

Course Assessment- Part B: Your Results & Analysis

COMPLETE

#493

Please select your course and name from the drop-down menu. If your course or name are incorrect or missing, contact the Curriculum and Assessment Administrative Assistant, 541-506-6037 or swade@cgcc.edu.

EET 222 - Operational Amplifier Circuits - 1096400 - Tom Lieurance - Winter 2021

*** Part B: Your Results DIRECTIONS 1. Report the outcome achievement data gathered via the assignments, tests, etc. you identified for each outcome (question 3) of your Part A. (Only include data for students who completed the course. Do not include students who withdrew or earned an incomplete) Data for all 3 outcomes should be reported below.**

More than 80% of students passed with a B or better. This means all but 2 got a C or very low D. Students wrote lab reports collected from data from the labs, analyzed the data and critically analyzed and interpreted the data in reports. There were many op amp designs presented and they had to figure out which worked best for the application.

*** Outcome #1**

Identify types of op-amp circuits and determine their function in a circuit.

*** % of students who successfully achieved the outcome (C or above)**

94%

*** Outcome #2**

Write technical reports using collected experiment data

*** % of students who successfully achieved the outcome (C or above)**

94%

*** Outcome #3**

Apply op-amps fundamentals in design and analysis of op-amps applications.

*** % of students who successfully achieved the outcome (C or above)**

94%

*** ANALYSIS 3. What contributed to student success and/or lack of success?**

Repetition of concepts, labs that reinforce concepts, simplified the labs to present only the major concepts. Open communication in lab so students can ask questions. Teach students critical thinking in troubleshooting circuits. Students turning in labs and homework and tests. Giving the homework the same value as tests. Tested often. Nearly all that that actively participated and turned in assignments were successful.

*** 4. Helping students to realistically self-assess and reflect on their understanding and progress encourages students to take responsibility for their own learning. Please compare your students' perception of their end-of-term understanding/mastery of the three outcomes (found in student evaluations) to your assessment (above) of student achievement of the three outcomes.**

Very few turned in the survey that included the outcomes. Most said that they understood that material better after the course was over. If I had given them the final exam at the beginning of the course they would have just freaked out. It is pretty close to impossible to master this material without the help of an instructor and a paced curriculum. "They gained a solid base of knowledge and skills and made progress to continue their learning and will be able to use the new skills in their new careers." (loosely Plagiarized from Daniel Changer)

*** 5. Did student achievement of outcomes meet your expectations for successfully teaching to each outcome (question 4 from Part A)**

with the exception of two students, yes.

*** 6. Based on your analysis in the questions above, what course adjustments are warranted (curricular, pedagogical, student instruction, etc.)?**

Learn more about the Moodle gradebook. It seems to be set up with no "back button" to undo the changes you guessed at. Moodle has a lot of functions that I have not explored yet. To keep our program up to date on the latest (semi latest) trends in technology, there are a lot of companies that offer training programs for instructors and students in industrial control and robotics. This would save me the time of creating what had already been created by companies that offer for sale curriculum and equipment that goes with the curriculum. Example: An industrial control trainer that is available from a wide variety of companies. I have looked at the \$250,000+ industrial control trainer from SMC (formerly labvolt) that would cover the entire curriculum in industrial control and include the equipment needed. The other option is to piece the curriculum together myself, which I have been doing because I am so cheap, and buy a bunch of parts and hope they will show the concepts that are in the curriculum. SMC has a curriculum that has been reviewed and accepted by industry and education. A Robotics curriculum with equipment to match it. Repair money for the HAS200.

7. What resources would be required to implement your recommended course adjustments (materials, training, equipment, etc.)? What Budget implications result?

See question #6. The trainers that are offered are not cheap. A technology program could easily spend \$250,000/year on equipment and training for the instructors. Perhaps learning something about grant writing and searching would be appropriate.

*** 8. Describe the results of any adjustments you made from the last assessment of this course (if applicable) and their effectiveness in student achievement of outcomes.**

After last year's Covid 19 disaster we are at least back in the lab. I am not confident that students learn as much with Zoom online teaching but I am testing more this year, with better results. I have re-written most of the lab experiments to be simpler and teach directly to the concepts we are learning. I don't believe there is as much critical thinking but with the simpler labs there is more understanding of what they are doing without the pressure of just getting a lengthy lab done. I get more intelligent responses from students when I talk to them during lab about what is going on in the lab now. The labs all have instructor checkoffs several places in the labs. The familiar glow of understanding is back. Test results are better (with the exception of two students).

9. Describe how you explain information about course outcomes and their relevance to your students.

Each week the outcomes are reinforced in the logical implementation of circuits in class and lab experiments.

10. Please describe any changes/additions to instruction, curriculum or assessment that you made to support students in better achieving the CGCC Institutional Learning Outcomes: ILO #1: Communication. The areas that faculty are focusing on are: "Source and Evidence" and "Organization and Presentation" and ILO #2: Critical Thinking/Problem Solving. The areas that faculty are focusing on are: "Student's Position" (Critical Thinking) and "Evaluate Potential Solutions" (Problem Solving). ILO #4: Cultural Awareness. The area that faculty is focusing on is: "Curiosity" - Encouraging our students to "Ask deeper questions about other cultures and seek out answers to these questions" ILO #5: Community and Environmental Responsibility. The area that faculty are focusing on are: "Applying Knowledge to Contemporary Contexts" and "Understanding Global Systems" ILO#3 -Quantitative Literacy - "Application/Analysis" and/or "Assumptions"

(No response)