Program Outcome to be Assessed in 2023

Upon program completion, graduates will apply electrical theory to solve DC circuits.

Standard

80% of students will obtain a score of 75% or higher on final lab exam.

Course where outcome is assessed

SKET110/ET110 - Lab exam is given at the end of the semester

Applicable Programs

AAS.15891 Mechatronics Technology – Associate in Applied Science

CTA.35913 Mechatronics Technology – Advanced Certificate

AAS.60901 Electrician – Associate in Applied Science

CTA.35901 Electrician – Advanced Certificate

Students must utilize skills learned throughout the course and apply these skills to individually design circuits per design criteria.

Lab Exam – Individual (15 pts) **Name _____**

1. You have a 10 VDC source available. Design a voltage divider circuit that has 2VDC, 5 VDC, and 8VDC available. The total circuit current is to be 10 mA.
   a. Draw your design and show your calculations.

2. You have a 10 VDC source available. Design a current divider circuit that has 10 mA, 20 mA, and 30 mA available.

a. Draw your design and show your calculations.

3. You have a 10 VDC source available. Design a balanced bridge that has an output of 0 V. The total circuit current is to be 100 mA.
   a. Draw your design and show your calculations.
   b. Modify the design so the output will be +2 VDC. Show your calculations.
   c. Modify the design so the output will be -2 VDC. Show your calculations.

Individual Design Rubric

Topic	0 Points	1 Point	2 Points	3 Points	Score
Problem 1	Student did not submit a design	Student drew an incomplete circuit. There were not enough components or the symbols were drawn incorrectly. No supporting calculations were provided.	Student drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were lacking.	Student drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were provided to support the design.*	
Problem 2	Student did not submit a design	Student drew an incomplete circuit. There were not enough components or the symbols were drawn incorrectly. No supporting calculations were provided.	Student drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were lacking or minimal.	Student drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were provided to support the design.*	
Problem 3a	Student did not submit a design	Student drew an incomplete circuit. There were not enough components or the symbols were drawn incorrectly. No supporting calculations were provided.	Student drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were lacking or minimal.	Student drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were provided to support the design.*	
Problem 3b	Student did not submit a design	Student drew an incomplete circuit. There were not enough components or the symbols were drawn incorrectly. No supporting calculations were provided.	Student drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were lacking or minimal.	Student drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were provided to support the design.*	
Problem 3c	Student did not submit a design	Student drew an incomplete circuit. There were not enough components or the symbols were drawn incorrectly. No supporting calculations were provided.	Student drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were lacking or minimal.	Student drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were provided to support the design.*	

* It is acceptable at this time if supporting calculations do not provide accurate results as this may be worked out during build and test of circuit.

Total Score

The students will then work as a team to build the circuits and verify the proper operation of the system.

Lab Exam (45 pts) **Names** _____

1. You have a 10 VDC source available. Design a voltage divider circuit that has 2VDC, 5 VDC, and 8VDC available. The total circuit current is to be 10 mA.
   a. Draw your design.
   b. Build your design and prove its proper operation.
      Measured voltages:
   c. Remove a resistor and discuss the impact on the circuit.
2. You have a 10 VDC source available. Design a current divider circuit that has 10 mA, 20 mA, and 30 mA available.

a. Draw your design.
b. Build your design and prove its proper operation.
   Measured currents:
c. Remove a resistor and discuss the impact on the circuit.

3. You have a 10 VDC source available. Design a balanced bridge that has an output of 0 V. The total circuit current is to be 100 mA.
   a. Draw your design.
   b. Build your design and prove its proper operation.
      Measured voltage:
   c. Modify the design so the output will be +2 VDC.
   d. Build your design and prove its proper operation.
      Measured voltage:
   e. Modify the design so the output will be -2 VDC.
   f. Build your design and prove its proper operation.
      Measured voltage:

Team Design Rubric

Topic	0 Points	1 Point	2 Points	3 Points	Score
Problem 1	Team did not submit a design	Team drew an incomplete circuit. There were not enough components or the symbols were drawn incorrectly. No supporting calculations were provided.	Team drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were lacking.	Team drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were provided to support the design.	
Problem 1b	Team did not build circuit	Team built circuit but did not submit measurements.	Team built circuits and took measurements. However, the measurements were not correct.	Team built circuit and submitted correct measurements (within reason due to tolerances of components).	
Problem 1b	Team did not show circuit to instructor.	Team showed circuit to instructor but did not show the instructor the measured values and had minimal understanding of the circuit.	Team showed circuit to instructor along with all of the measured values. One person on the team was able to describe the circuit.	Team showed circuit to instructor along with all of the measured values. The entire team shared in the discussion of the circuit with the instructor.	
Problem 1c	Team did not have a response to the question.	Team provided a response that was not accurate.	Team provided a response that was somewhat accurate but lacked sufficient impact statement.	Team provided accurate response including the impact on current draw in the circuit and voltage drops across remaining resistors.	
Problem 2	Team did not submit a design	Team drew an incomplete circuit. There were not enough components or the symbols were drawn incorrectly. No supporting calculations were provided.	Team drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were lacking.	Team drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were provided to support the design.	
Problem 2b	Team did not build circuit	Team built circuit but did not submit measurements.	Team built circuits and took measurements. However, the measurements were not correct.	Team built circuit and submitted correct measurements (within reason due to tolerances of components).	
Problem 2b	Team did not show circuit to instructor.	Team showed circuit to instructor but did not show the instructor the measured values and had minimal understanding of the circuit.	Team showed circuit to instructor along with all of the measured values. One person on the team was able to describe the circuit.	Team showed circuit to instructor along with all of the measured values. The entire team shared in the discussion of the circuit with the instructor.	
Problem 2c	Team did not have a response to the question.	Team provided a response that was not accurate.	Team provided a response that was somewhat accurate but lacked sufficient impact statement.	Team provided accurate response including the impact on overall current draw in the circuit and impact (if any) on remaining resistors.	

Team Design Rubric (Continued)

Problem 3a	Team did not submit a design	Team drew an incomplete circuit. There were not enough components or the symbols were drawn incorrectly. No supporting calculations were provided.	Team drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were lacking.	Team drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were provided to support the design.	
Problem 3a	Team did not build circuit	Team built circuit but did not submit measurements.	Team built circuits and took measurements. However, the measurements were not correct.	Team built circuit and submitted correct measurements (within reason due to tolerances of components).	
Problem 3b	Team did not submit a design	Team drew an incomplete circuit. There were not enough components or the symbols were drawn incorrectly. No supporting calculations were provided.	Team drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were lacking.	Team drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were provided to support the design.	
Problem 3b	Team did not build circuit	Team built circuit but did not submit measurements.	Team built circuits and took measurements. However, the measurements were not correct.	Team built circuit and submitted correct measurements (within reason due to tolerances of components).	
Problem 3c	Team did not submit a design	Team drew an incomplete circuit. There were not enough components or the symbols were drawn incorrectly. No supporting calculations were provided.	Team drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were lacking.	Team drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were provided to support the design.	
Problem 3c	Team did not build circuit	Team built circuit but did not submit measurements.	Team built circuits and took measurements. However, the measurements were not correct.	Team built circuit and submitted correct measurements (within reason due to tolerances of components).	
Problem 3	Team did not show circuit to instructor.	Team showed circuit to instructor but did not show the instructor the measured values and had minimal understanding of the circuit.	Team showed circuit to instructor along with all of the measured values. One person on the team was able to describe the circuit.	Team showed circuit to instructor along with all of the measured values. The entire team shared in the discussion of the circuit with the instructor.	
					Total Score

SKET110 Final Lab Exam Scoring Rubric Summary

Instructor _____ **Semester _____**

Student (No names provided)	Individual (out of 15)	Team (out of 45)	Total (out of 60)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			

1. How many students scored below a 45 for a total score on the final lab exam?
2. For each student that scored below a 45 as a total score, please indicate why the student may have scored below department expectations (include student number 1-16).

Data

Data was collected from 290 students over 11 semesters from Spring 2017 through Spring 2022.

Rubric scores and final lab exams were collected from every student taking SKET110 and ET110 throughout this time period.

Students that did not turn in the individual portion of the exam or did not participate in the team portion of the exam were excluded from the study.

Results Summary

Goal

80% of students will obtain a score of 75% or higher on lab exam.

Results

263 out of 290 students (or 90.7% of students) obtained a score of 75% or higher on lab exam.

This is an increase from the 2017 report where 84.91% obtained a score of 75% or higher.

Results Summary

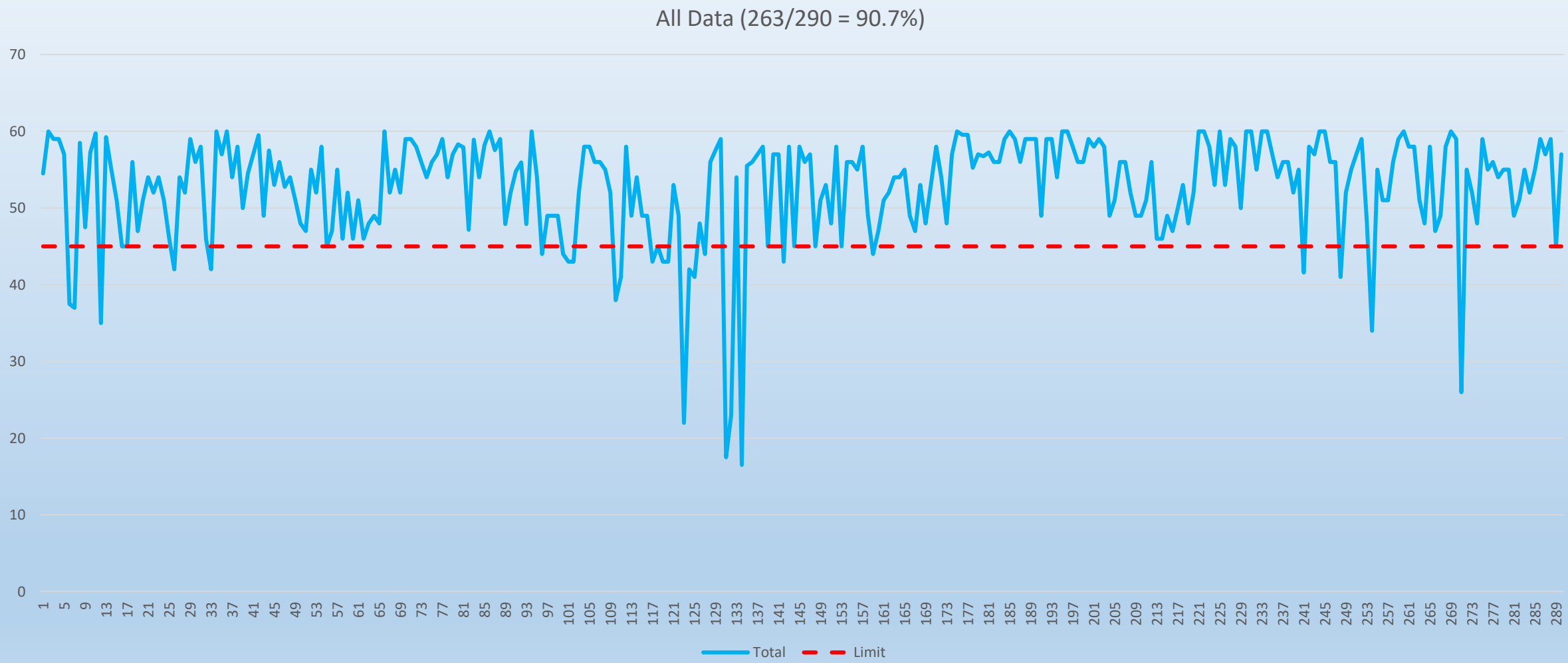
Based on the last review in 2017, we decided to have the instructors include with their data why they feel any students who did meet the passing criteria failed to meet the standards.

For this reporting period, 27 students failed to meet the requirements of a score of 75% or higher on the lab exam. The reasons, as documented by their instructor, include:

14 students provided a lack of effort on the final lab exam.

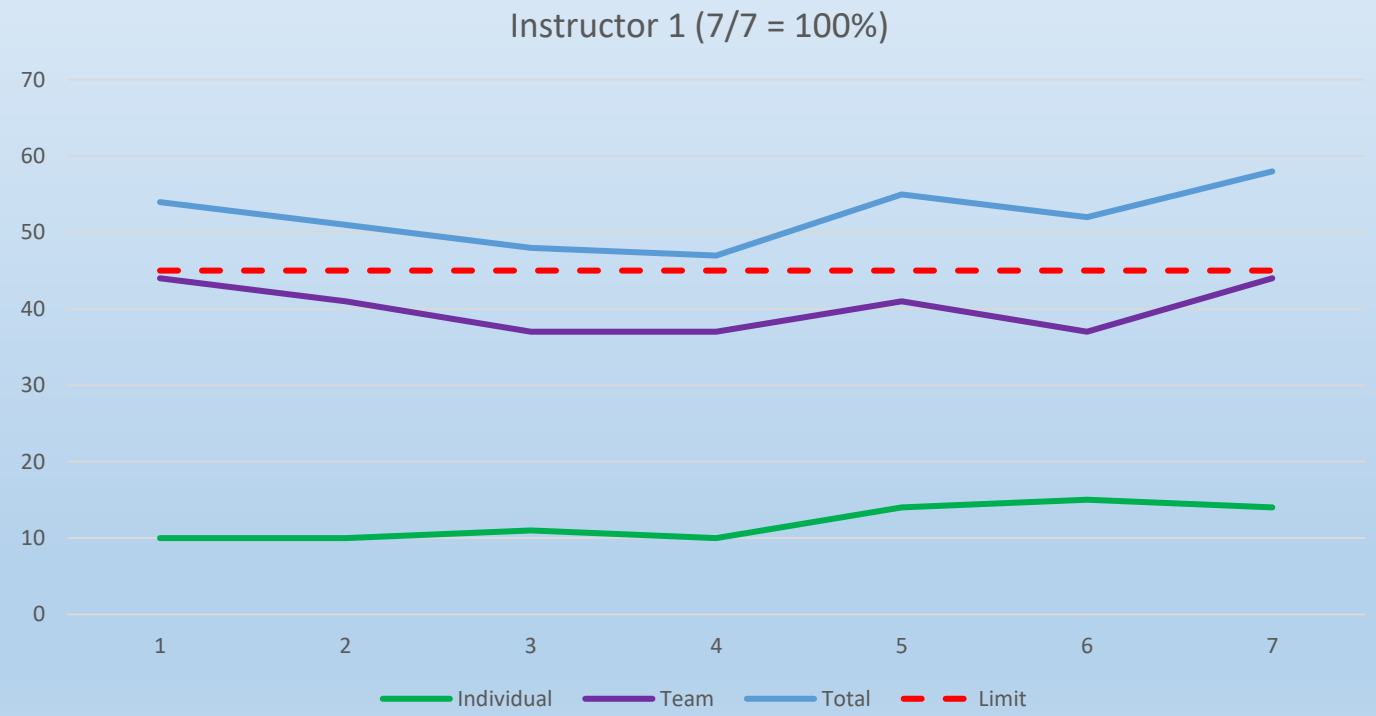
13 students had a lack of understanding for the material presented in the class or were unable to apply the knowledge they learned in the class to a design problem.

All Data – 263/290 scored 75% or above



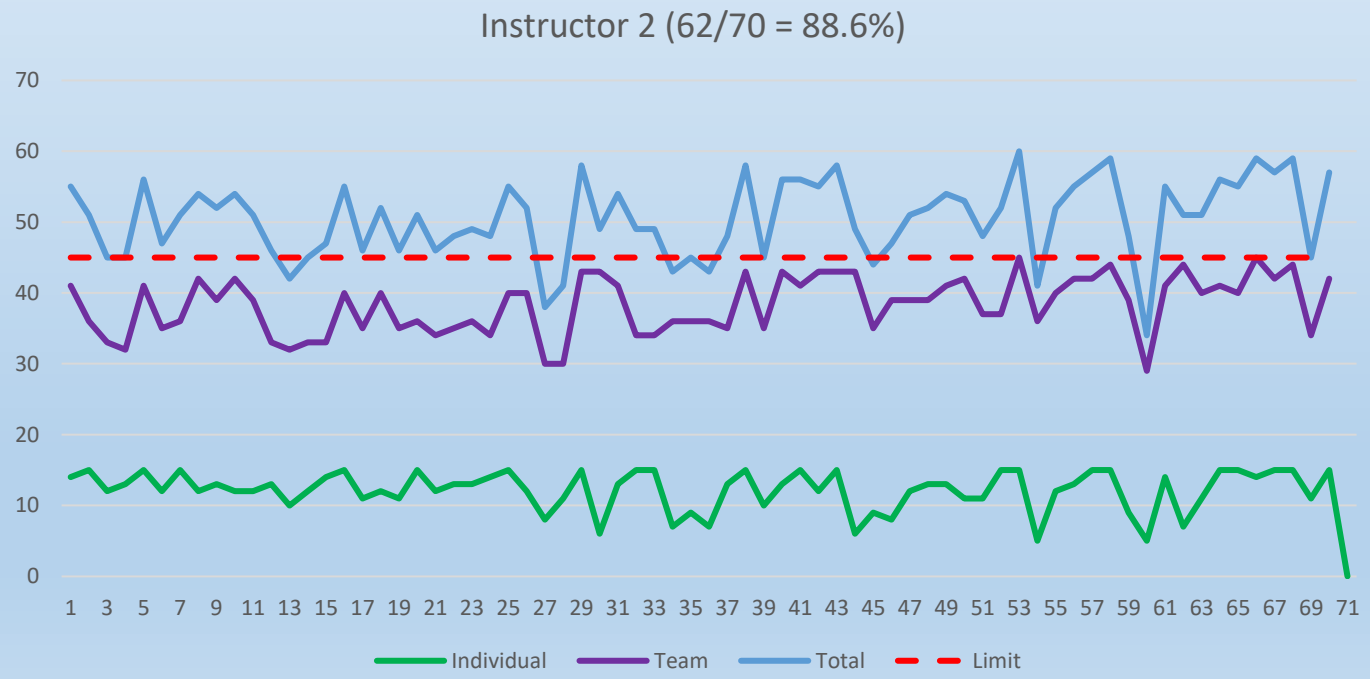
Instructor Data

100% of students scored 75% or above. Some variation in data exists. No student scored 100% and one student almost scored at or below 75%. This instructor only taught for one semester. Therefore, there is not any long term data available for this instructor.



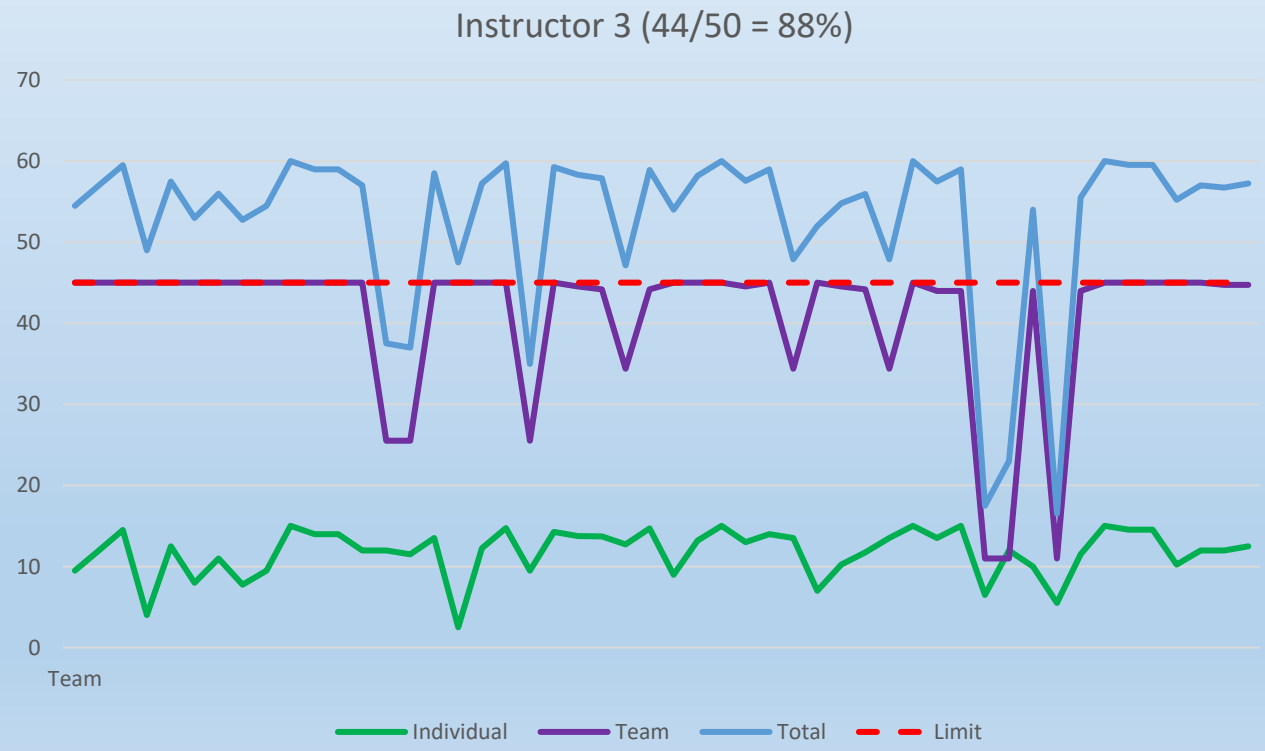
Instructor Data

62 out of 70 (or 88.6% of students) scored 75% or above. Some variation in data exists. Instructor has taught numerous sections providing long term data. We are happy with these results.



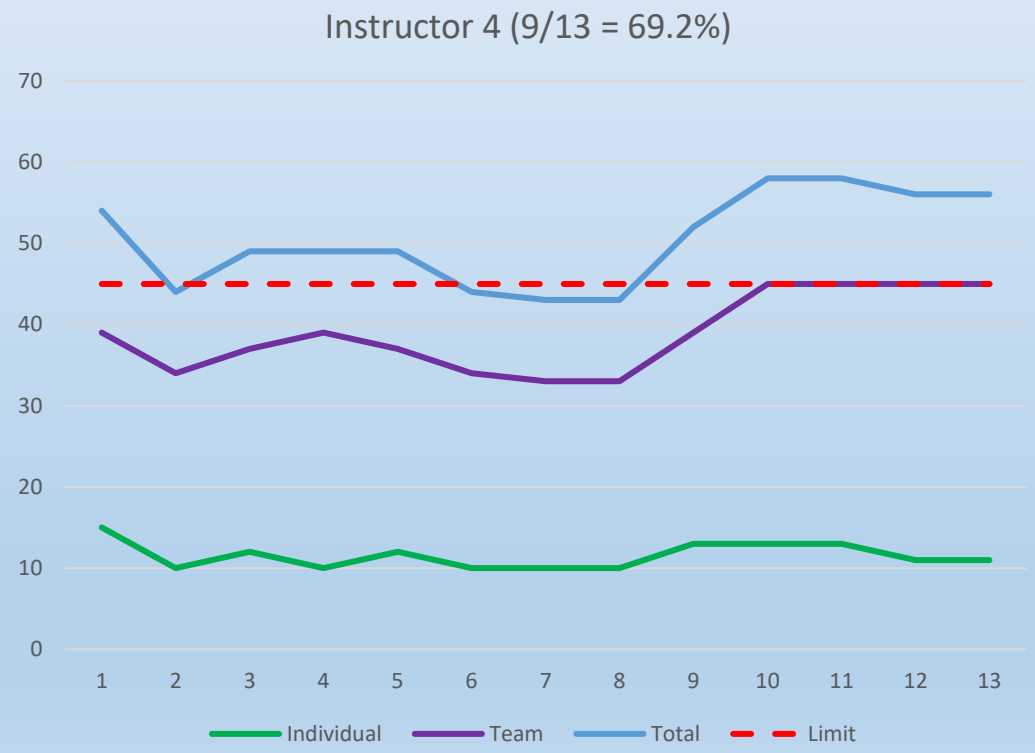
Instructor Data

44 out of 50 (or 88% of students) scored 75% or above. Some variation in data exists. Instructor has taught numerous sections providing long term data. We are happy with these results.



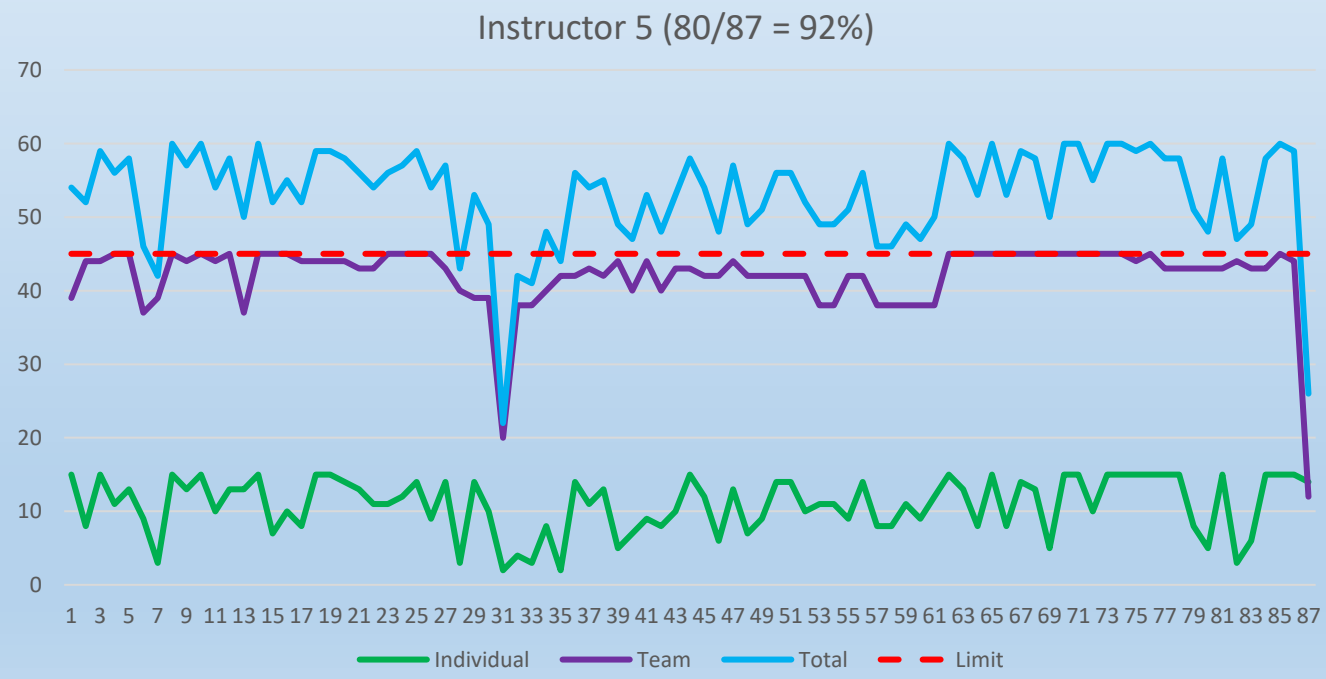
Instructor Data

9 out of 13 (or 69.2% of students) scored 75% or above. Some variation in data exists. This is the first and only semester this teacher has taught this class. Therefore, long term data is not available. Students that did not meet the criteria were just below the expectations.



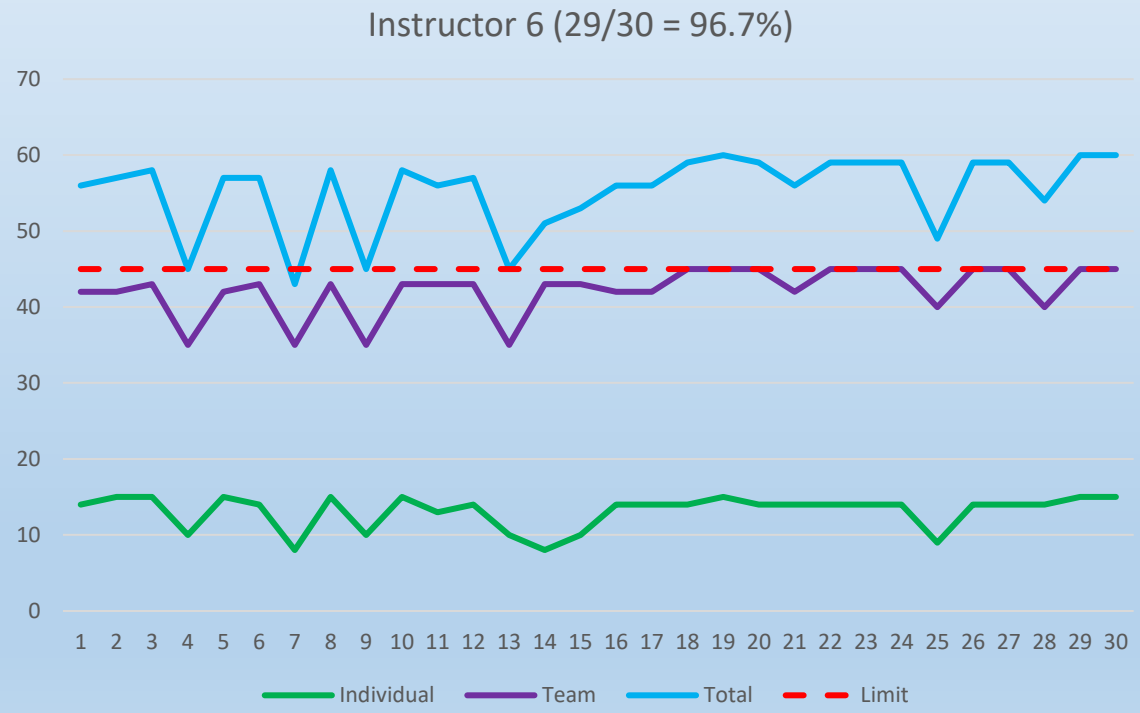
Instructor Data

80 out of 87 (or 92% of students) scored 75% or above. Some variation in data exists. Instructor has taught numerous sections and the most students of all instructors providing long term data. We are happy with these results.



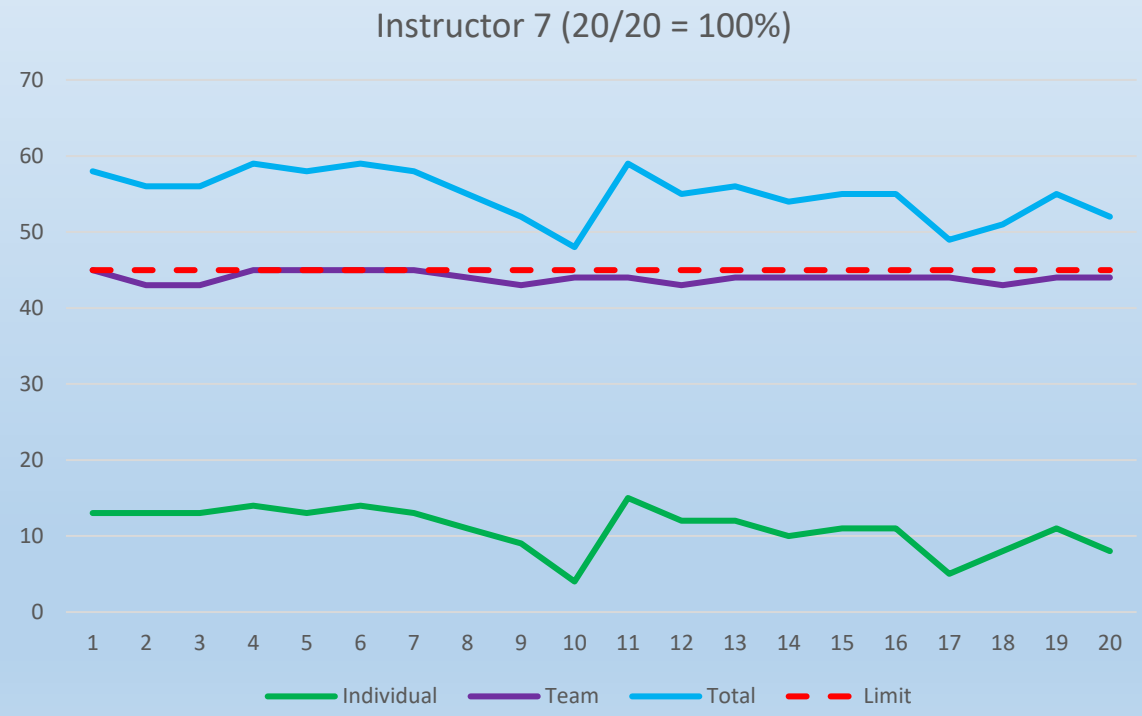
Instructor Data

29 out of 30 (or 96.7% of students) scored 75% or above. Some variation in data exists. Instructor has an excellent passing percentage. We are happy with these results.



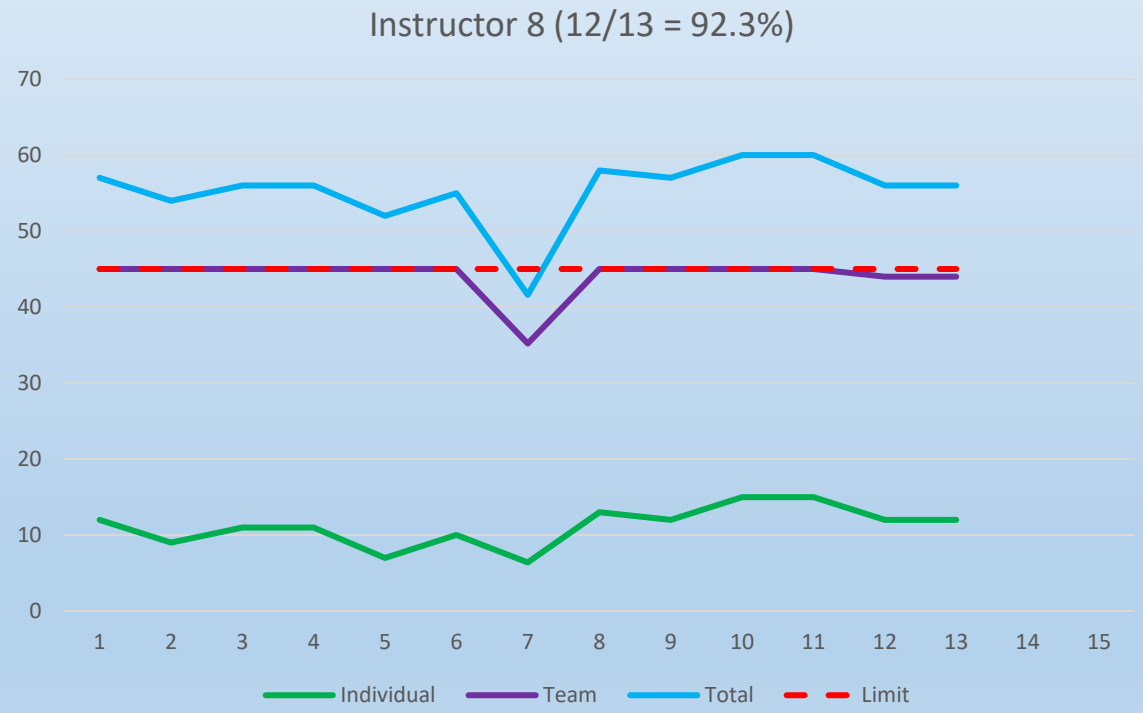
Instructor Data

20 out of 20 (or 100% of students) scored 75% or above. Some variation in data exists for the individual exam but not for the team exam. There is no long term data available for this instructor.

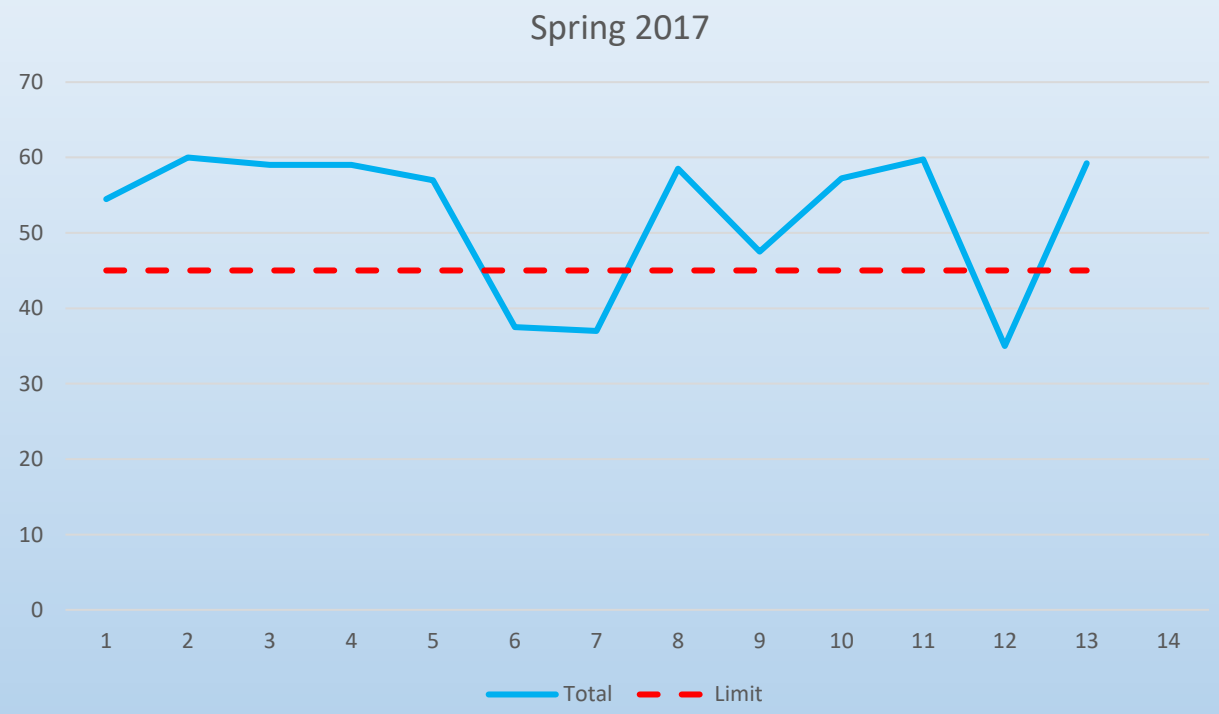


Instructor Data

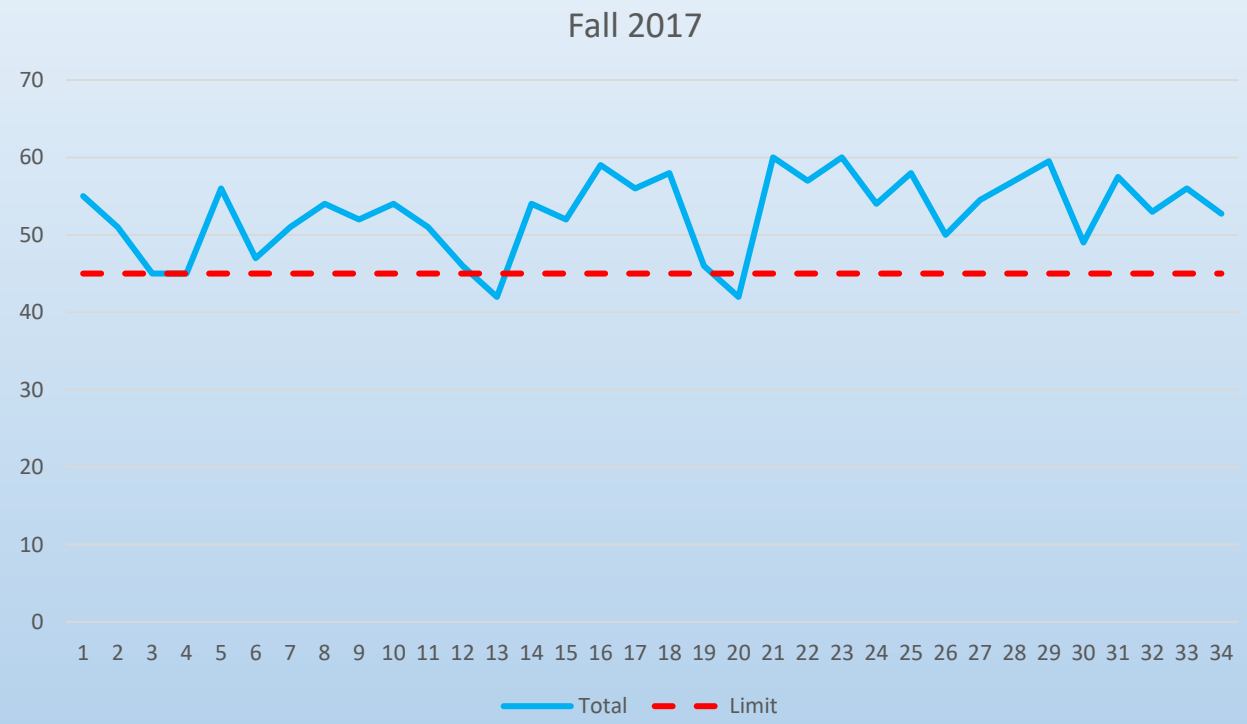
12 out of 13 (or 92.3% of students) scored 75% or above. Some variation in data exists for the individual exam but not for the team exam. There is no long term data available for this instructor.



Spring 17 Data



Fall 17 Data


Fall 2017
70
60
50
40
30
20
10
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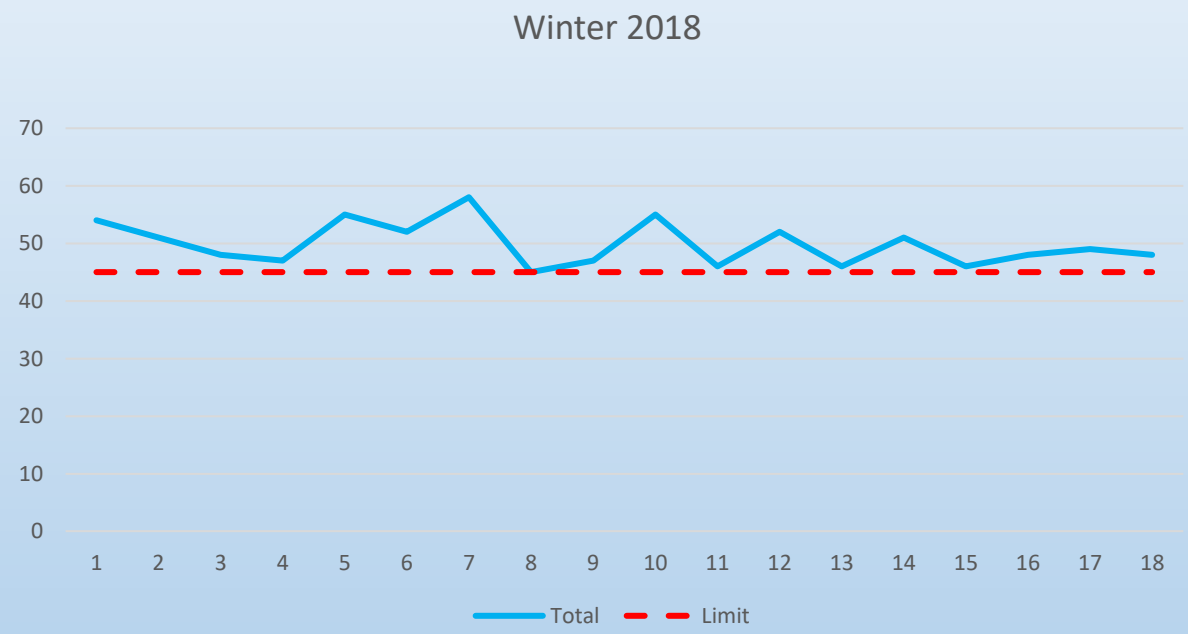
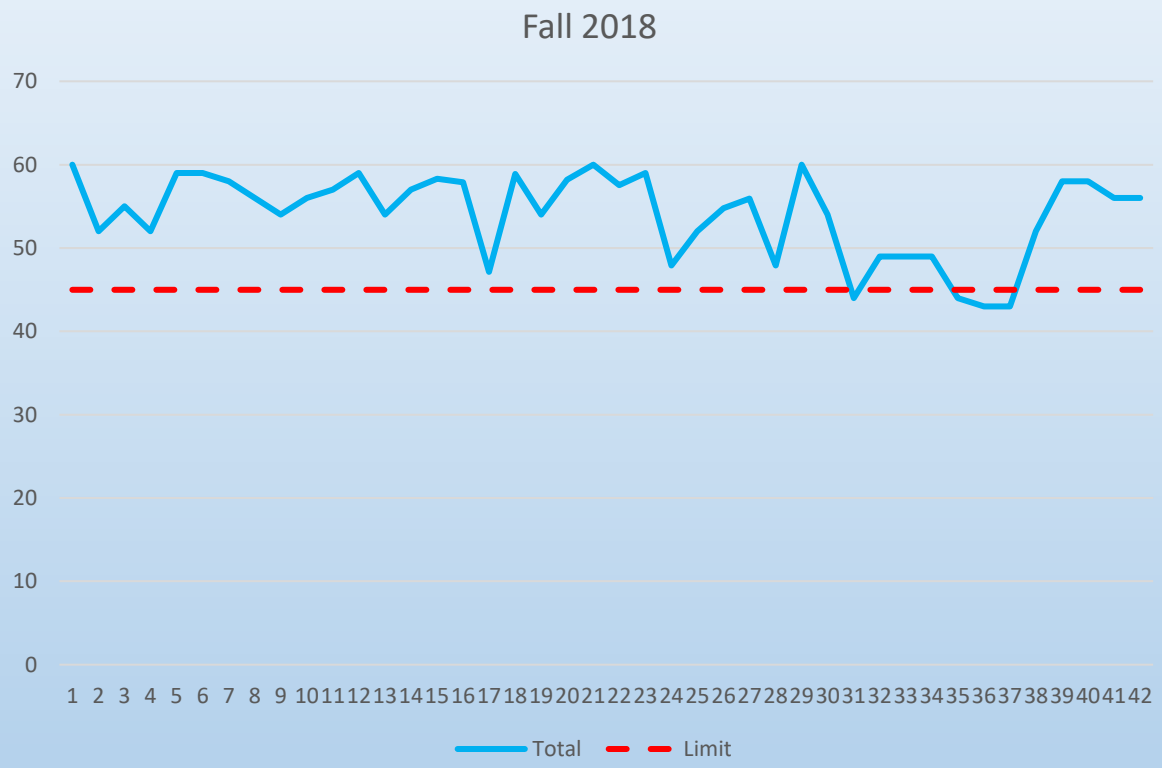
Total
Limit

Winter 18 Data



Fall 18 Data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60
50
40
30
20
10
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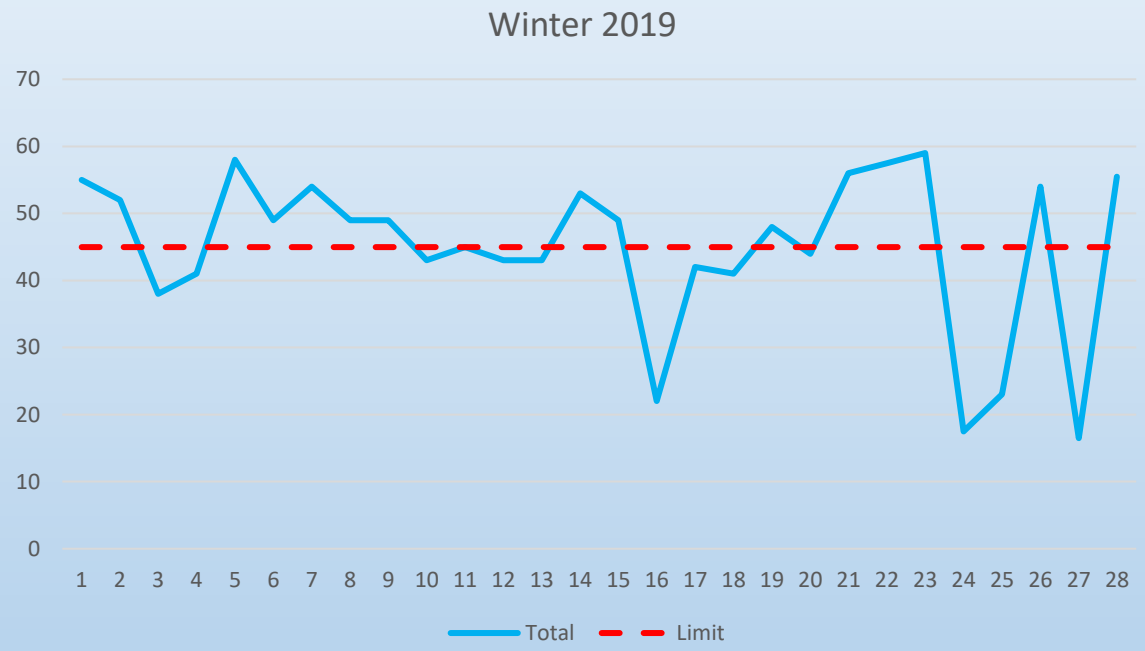
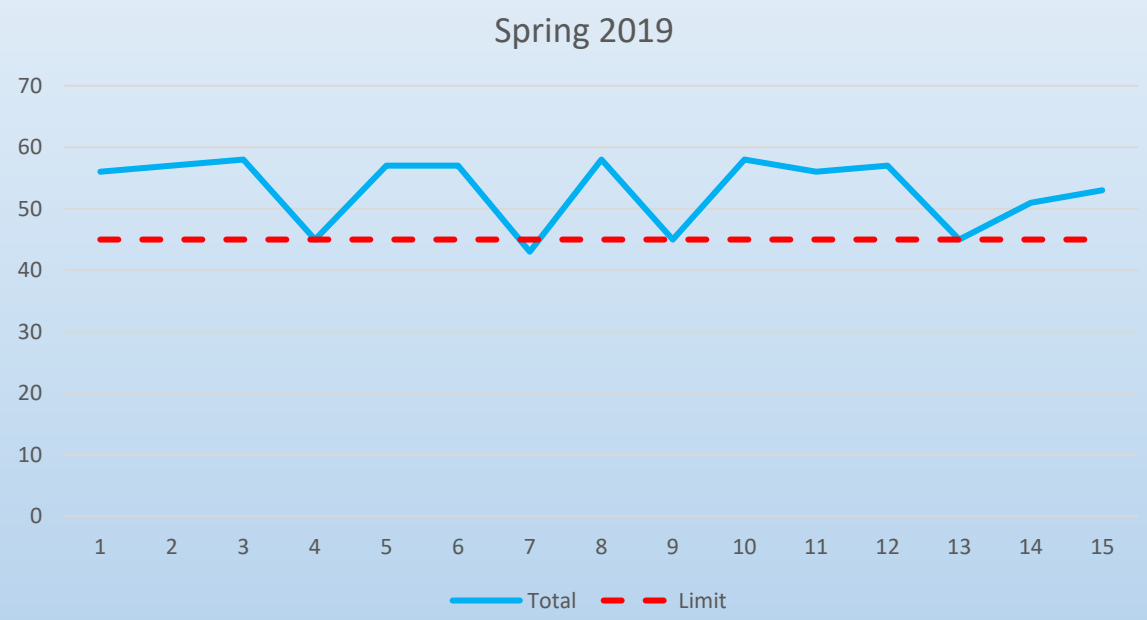
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42
Total
Limit

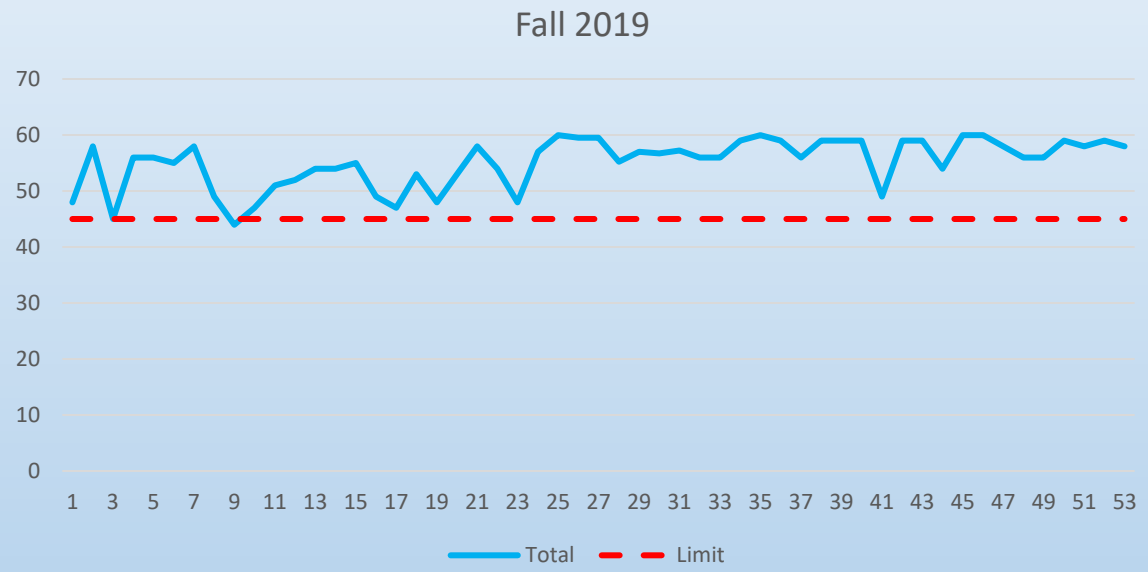
Winter 19 Data



Spring 19 Data



Fall 19 Data


Fall 2019
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60
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40
30
20
10
0
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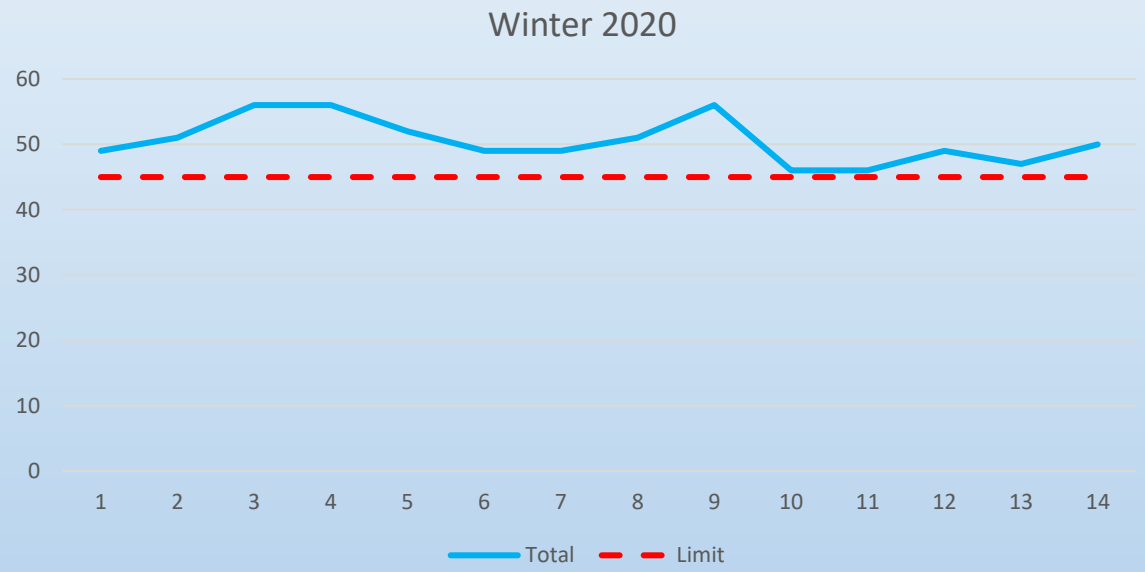
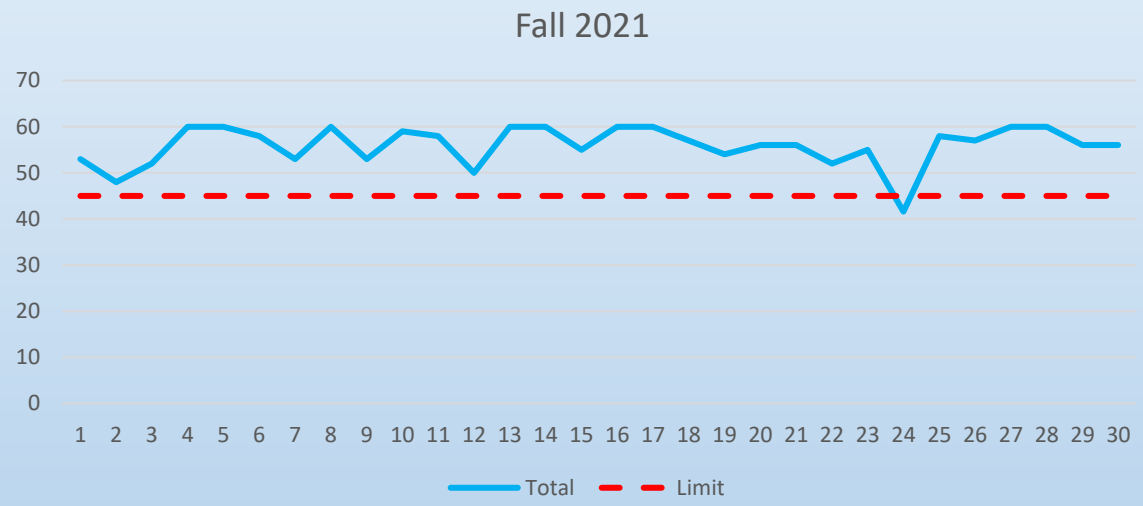
Total
Limit

Winter 20 Data



Fall 21 Data


Fall 2021
70
60
50
40
30
20
10
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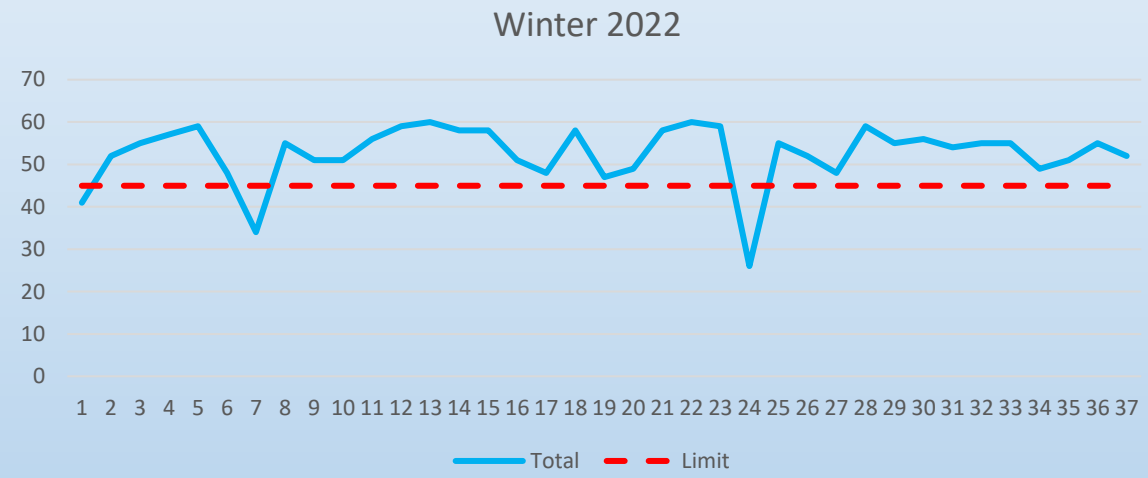
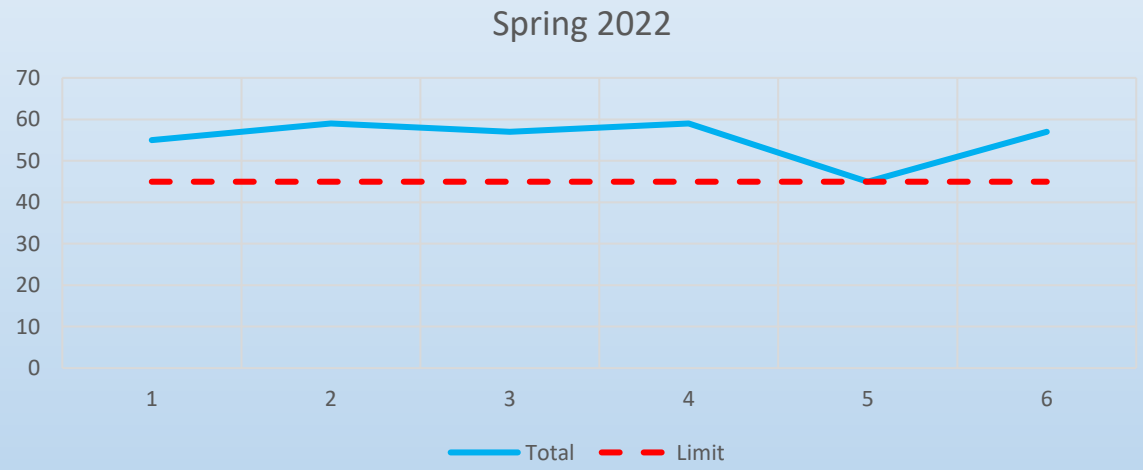
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Total
Limit

Winter 22 Data



Spring 22 Data



What We Learned

There is a lapse of data due to Covid pandemic. Now that students have returned to classes after Covid, we have noticed a sharp decline in the amount of students that are even completing the individual and/or team lab exams. Note: this data is not included in this report but may be seen in the raw data that is submitted by the instructors.

We do not see any significant issues for instructors that continuously teach this course. We are happy with the overall results. We feel that documenting the reasons why students are not meeting expectations has helped us to focus on whether we need to make changes to our instruction.

We do not see any long term trends in the data over time. We do note that Winter 2019 was an outlier in the data. From the instructor comments, there was a significant decline in the effort put forth by the students and in student understanding during this semester. We also had 3 snow days during this semester.

Use of Data to Improve Student Performance

We are very happy with the current results. However, we would like to change the format of the lab exam to more accurately represent our goals for student learning.

Current System

Students perform the designs on an individual basis and then build the circuits as a team.

Future System

We would like to modify the final lab exam so the students can work together on the design of the circuits. The students will then have to build the circuits on an individual basis and answer questions regarding the impact of changes to the circuits.

This new method will require students to show us that they have learned how to build the circuits, how to use their meter to take measurements, and how to utilize knowledge learned in the class to discuss how modifications to the circuit will impact the readings.

New Format of Team Lab Exam

Lab Exam – Team (15 pts) **Names _____**

1. You have a 10 VDC source available. Design a voltage divider circuit that has 2VDC, 5 VDC, and 8VDC available. The total circuit current is to be 2 mA.
   a. Draw your design and show your calculations.
2. You have a 10 VDC source available. Design a current divider circuit that has 10 mA, 6.67 mA, and 3.7 mA available.

a. Draw your design and show your calculations.

3. You have a 10 VDC source available. Design a balanced bridge that has an output of 0 V. The total circuit current is to be 10 mA.
   a. Draw your design and show your calculations.
   b. Modify the design so the output will be +2 VDC. Show your calculations.
   c. Modify the design so the output will be -2 VDC. Show your calculations.

New Format of Team Lab Exam

Rubric for Team Portion of Lab Exam

Topic	0 Points	1 Point	2 Points	3 Points	Score
Problem 1	Team did not submit a design	Team drew an incomplete circuit. There were not enough components or the symbols were drawn incorrectly. No supporting calculations were provided.	Team drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were lacking.	Team drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were provided to support the design.	
Problem 2	Team did not submit a design	Team drew an incomplete circuit. There were not enough components or the symbols were drawn incorrectly. No supporting calculations were provided.	Team drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were lacking or minimal.	Team drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were provided to support the design.	
Problem 3a	Team did not submit a design	Team drew an incomplete circuit. There were not enough components or the symbols were drawn incorrectly. No supporting calculations were provided.	Team drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were lacking or minimal.	Team drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were provided to support the design.	
Problem 3b	Team did not submit a design	Team drew an incomplete circuit. There were not enough components or the symbols were drawn incorrectly. No supporting calculations were provided.	Team drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were lacking or minimal.	Team drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were provided to support the design.	
Problem 3c	Team did not submit a design	Team drew an incomplete circuit. There were not enough components or the symbols were drawn incorrectly. No supporting calculations were provided.	Team drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were lacking or minimal.	Team drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were provided to support the design.	
					Total Score (out of 15)

New Format of Individual Lab Exam

Lab Exam - Individual (45 pts) Name_____

1. You have a 10 VDC source available. Design a voltage divider circuit that has 2VDC, 5 VDC, and 8VDC available. The total circuit current is to be 2 mA.

a. Draw your design and show the calculations.

b. Build your design and prove its proper operation.

Measured voltages:

c. Remove a resistor and discuss the impact on the circuit.

2. You have a 10 VDC source available. Design a current divider circuit that has 10 mA, 6.67 mA, and 3.7 mA available.

a. Draw your design and show the calculations.

b. Build your design and prove its proper operation.

Measured currents:

c. Remove a resistor and discuss the impact on the circuit.

3. You have a 10 VDC source available. Design a balanced bridge that has an output of 0 V. The total circuit current is to be 10 mA.

a. Draw your design and show the calculations.

b. Build your design and prove its proper operation.

Measured voltage:

c. Modify the design so the output will be +2 VDC and show the calculations.

d. Build your design and prove its proper operation.

Measured voltage:

e. Modify the design so the output will be -2 VDC and show the calculations.

f. Build your design and prove its proper operation.

Measured voltage:

New Rubric for Individual Lab Exam

Topic	0 Points	1 Point	2 Points	3 Points	Score
Problem 1	Student did not submit a design	Student drew an incomplete circuit. There were not enough components or the symbols were drawn incorrectly. No supporting calculations were provided.	Student drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were lacking.	Student drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were provided to support the design.	
Problem 1b	Student did not build circuit	Student built circuit but did not submit measurements.	Student built circuits and took measurements. However, the measurements were not correct.	Student built circuit and submitted correct measurements (within reason due to tolerances of components).	
Problem 1b	Student did not show circuit to instructor.	Student showed circuit to instructor but the circuit was put together in a manner that could not produce correct results.	Student showed circuit to instructor along with all of the measured values. There was at least one wrong component used.	Student showed circuit to instructor along with all of the measured values. Circuit was built correctly and correct components were used.	
Problem 1c	Student did not have a response to the question.	Student provided a response that was not accurate.	Student provided a response that was somewhat accurate but lacked sufficient impact statement.	Student provided accurate response including the impact on current draw in the circuit and voltage drops across remaining resistors.	
Problem 2	Student did not submit a design	Student drew an incomplete circuit. There were not enough components or the symbols were drawn incorrectly. No supporting calculations were provided.	Student drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were lacking.	Student drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were provided to support the design.	
Problem 2b	Student did not build circuit	Student built circuit but did not submit measurements.	Student built circuits and took measurements. However, the measurements were not correct.	Student built circuit and submitted correct measurements (within reason due to tolerances of components).	
Problem 2b	Student did not show circuit to instructor.	Student showed circuit to instructor but the circuit was put together in a manner that could not produce correct results.	Student showed circuit to instructor along with all of the measured values. There was at least one wrong component used.	Student showed circuit to instructor along with all of the measured values. Circuit was built correctly and correct components were used.	
Problem 2c	Student did not have a response to the question.	Student provided a response that was not accurate.	Student provided a response that was somewhat accurate but lacked sufficient impact statement.	Student provided accurate response including the impact on overall current draw in the circuit and impact (if any) on remaining resistors.	

New Rubric for Individual Lab Exam

Problem 3a	Student did not submit a design	Student drew an incomplete circuit. There were not enough components or the symbols were drawn incorrectly. No supporting calculations were provided.	Student drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were lacking.	Student drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were provided to support the design.	
Problem 3a	Student did not build circuit	Student built circuit but did not submit measurements.	Student built circuits and took measurements. However, the measurements were not correct.	Student built circuit and submitted correct measurements (within reason due to tolerances of components).	
Problem 3b	Student did not submit a design	Student drew an incomplete circuit. There were not enough components or the symbols were drawn incorrectly. No supporting calculations were provided.	Student drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were lacking.	Student drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were provided to support the design.	
Problem 3b	Student did not build circuit	Student built circuit but did not submit measurements.	Student built circuits and took measurements. However, the measurements were not correct.	Student built circuit and submitted correct measurements (within reason due to tolerances of components).	
Problem 3c	Student did not submit a design	Student drew an incomplete circuit. There were not enough components or the symbols were drawn incorrectly. No supporting calculations were provided.	Student drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were lacking.	Student drew a complete circuit. Correct components were used and symbols were drawn correctly. Supporting calculations were provided to support the design.	
Problem 3c	Student did not build circuit	Student built circuit but did not submit measurements.	Student built circuits and took measurements. However, the measurements were not correct.	Student built circuit and submitted correct measurements (within reason due to tolerances of components).	
Problem 3	Student did not show circuit to instructor.	Student showed circuit to instructor but the circuit was put together in a manner that could not produce correct results.	Student showed circuit to instructor along with all of the measured values. There was at least one wrong component used.	Student showed circuit to instructor along with all of the measured values. Circuit was built correctly and correct components were used.	
					Total Score (out of 45)

SKET110 Final Lab Exam Scoring Rubric Summary

Instructor _____ **Semester _____**

Student (No names provided)	Team (out of 15)	Individual (out of 45)	Total (out of 60)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			

1. How many students scored below a 45 for a total score on the final lab exam?
2. For each student that scored below a 45 as a total score, please indicate why the student may have scored below department expectations (include student number 1-16).

Action Plan

1. Coordinator to explain the new system and will submit a scoring matrix to all instructors that will teach this course. (Done)
2. Instructors will be advised to submit all individual and team scores for each student. (Done)
3. Instructors will be required to provide any feedback for students scoring below 75%. (Done)
4. Coordinator will track this data every semester and get immediate feedback from any instructor where problems occur. (Ongoing)

Letter to Instructors

Hello SKET/ET110 instructors,

I have sorted through the data for the second assessment report for the Higher Learning Commission. I wanted to share the results with you

90.7% of students obtained a score of 75% or higher on lab exam. This is an increase from the 2017 report where 84.91% obtained a score of 75% or higher. Since the goal is for 80% of students to obtain a score of 75% or higher on the lab exam, we did an outstanding job! Thank you!

We do not see any significant issues for instructors that continuously teach this course. We are happy with the overall results. We feel that documenting the reasons why students are not meeting expectations has helped us to focus on whether we need to make changes to our instruction.

We do not see any long-term trends in the data over time. We do note that Winter 2019 was an outlier in the data. From the instructor comments, there was a significant decline in the effort put forth by the students and in student understanding during this semester. We also had 3 snow days during this semester.

We are very happy with the current results. However, we would like to change the format of the lab exam to more accurately represent our goals for student learning.

Current System
Students perform the designs on an individual basis and then build the circuits as a team.
Future System
We would like to modify the final lab exam so the students can work together on the design of the circuits. The students will then have to build the circuits on an individual basis and answer questions regarding the impact of changes to the circuits.

This new method will require students to show us that they have learned how to build the circuits, how to use their meter to take measurements, and how to utilize knowledge learned in the class to discuss how modifications to the circuit will impact the readings.
I have attached the new forms representing our new method for administering the exam. Please begin to report using the new system starting fall 2023.

Please let me know if you have any questions or concerns.
Diane Lobsiger-Braden

Advisory Board Feedback

Report will be shared with the Skilled Trades Advisory Board in the Fall 2023 meeting.