

PROGRAM ASSESSMENT REPORT

Program Code CVIET2	Name Industrial Electronics Technology II
Division ATP	Department Industrial Technology
Award <input type="checkbox"/> A.A. <input type="checkbox"/> A.S. <input type="checkbox"/> A.A.S. <input type="checkbox"/> Cert. <input checked="" type="checkbox"/> Adv. Cert. <input type="checkbox"/> Post-Assoc. Cert. <input type="checkbox"/> Cert. of Completion	

I. Review previous assessment reports submitted for this program and provide the following information.

1. Was this program previously assessed and if so, when?

No

2. Briefly describe the results of previous assessment report(s).

N/A

3. Briefly describe the Action Plan/Intended Changes from the previous report(s), when and how changes were implemented.

N/A

II. Background Information

1. Indicate the semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2012, 2013, 2014, 2015, 2016	

2. Assessment tool(s) used (check all that apply):

- Portfolio
- Standardized test
- Other external certification/licensure exam (please describe): _____
- Graduate Survey
- Employer Survey
- Advisory Committee Survey
- Transfer follow-up
- Externally evaluated performance or exhibit
- Externally evaluation of job performance (internship, co-op, placement, other)
- Capstone experience (please describe):
- Other (please describe):

3. Have any of these tools been used before?

- Yes (if yes, identify the tool below and describe any changes made since it was last administered)
- No

Changes:

4. Indicate the number of students assessed/total number of students enrolled in the course(s)/program.

36 in ELE 134, 6 in ELE 204	
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5. Describe how you selected students for the assessment.

- Describe your sampling method.
- Describe the population assessed (e.g. students in capstone course, graduating students, alumni).

All students taking ELE 134 Final 2012 – 2015, all students taking ELE 204 Final 2016 (only offered every other year)

III. Results

1. State every outcome (verbatim) from the Program Assessment Planning or Program Proposal form for the program. *Add more lines as needed.*

1. Recognize the principles of operation of electrical machines
2. Troubleshoot motor control circuits utilizing electrical diagrams.
3. Demonstrate proficiency in interpreting the NEC rules and in performing electrical calculations using the tables in the NEC.
4. Identify structured techniques used to program PLCs.

2. Briefly describe assessment results based on data collected during the program assessment, demonstrating the extent to which students are achieving each of the learning outcomes listed above. **Please attach a summary of the data collected (as a separate document).** *Add more lines as needed.*

1. The overall score, averaged over all questions relevant to this outcome was 73%.
2. The overall score, averaged over all questions relevant to this outcome was 88%.
3. The overall score, averaged over all questions relevant to this outcome was 70%.
4. Not assessed – ELE 284 was offered a few times, but never ran.

3. For each outcome assessed, indicate the standard of success used, and the percentage of students who achieved that level of success. **Please attach the rubric/scoring guide used for the assessment (as a separate document).** *Add more lines as needed.*

1. The overall score, averaged over all questions relevant is $\geq 70\%$.
2. The overall score, averaged over all questions relevant is $\geq 70\%$.
3. The overall score, averaged over all questions relevant is $\geq 70\%$.
n/a

4. Describe the areas of strength and weakness in students' achievement of the learning outcomes shown in assessment results.

Strengths:

1. Strengths varied considerably over different topics and question types. As expected students generally did better on the "plug and chug" questions, but not true for all such questions.
2. All areas were pretty strong, which is good since troubleshooting is really at the heart of what we try to teach.
3. Strengths - wiring and protection, wiring methods and materials, equipment for general use.

Weaknesses:

1. This outcome has a lot of theory in it which is typically difficult for our students who are more "hands-on" learners, so I was not too surprised by the results. Three-phase power was an area of weakness. It's student's first exposure to this challenging topic and even though it's hit several times during the semester, students have a hard time with it on the final.
2. The weakest areas were the more complex troubleshooting problems, and some of the 'on paper' voltage measurements. Instructor might need to spend more time reinforcing these concepts in lab.
3. Weaknesses - introductory material and general material
Some of the exam questions were "picky" e.g. the difference between "shall" and "shall be permitted". The exam may not properly reflect what is emphasized in the course.

IV. Changes influenced by assessment results

1. Based on the previous assessment report Action Plan(s) identified in Section I above, please discuss how effective any changes were in improving student learning.

N/A

2. If weaknesses were found (see above) or students did not meet expectations, describe the action that will be taken to address these weaknesses. If students met all expectations, describe your plan for continuous improvement.

1. Ask instructor to spend more time practicing 3-phase problems and emphasizing the importance of doing the homework problems. Also spend more time tying the lessons learned in lab back to the theory.
2. time permitting, spend more time on complex troubleshooting. More practice problems for 'on paper' voltage measurements. Spend more time summarizing lab results.
3. For ELE 204, the final exam needs to be updated to reflect all of the outcomes. Students did well in the areas that were assessed. Also consider dropping the "picky" questions from the exam, or emphasizing them in class.

3. Identify any other intended changes that will be instituted based on results of this assessment activity. Describe changes and give rationale for change. (Check all that apply).

a. Outcomes/assessments from Program Assessment Planning or Program Proposal form:

b. Program Curriculum:

Course sequencing

Course deletion

Course addition

Changes to existing program courses (specify):

Other (specify):

c. Other (specify):

4. What is the timeline for implementing these actions?

Delete ELE 284 from program and replace with two technical electives – S2019
Delete outcome 4. From assessment plan – S2019
Relevant actions will be taken when ELE 204 will next be taught - W2020.
ELE 134 objectives – F2019

V. Future plans

1. Describe the extent to which the assessment tools used were effective in measuring student achievement of learning outcomes for this program.

Recently more students are pursuing the CVIET2 certificate and we are overdue for revising the courses in the certificate. This assessment gave us a little boost to make the changes. We realized that we need to communicate better with the ELE 204 part time instructor about the final exam and assessment.

2. If the assessment tools were not effective, describe the changes that will be made for future assessments.


Assessment plan will be updated to reflect new program outcomes when the program is updated. The new standard that will be used will be: A minimum of 70% of students will correctly answer each outcome-related question.

To the C&A Committee: I found the boxes, and the automatic numbering on this "form" very frustrating to work with. It would be much better for me to simply have headings and space to type in. Also it would be much easier to answer all the questions about each outcome together, rather than jump back and forth. Thanks for your consideration.

Submitted by:

Name: Dale Petty  Date: 5/19/19
Print/Signature

Department Chair: Tom Penno / The Ad Date: 7/24/2018
Print/Signature

Dean:  Date: 7/23/19
Print/Signature

Reviewed by C&A Committee
8/22/19

Please return completed form to the Office of Curriculum & Assessment, SC 257.

ELE 134 "Rubric"

All questions on the final exam were scored according to an answer key. Average percent wrong for each question was determined using Scantron Item Analysis. Average percent right for each question was calculated with Excel over all classes. The percent of questions answered correctly by 70% of students was determined overall and for each Article of the NEC.

Attached: ELE 134 Assessment Analysis att to CVIET2 report_20190519.xlsx

ELE 204 "Rubric"

All questions on the final exam were scored according to an answer key. Average percent wrong for each question was determined using Scantron Item Analysis. Average percent right for each question was calculated with Excel over all classes. The percent of questions answered correctly by 70% of students was determined overall and for each Article of the NEC.

Attached: ELE 204 Assessment Analysis att to CVIET2 report_20190519.xlsx