				
	College-wide, reference-only (not ELE)	6	17	34
Associate of Science (A.S.) degree Total				
	Electronics & Electric Technology	3	1	7
Certificate requiring 30 to < 60 semester units Total				
	Electronics & Electric Technology-093400	6	1	16
	Industrial Automation (part of ACE)	0	0	Too New for data

		IBEW Union Electrician Apprenticeship			Too new
		IBEW Union Audio Apprenticeship			Not yet active
		Certificate requiring 18 to < 30 semester units Total			
		Green Technician	1	0	0
Total Electronics & Electric Technology = 35 since 2013					
Electronics & Electrician % of Norco Total = 0.01%					

PROGRAM OF STUDY

This analysis includes students who enrolled in at least one course at Norco in Fall 2016 and had a declared Program of Study. Current as of 12/13/16.		
Students may have more than one Active Program of Study; therefore, this is a duplicate count. Students may also have a declared Program of Study not offered at Norco.		
Program Title	Frequency	Percent
Electrician/Electronics: Digital Electronics	366	2.5
Electrician/Electronics: Electrician, pre-apprenticeship	37	0.3

Electrician/Electronics: Electrician Apprenticeship	51	0.3
Electrician/Electronics: Green Technician	8	0.1
Electronics Technology	34	.02
Electronic Communications	1	0
Electronics Technology: Electronics Computer Systems	1	0
Digital Electronics Technology	1	0
Manufacturing Tech: Automated Systems	2	0
Manufacturing Tech: Automated Systems Technician	68	0.5

4. List the resources that you received in the last year as a result of program review. How did the resources impact student learning? If you requested resources and did not receive them, how did it impact your unit?

We have not received sufficient resources from our Annual Program Reviews to adequately replenish expendable components, or to maintain, or replace defective Electronics training equipment. Adding to that, we have split the venues used to house our three teaching areas: Digital Electronics in STEM-302; Electrician training in the CACT; and Industrial Automation in IT-124. This has increased the need to subdivide our inventory of components and equipment, creating even more shortages of a many more items. And, while a full-time faculty member was finally hired to lead the Electronics and Electrician training programs, there has not been anyone to zealously advocate for our discipline for several decades. This faculty member is the only full-time member of the discipline. All other instructors are adjunct. This may have been at least a partial contributing factor to the lack of focus on the needs of the Electronics and Electrician training programs, since ELE came to Norco College from Riverside in 1999.

5. What annual goals does your unit have for 2016-2017 (please list the most important first)? Please indicate if a goal is directly linked to goals in your comprehensive. How do your goals support the college mission and the goals of the [Strategic Plan/Educational Master Plan](#)?

List the goals of your unit for 2016-2017	Define activity(s) linked to the goal	Briefly explain the relationship of goal to mission and Strategic Plan/Educational Master Plan (see above)	Indicate if goal is limited to Distance Education
Increase all beginning enrollments through marketing	Marketing and outreach, along with a shift to hybrid courses	Goal 3, Objective 2 to fill our courses	No

efforts			
Increase enrollments of under-represented populations through marketing efforts and outreach	Marketing and outreach to under-represented populations, especially to potential female students	Goal 1, Objective 10 to add female students to trainees, so they can attain high paying jobs too	No
Increase industry partnerships to give students greater opportunities	Find and cultivate more industry apprenticeship opportunities	Goal 4, Objective 2 by gaining more earn-while-you learn partnerships	No
Subdivide ELE discipline into ELE and ELC; then expand programs via changes in CurricunetMETA	Hire a new faculty member to lead, and to grow, Electrician training, as the ACE program continues expansion	Goal 1, Objective 6—splitting and growing each focus area will expand our effectiveness & quality	No
Completion rates of degrees and certificates at or above College Benchmark Standard	Determine College Benchmark, and consider an analysis of results during next review	Goal 1, Objective 5, through increased student preparation and counseling	No
Success rates at or above College Benchmark standard	Determine College benchmark, and consider an analysis of results during the next review	Goal 1, Objective 6 through increased student preparation and counseling	No
Retention rates at or above college benchmark standard	Determine college benchmark and consider an analysis of results during next review	Goal 1, Objective 6 through increased student preparation and counseling	No

**Your unit may need assistance to reach its goals. Financial resources should be listed on the subsequent forms. In addition, you may need help from other units or Administrators. Please list that on the appropriate form below, or on the form for “other needs.”*

Norco College Annual Instructional Program Review Update

Unit: Electronics (ELE) _____
 Contact Person: Glen Graham _____
 Date: 4-20-17 _____

Current Human Resource Status

6. Complete the Faculty and Staff Employment Grid below. Please list full and part time faculty numbers in separate rows. Please list classified staff who are full and part time separately:

Faculty Employed in the Unit		
Teaching Assignment (e.g. Math, English)	Full-time faculty or staff (give number)	Part-time faculty or staff (give number)
Electronics and Electrician programs	1	6

Classified Staff Employed in the Unit		
Staff Title	Full-time staff (give number)	Part-time staff (give number)
None are separately assigned to ELE		

7. Staff Needs

NEW OR REPLACEMENT STAFF (Administrator, Faculty or Classified)¹

<p>List Staff Positions Needed for Academic Year 2017-2018 Please justify and explain each faculty request as they pertain to the goals listed in item #3. Place titles on list in order (rank) or importance. Please state if the request impacts Distance Education.</p>	<p>Indicate (N) = New or (R) = Replacement</p>	<p>Number of years requested</p>	<p>Annual TCP*</p>
<p>1. Full-Time Instructor to lead the Electrician Training programs <u>Justification: The BEIT Dept. just voted to split Electronics and Electrician programs into ELE and ELC, respectively. Not all ELE instructors are qualified to teach ELC, and vice versa. We need current/former Electronic Engineers to teach ELE; and, we need current/former Electrical Contractors to teach Electrician training. There is so much demand for our successful ACE program that it is expanding. A dedicated ELC instructor is needed to lead this expansion, and to teach these specialized courses, as ACE grows. ELC now includes Residential Electrician, Industrial Electrician, Industrial Automation, and Green Technician programs. This is a very heavy load to manage and teach, in addition to day and evening Electronics courses, along with finding time for curriculum development, assessment work, required committee work, and flex time obligations for our one-and-only full-time ELE instructor, now. The other issue is that few instructors are available to teach five days per week in ACE during the daytime hours. So, those courses must default to our full-timer, when another instructor cannot be found. This situation needs a permanent resolution, or it can risk the continuity and reliability of ACE course sequence scheduling and execution.</u></p>	<p>New</p>	<p>All future years</p>	<p>Est. \$100 to 130K TCP—depends on degrees of new hire (salary step)</p>
<p>2. <u>Justification:</u></p>			
<p>3. <u>Justification:</u></p>			

¹ If your SLO assessment results make clear that particular resources are needed to more effectively serve students, please be sure to note that in the “reason” section of this form.

4. <u>Justification:</u>			
5. <u>Justification:</u>			
6. <u>Justification:</u>			

* TCP = "**Total Cost of Position**" for one year is the cost of an average salary plus benefits for an individual. New positions (not replacement positions) also require space and equipment. Please speak with your college Business Officer to obtain accurate cost estimates. Please be sure to add related office space, equipment and other needs for new positions to the appropriate form and mention the link to the position. Please complete this form for "New" Classified Staff only. All replacement staff must be filled per Article I, Section C of the California School Employees Association (CSEA) contract.

Requests for staff and administrators will be sent to the [Business and Facilities Planning Council](#). Requests for faculty will be sent to the [Academic Planning Council](#).

Unit Name: *Electronics (and Electrician) programs-*

8. Equipment & Technology Not Covered by Current Budget²

List Equipment, Technology, Software or Equipment Repair Needed for Academic Year <u>2017-2018</u> Please list/summarize the needs of your unit on your college below. Please be as specific and as brief as possible. Place items on list in order (rank) or importance. Provide the Asset Tag Number(s) for replacement requests. In the Justification, include how the item addresses the department's goals, and if it assists in remaining competitive with comparable institutions (if applicable). Please state if the request impacts Distance Education.	*Indicate whether Equipment is for (I) = Instructional or (N) = Non-Instructional purposes	How many students/Staff/ departments will directly benefit from this equipment/ technology?	Use this link for Annual TCO*			
			Number of years requested	Cost per item	Number Requested	Total Cost of Request

² If your SLO assessment results make clear that particular resources are needed to more effectively serve students, please be sure to note that in the "reason" section of this form.

<p>1. Supplies and minor equipment replenishment in Electronics area, up to \$10,000 <u>Justification:</u></p>	I	Est. 250 students per year	3	\$.20 to \$400 each item; avg is \$12.00	Cannot be told until these die	\$10,000	See above when first listed
<p>2. <u>Justification:</u></p>							
<p>3. <u>Justification:</u></p>							
<p>4. <u>Justification:</u></p>							
<p>5. <u>Justification:</u></p>							

* Instructional Equipment is defined as equipment purchased for instructional activities involving presentation and/or hands-on experience to enhance student learning and skills development (i.e. desk for student or faculty use). Non-Instructional Equipment is defined as tangible district property of a more or less permanent nature that cannot be easily lost, stolen or destroyed; but which replaces, modernizes, or expands an existing instructional program. Furniture and computer software, which is an integral and necessary component for the use of other specific instructional equipment, may be included (i.e. desk for office staff). ** Total Cost of Ownership requests are sent to the [Business and Facilities Planning Council](#).

Unit Name: *Electronics (and Electrician) programs* -

9. Professional or Organizational Development Needs Not Covered by Current Budget*₃

<p>List Professional Development Needs for Academic Year _____ Not requested for 2017-2018 (too busy) _____ . Reasons might include in</p>	<p>Annual TCO*</p>
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3 If your SLO assessment results make clear that particular resources are needed to more effectively serve students, please be sure to note that in the “reason” section of this form.

<p>response to assessment findings or the need to update skills to comply with state, federal, professional organization requirements or the need to update skills/competencies. Please be as specific and as brief as possible. Some items may not have a cost per se, but reflect the need to spend current staff time differently. Place items on list in order (rank) or importance. Examples include local college workshops, state/national conferences. Please state if the request impacts Distance Education.</p>	<p>Cost per item</p>	<p>Number Requested</p>	<p>Total Cost of Request</p>	<p>EMP Goals</p>
<p>1. <u>Justification:</u></p>				
<p>2. <u>Justification:</u></p>				
<p>3. <u>Justification:</u></p>				
<p>4. <u>Justification:</u></p>				
<p>5. <u>Justification:</u></p>				
<p>6. <u>Justification:</u></p>				

*It is recommended that you speak with the Faculty Development Coordinator to see if your request can be met with current budget.

** These requests are sent to the [Professional Development Committee](#) for review.

Unit Name: _____

10. Student Support Services, Library, and Learning Resource Center (see definition below*) Services needed by your unit over and above what is currently provided by student services at your college. Requests for Books, Periodicals, DVDs, and Databases must include specific titles/authors/ISBNs when applicable. Do not include textbook requests. These needs will be communicated to Student Services at your college⁴

<p align="center">List Student Support Services Needs for Academic Year Not requested for 2017-2018 _____.</p> <p align="center">Please list/summarize the needs of your unit on your college below. Please be as specific and as brief as possible. Not all needs will have a cost, but may require a reallocation of current staff time. Please state if the request impacts Distance Education.</p>	<p align="center">EMP GOALS</p>
<p>1. <u>Justification:</u></p>	
<p>2. <u>Justification:</u></p>	
<p>3. <u>Justification:</u></p>	
<p>4. <u>Justification:</u></p>	
<p>5. <u>Justification:</u></p>	
<p>6. <u>Justification:</u></p>	

*Student Support Services include for example: tutoring, counseling, international students, EOPS, job placement, admissions and records, student assessment (placement), health services, student activities, college safety and police, food services, student financial aid, and matriculation. * These requests are sent to the [Student Services Planning Council](#) and the [Library Advisory Committee](#).

⁴ If your SLO assessment results make clear that particular resources are needed to more effectively serve students, please be sure to note that in the “reason” section of this form.

Unit Name: _____

11. OTHER NEEDS AND LONG TERM SAFETY CONCERNS not covered by current budgets

**** For immediate hazards, contact your supervisor ****

<p align="center">List Other Needs that do not fit elsewhere.</p> <p>Please be as specific and as brief as possible. Not all needs will have a cost, but may require a reallocation of current staff time. Place items on list in order (rank) or importance.</p>	Annual TCO*			
	Cost per item	Number Requested	Total Cost of Request	EMP Goals
<p>1. Marketing and outreach—my dean suggested \$25K to reach my goal to increase total enrollments of all populations, as well as to market to under-represented populations, including women (who have been almost non-existent within Electronics and Electrician programs).</p> <p><u>Justification: Our courses have been low-enrolled in the past year, which is assumed to be the result of a strengthening economy. We do not want courses to cancel, because that would delay completion by students who are already in our programs. If we do not take early steps to increase enrollments, we may need to cancel low-enrolled courses. We cannot allow that to impact our continuing students who depend upon the reliability of our programs. Also, women hardly ever start our programs. They are an under-represented population. There is no reason why women cannot get the education needed to earn the high incomes that are available in Electrician and Electronics industries. We need to break the false perception that our technologies are for men only—they are not gender specific at all.</u></p>	\$25,000	Lump Sum	\$25,000	Listed above
<p>2.</p> <p><u>Justification:</u></p>				

⁵ If your SLO assessment results make clear that particular resources are needed to more effectively serve students, please be sure to note that in the “reason” section of this form.

3. <u>Justification:</u>				
4. <u>Justification:</u>				
5. <u>Justification:</u>				
6. <u>Justification:</u>				

These requests are sent to the [Business and Facilities Planning Council](#), but are not ranked. They are further reviewed as funding becomes available.

Preliminary

Rubric for Annual Instructional Program Review - Part I only

Discipline:

Contact Person:

Reviewer:

Average Score:

Area of Assessment	0 No attempt	1 some attempt	2 good attempt	3 outstanding attempt
1. Retention, success, and efficiency rates have been identified and reflected upon.	No attempt to list retention, success, or efficiency data	Limited attempt to identify or discuss identified data	Clear attempt to identify and discuss identified data	Substantial attempt to identify and discuss/interpret identified data
2. Previous recourse requests stated and impact discussed.	No resource requests discussed	Limited discussion of resource requests or limited attempt to link to student learning.	Resources discussed and clear attempt to identify student impact	Resources discussed and substantial attempt to identify student impact OR No resources were requested.
3. There are annual goals for refining and improving program practices.	No annual goals stated	Limited/generic statement made regarding goal(s), lacks clarity or details	Clear statement made regarding goal(s), includes details	Well-defined statement made regarding goal(s), includes details, reasoning
4. Activities identified that support annual goals; connections made between goals/activities and Retention, Success, Enrollment, and Efficiency data.	No attempt made to identify activities	Limited/generic statement about activities; very limited attempt to connect to data from question 2 (where logical)	Clearly stated activities that support the goal(s); clear connection made to data from question 2 (where logical)	Well-defined activities that logically support the goal(s); definitive connections made to data from question 2 (where logical)
5. The annual goals are linked to the Mission and Educational Master Plan (EMP) of NC.	No link between the annual goals and the Mission or EMP	Limited attempt to link goals to Mission and EMP	Clear attempt to link goals to Mission and EMP	Well defined connection made between goals and Mission and EMP
6. Resource requests have reasons identified and completed data fields, including estimated dollar amount.	No reasons identified and incomplete data fields; or reasons identified, but incomplete or empty data field	Limited/generic/basic reasons provided, data fields completed	Clear requests for resources, all data fields fully completed	Well defined reasons for resources, all data fields fully completed
7. Linkages made between EMP/Strategic Plan Goals (SPG) with reasons for resource requests.	No linkage made between resource requests and EMP/SPG	Limited/generic/basic connection made between resource requests and EMP/SPG	Clear connection made between resource requests and EMP/SPG	Strong connection made between resource requests and EMP/SPG
Column scores				

Additional comments:

II. Norco College - Annual Assessment Update

USE ASSESSMENT DATA FROM fall 2015-spr 16

Purpose –An annual review provides an opportunity for reflection on all that has been accomplished and learned from your efforts in assessment. The annual review is a time to take stock of which courses and programs have undergone some scrutiny, and subsequently should help with planning for the upcoming years. Things we might learn in one cycle of assessment might actually help us to plan assessments in the next cycle, or might facilitate changes in other courses that weren't even included in the initial assessment. To this end, please complete the following with as much detail as possible. If you have any questions, please contact either Sarah Burnett at sarah.burnett@norcollege.edu, or Greg Aycock at greg.aycock@norcollege.edu, or talk to your NAC representative.

1. Identify where you are in the cycle of SLO assessment for each course you assessed in fall 2015 - spring 2016. Each response will be individualized; this means each completed column might look a little different. You may have a course in which you are implementing improvements to close the loop on an initial assessment that was completed in a different year. You might also have a course that only has an initial assessment and you haven't yet completed any follow-up or improvement activities. (Add rows to the chart as needed.)

Course number	SLO Initial Assessments	Semester assessed	Entered into TracDat fields	SLOs with Changes Made to course	Plan for completing identified Changes	SLOs not needing Changes (assumed loop-closed)	SLOs involved in Loop-Closing assessment
	Indicate which specific SLOs were assessed in the identified course		Yes or No	Identify which SLOs for had Changes Made identified, & simple reasoning	Identify semester & basic plan of action	Provide clear reasoning as to why loop closed	Indicate semester initial assessment was started and semester when loop was closed. Provide rationale for why you consider the assessment loop is closed
ELE-11	ALL SLOs	Each--even though not required	Yes	All need generalization mods that are no so onerous to assess. Currently, they require essays. They need to be more easily assessed.	Changes have already started by coordination with the NAS, and changes being slowly introduced, along with other	<i>SLOs were</i> onerous to assess, resulting from Bloom's Taxonomic verbs such as describe, explain, or discuss within each. These required essays for assessment.	None of our SLOs were marked as a loop-closing activities, because of grossly misaligned SLOs/PLOs—all need

					CurricunetMETA updates.		to be changed and realigned.
ELE-13	ALL SLOs	Each--even though not required	Yes	All need generalization mods that are no so onerous to assess. Currently, they require essays. They need to be more easily assessed.	Changes have already started by coordination with the NAS, and changes being slowly introduced, along with other CurricunetMETA updates.	<i>SLOs were</i> onerous to assess, resulting from Bloom’s Taxonomic verbs such as describe, explain, or discuss within each. These required essays for assessment.	None of our SLOs were marked as a loop-closing activities, because of grossly misaligned SLOs/PLOs—all need to be changed and realigned.
ELE-64	ALL SLOs	Each--even though not required	Yes	All need generalization mods that are no so onerous to assess. Currently, they require essays. They need to be more easily assessed.	Changes have already started by coordination with the NAS, and changes being slowly introduced, along with other CurricunetMETA updates.	<i>SLOs were</i> onerous to assess, resulting from Bloom’s Taxonomic verbs such as describe, explain, or discuss within each. These required essays for assessment.	None of our SLOs were marked as a loop-closing activities, because of grossly misaligned SLOs/PLOs—all need to be changed and realigned.
ELE-71	ALL SLOs	Each--even though not required	Yes	All need generalization mods that are no so onerous to assess. Currently, they require essays. They need to be more easily assessed.	Changes have already started by coordination with the NAS, and changes being slowly introduced, along with other CurricunetMETA updates.	<i>SLOs were</i> onerous to assess, resulting from Bloom’s Taxonomic verbs such as describe, explain, or discuss within each. These required essays for assessment.	None of our SLOs were marked as a loop-closing activities, because of grossly misaligned SLOs/PLOs—all need to be changed and realigned.
ELE-74	ALL SLOs	Each--even though	Yes	All need generalization mods that are no so onerous to assess. Currently,	Changes have already started by coordination with the NAS, and	<i>SLOs were</i> onerous to assess, resulting from Bloom’s Taxonomic verbs such as describe,	None of our SLOs were marked as a loop-closing activities, because of grossly

		not required		they require essays. They need to be more easily assessed.	changes being slowly introduced, along with other CurricunetMETA updates.	explain, or discuss within each. These required essays for assessment.	misaligned SLOs/PLOs—all need to be changed and realigned.

2. a) How many Program Level Outcome **initial** assessments were you involved in **fall 2015 - spring 2016**? Indicate a total number per column. Name the AOE, ADT, GE and/or Certificate program.

To provide you with supportive information for this section, the following GE and AOE assessments were conducted in 2015-16:
 Initial assessment for GE PLO Information Competency and Technology Literacy
 Closing Loop for GE PLO Self-Development and Global Awareness
 A Closing the Loop Assessment for AOE in Humanity, Philosophy and The Arts
 A Closing the Loop Assessment for AOE in Social and Behavioral Sciences

AOE (Area of Emphasis)	ADT (Associate for Transfer)	GE (General Education)	Certificate
0	0	0	0

- b) How many Program Level Outcome **loop-closing** assessments were you involved in **fall 2015 - spring 2016**? Indicate a total number per column. Name the AOE, ADT, GE and/or Certificate program.

AOE (Area of Emphasis)	ADT (Associate for Transfer)	GE (General Education)	Certificate
0	0	0	None in 2015-16

3. Please describe any **Changes** you made in a course or a program in response to an assessment. Reflect on the impact you determine the changes may have had on student learning, student engagement, and/or your teaching. (Add rows as needed)

Course	Changes Made	Impact of changes on student learning, engagement,
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	Please click on “Choose an item & select from the drop down menu – content can be modified to suit your needs. Type in “other” approach taken	and/or teaching
ELE-11	Increased in-class activities/exercises/worksheets to practice content	The impact of the changes I made created higher levels of student engagement, satisfaction, and retention.
ELE-13	In-class activities/exercises/worksheets to practice content	The impact of the changes I made created higher levels of student engagement, satisfaction, and retention.
ELE-64	Increased in-class activities/exercises/worksheets to practice content	The impact of the changes I made created higher levels of student engagement, satisfaction, and retention.
ELE-74	Increased in-class activities/exercises/worksheets to practice content	The impact of the changes I made created higher levels of student engagement, satisfaction, and retention.

4. Identify any assessments that indicate a modification should be made to the Course Outlines of Record (COR), the Student Learning Outcomes (SLO), or Program Level Outcomes. State the modification.

Identify COR, SLO or PLO to modify	State Suggested Modification	Reasoning
ALL (without exception)	Replace all instances of “explain, describe, discuss, and compare/contrast” with “demonstrate a working knowledge of ...” each technology, device, or circuit.	Essay questions cause students tremendous anxiety, and are onerous to assess, even with a well designed rubric. Assessment should be able to be accomplished within the body of testing, within lecture classes, or by practicum during lab sessions.

5. Have you shared your assessments, outcomes, improvements etc. with your discipline? How? If not, how do you plan to do so in the future? (For a more complete answer, please include any meeting dates, agenda, and/or minutes, emails between faculty members, conversations captured in college, department, or discipline meetings – include these data as an Appendix at the end of this document)

I have held informal meetings with my adjunct instructors. As the only full-timer, I cannot expect all adjuncts to come to meetings, as they are not required to attend. I have also sent emails to them. Around Christmas break, I had many over to my home for a party, a light meal, and discussions. As far as my discipline goes, I am the only voting member, so there are no meeting minutes. But, I do seek input from all my adjuncts. After all, enabling each of them helps me meet the needs of our students.

6. Did any of your assessments indicate that your discipline or program would benefit from specific resources in order to support student learning, and/or faculty development? If so, please explain.

<p style="text-align: center;">Resources</p> <p style="text-align: center;">State the resources identified to support student learning and/or faculty development</p>	<p style="text-align: center;">Assessment</p> <p style="text-align: center;">Name the assessment(s) that indicated resources are needed</p> <p style="text-align: center;">Identify course, SLO & semester</p>	<p style="text-align: center;">Reasoning</p> <p style="text-align: center;">Briefly explain what you learned in the assessment that indicates the resource might be beneficial</p>
<p>Yes, parts cabinets, customized for each course, so teachers and students have ready access to everything they need to perform labs. We have not had money to buy these customized parts cabinets before now.</p>	<p>SLOs and PLOs cannot be accomplished without the materials needed for labs. With split venues for teaching courses, it has been difficult to plan and execute subdivision of what parts and equipment are required for all course venues.</p>	<p>It seems obvious that without a full complement of parts and equipment, labs cannot be performed.</p>

7. What additional support, training, etc. do you need in the coming year regarding assessment?

More training on SLO/PLO assessments for me and my adjuncts will be needed in order to prepare us all for future demands for assessments, which come periodically. I will need training in a variety of areas to support my regular, ongoing activities in curriculum development (the new META system), and more how-to lessons on deeper aspects of META and TracDat—professional development.

Preliminary

Scoring Rubric for Annual Program Review of Assessment (Part II only)

Assessment Unit Name: Electronics (ELE & ELC) and Electrician programs Average score _____

	0	1	2	3	Comments
Initial SLO assessments	No evidence provided 0	Limited evidence of on-going SLO assessment (1 incomplete assessment – Plan but no results) 1	Clear evidence of on-going SLO assessment (1 complete assessment) 2	Clear and robust evidence of on-going SLO assessment (2 or more complete assessments) 3	
Loop Closing Assessments	No evidence provided 0	Limited evidence of Loop-closing assessment (Course identified as “loop-closed”, but no Change Plan identified, or reasoning provided) 1	Clear evidence of loop-closing (At least 1 Change Made plan in place, or clear reasoning of “loop closed” for at least 1 initial assessment) 2	Clear and robust evidence of loop-closing (Multiple Change Made Plans in place, or very clear justification for “loop closed” for multiple initial assessments) 3	
Assessment input into TracDAT	No assessments in TracDat format or Repository 0	Assessment completed are in word/pdf in Document Repository 1	Assessments identified have Assessment Plan, but not all have Results 2	All identified assessments have a complete report (Plan and Results) in TracDat data field) 3	
Attempts to improve student learning	No indication of any changes made to any courses, and no clarification provided 0	No attempts to change any courses, teaching approaches, and no clarification or reasoning as to why not 1	Evidence of an attempt to implement a change in a course or teaching approach provided, or simple clarifying statement regarding why no specific improvement is needed 2	Multiple attempts made to implement changes to courses or teaching approaches, or clear and supported clarification why no improvement is needed 3	
Dialogue across the discipline	No dialogue or attempt to communicate results 0	Limited demonstration of dialogue or communication within the discipline, department, college 1	Clear demonstration of dialogue and sharing of assessment within discipline, department, or college 2	Robust and systematic dialogue and communication demonstrated within discipline, department, or college 3	
Participation in PLO assessment (bonus points averaged into total score)		Engagement in at least 1 initial PLO assessment and/or Engagement in at least 1 PLO closing-the-loop assessment fall ‘14-spr ‘15 1			
Total for Each Column					