Nashua Community College
Electronic Engineering Technology
Department Assessment Meeting Minutes
June 16, 2022

Discussion

Both full time faculty in the EET program at Nashua Community College (Susan Hughes and Austin Hewin) met to review the results of the student outcome calculations using the course POLs generated from AY17-18 to AY21-22. All raw data used for these calculated is stored in *Improve* under the document repository directory *ELET Course Assessment Data*.

STUDENT OUTCOME 1:

Apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve well-defined engineering problems appropriate to the discipline.

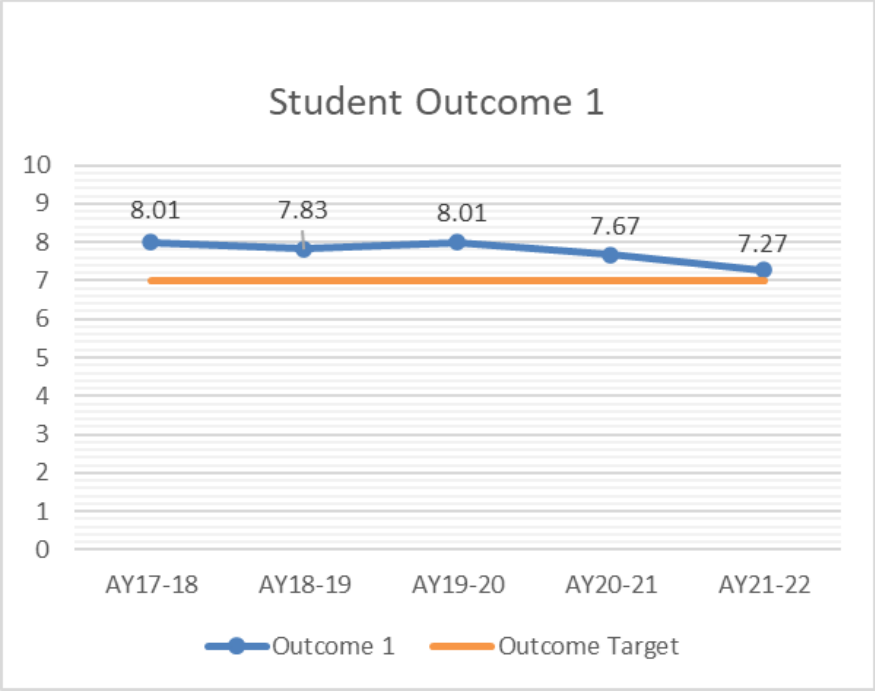
B. Assessment Metrics – Points of Learning

Student Outcome 1 data is calculated based on the course POLs as shown below. The mapping as shown currently averages 39 out of the 40 available POLs to generate the student outcome 1 results. The notation *Both* for a given course indicates that the POL was calculated by aggregating both the day and evening sections together. Blank cells indicate that no data was collected for that semester. This mapping was maintained for consistency with the approach used in previous years. However, the current EET faculty have concerns about the number of contributors to this calculation that may be effectively averaging out meaningful information. The current EET faculty will be reviewing how the student outcomes are calculated and will make recommendations. Any recommended changes will be reviewed using the documented process to establish or modify student outcomes.

	AY17-18	AY18-19	AY19-20	AY20-21	AY21-22
ELET115N POL1	8.61	9.11			9.11
POL2	7.25	8.53			8.8
POL3	7.62	7.11			8.97
POL4	6.6	5.92			8.17
ELET121N Both POL1	8.15	9.11	8.41	9.20	7.24
POL2	8.07	8.53	8.72	6.93	**6.91**
POL3	8.24	7.11	8.97	5.99	**6.54**
POL4	6.19	5.92	7.11	4.98	**4.85**
ELET131N Both POL1	8.24	8.64	8.21	8.01	7.53
POL2	8.30	8.54	7.66	7.67	7.37
POL3	7.24	7.85	7.71	7.09	**6.85**
POL4	7.33	7.33	8.29	7.92	**4.57**
ELET132N Both POL1	7.51		7.99	7.62	**6.95**
POL2	7.89		7.47	7.30	8.22
POL3	8.40		7.94	7.65	**6.85**
POL4	7.33		7.83	7.58	9.15
ELET141N POL1	6.93	6.82	8.44	8.21	7.13
POL2	7.21	7.01	7.41	7.78	**4.93**
POL3	8.31	8.12	8.77	8.45	**6.65**

POL4	8	7.81	7.02	6.46	**5.83**
ELET221N POL1	8.58	7.92	8.39	7.49	8.33
POL2	7.69	6.74	6.53	6.62	**6.43**
POL3	8.38	8.05	7.16	6.89	8.45
POL4	8.83	7.74	8.74	7.56	7.59
ELET241N POL1	8.91	7.9	7.53	8.77	8.68
POL2	9.07	8.47	8.64	8.39	8.14
POL3	8.43	8.46	8.26	7.27	8.33
POL4	9.29	7.57	8.15	8.05	7.88
ELET245N POL1	8.6				**4.87**
POL2	8.44				7.32
POL3	8.25				**6.35**
POL4	8.76				**5.84**
ELET250N POL1	8.03	8.54	8.33	8.81	8.05
POL2	7.66	8.74	8.54	8.78	7.66
POL3	7.8	7.61	7.55	8.39	7.73
POL4	8.08	7.92	8.45	8.97	7.61
ELET274N POL1	8.62	9.25	8.6	9.03	9.22
POL2	8.67	8	8.1	8.36	8.44
POL3	8.8	8.85	8.31	9.22	9.15
Outcome 1	**8.01**	**7.83**	**8.01**	**7.67**	**7.27**
Outcome Target	7	7	7	7	7

D. Evaluation – Data for Student Outcome 1, AY17-18 to AY21-22



E. Using Results for Continuous Improvement – Summary Analysis

Student Outcome 1 has decreased since AY19-20. Looking at the POL contributors, ELET121N POL4, ELET131N POL4, ELET141N POL2, and ELET245N POL1 were all under 5.0. The focus on improving these course POLs as described in the course assessments should improve this number for AY22-23.

STUDENT OUTCOME 2:

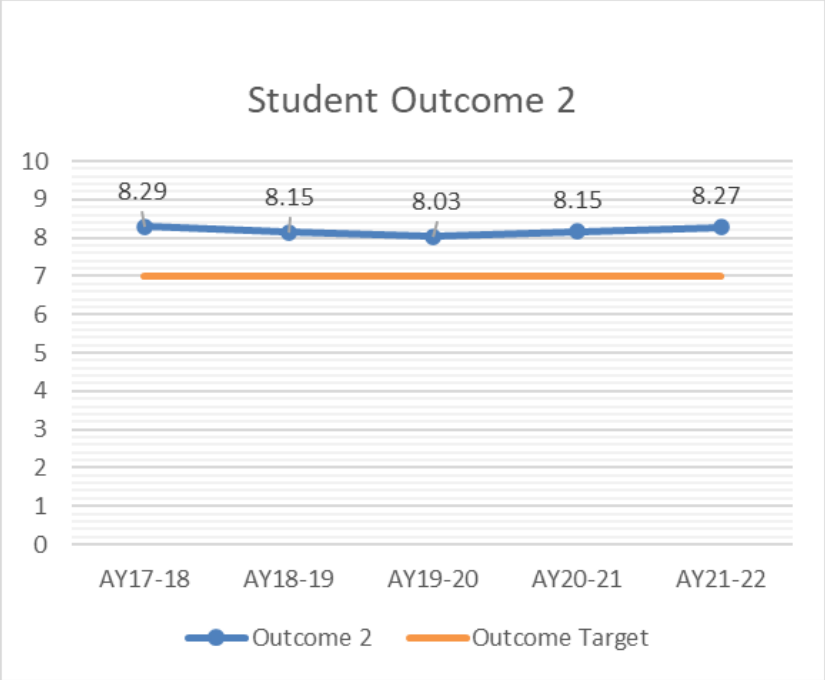
Design solutions for well-defined technical problems and assist with the engineering design of systems, components, or processes appropriate to the discipline.

B. Assessment Metrics – Points of Learning

Student outcome 2 data is calculated based on the course POLs as shown in below. The mapping as shown currently averages 5 out of the 40 available POLs to generate the student outcome 2 results.

	AY17-18	AY18-19	AY19-20	AY20-21	AY21-22
ELET221N POL1	8.58	7.92	8.39	7.49	8.33
POL3	8.38	8.05	7.16	6.89	8.45
ELET250N POL3	7.8	7.61	7.55	8.39	7.73
POL4	8.08	7.92	8.45	8.97	7.61
ELET274N POL1	8.62	9.25	8.6	9.03	9.22
Outcome 2	**8.29**	**8.15**	**8.03**	**8.15**	**8.27**
Outcome Target	7	7	7	7	7

D. Evaluation – Data for Student Outcome 2, AY17-18 to AY21-22



E. Using Results for Continuous Improvement – Summary Analysis

Student outcome 2 has been consistent over the last 5 years. There are no concerns. The course assessments outline suggested improvements for their respective course POLs. Improvements in the contributing POLs will improve student outcome 2.

STUDENT OUTCOME 3:

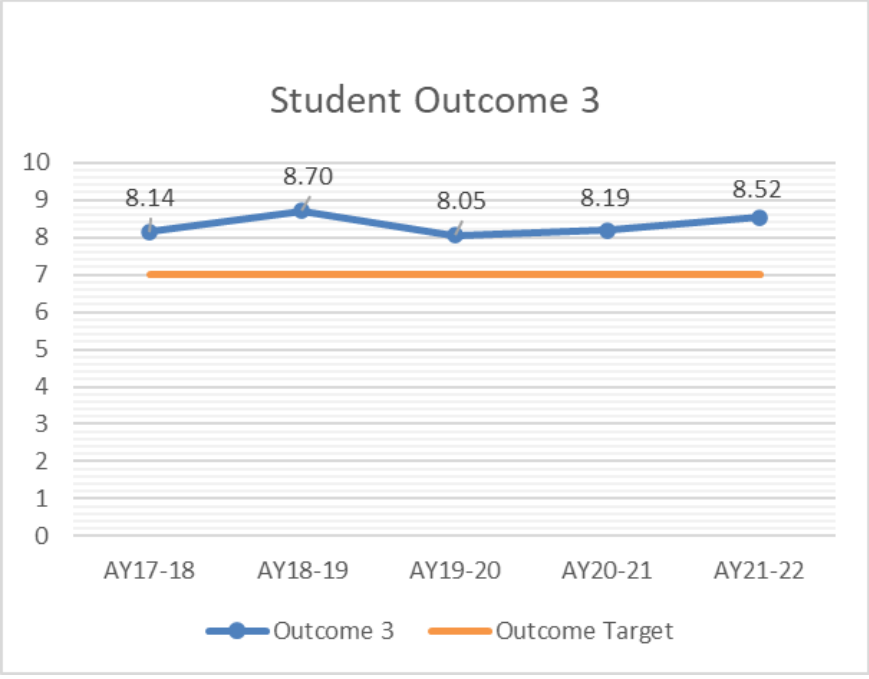
Apply written, oral, and graphical communication in well-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature.

B. Assessment Metrics – Points of Learning

Student outcome 3 data is calculated based on the course POLs as shown below. The notation *Both* for a given course indicates that the POL was calculated by aggregating both the day and evening sections together. Blank cells indicate that no data was collected for that semester. The mapping as shown currently averages 6 out of the 40 available POLs to generate the student outcome 3 results.

	AY17-18	AY18-19	AY19-20	AY20-21	AY21-22
ELET132N Both POL1	7.51		7.99	7.62	6.95
POL2	7.89		7.47	7.30	8.22
POL4	7.33		7.83	7.58	9.15
ELET274N POL1	8.62	9.25	8.6	9.03	9.22
POL2	8.67	8	8.1	8.36	8.44
POL3	8.8	8.85	8.31	9.22	9.15
Outcome 3	**8.14**	**8.70**	**8.05**	**8.19**	**8.52**
Outcome Target	7	7	7	7	7

D. Evaluation – Data for Student Outcome 3, AY17-18 to AY21-22



E. Using Results for Continuous Improvement – Summary Analysis

Student outcome 3 has been consistent over the last 5 years. There are no concerns. The course assessments outline suggested improvements for their respective course POLs. Improvements in the contributing POLs will improve student outcome 3.

STUDENT OUTCOME 4:

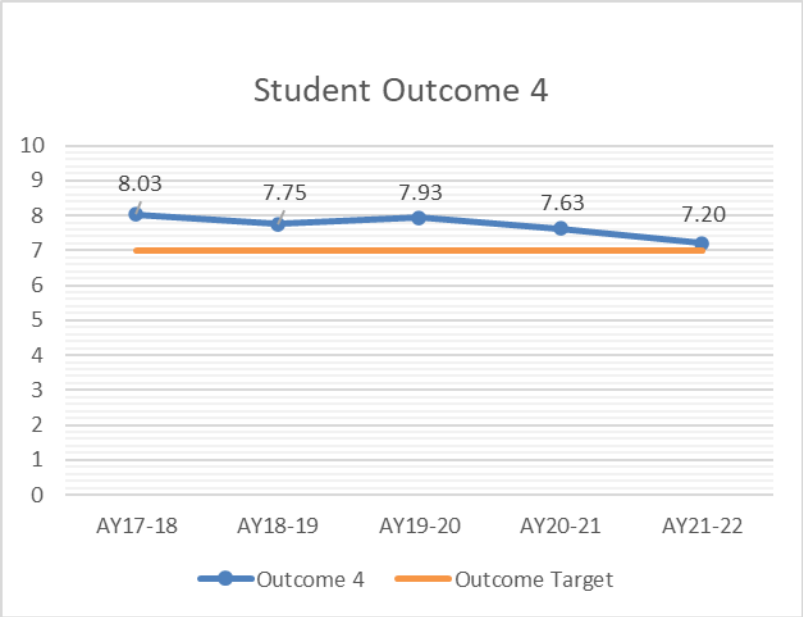
Conduct standard tests, measurements, and experiments and to analyze and interpret the results.

B. Assessment Metrics – Points of Learning

Student outcome 4 data is calculated based on the course POLs as shown below. The notation *Both* for a given course indicates that the POL was calculated by aggregating both the day and evening sections together. Blank cells indicate that no data was collected for that semester. The mapping as shown currently averages 22 out of the 40 available POLs to generate the student outcome 4 results. This mapping was maintained for consistency with the approach used in previous years. However, the current EET faculty have concerns about the number of contributors to this calculation that may be effectively averaging out meaningful information. The current EET faculty will be reviewing how the student outcomes are calculated and will make recommendations. Any recommended changes will be reviewed using the documented process to establish or modify student outcomes.

	AY17-18	AY18-19	AY19-20	AY20-21	AY21-22
ELET115N POL2	7.25	8.53			8.8
POL3	7.62	7.11			8.97
POL4	6.6	5.92			8.17
ELET121N Both POL2	8.07	8.53	8.72	6.93	**6.91**
ELET131N Both POL1	8.24	8.64	8.21	8.01	7.53
POL2	8.30	8.54	7.66	7.67	7.37
POL3	7.24	7.85	7.71	7.09	**6.85**
POL4	7.33	7.33	8.29	7.92	**4.57**
ELET141N POL1	6.93	6.82	8.44	8.21	7.13
POL2	7.21	7.01	7.41	7.78	**4.93**
POL3	8.31	8.12	8.77	8.45	**6.65**
POL4	8	7.81	7.02	6.46	**5.83**
ELET221N POL1	8.58	7.92	8.39	7.49	8.33
POL2	7.69	6.74	6.53	6.62	**6.43**
POL3	8.38	8.05	7.16	6.89	8.45
ELET241N POL1	8.91	7.9	7.53	8.77	8.68
POL2	9.07	8.47	8.64	8.39	8.14
POL3	8.43	8.46	8.26	7.27	8.33
POL4	9.29	7.57	8.15	8.05	7.88
ELET245N POL1	8.6				**4.87**
POL2	8.44				7.32
POL3	8.25				**6.35**
Outcome 4	**8.03**	**7.75**	**7.93**	**7.63**	**7.20**
Outcome Target	7	7	7	7	7

D. Evaluation – Data for Student Outcome 4, AY17-18 to AY21-22



E. Using Results for Continuous Improvement – Summary Analysis

Student outcome 4 has decreased since AY19-20. Looking at the POL contributors, ELET131N POL4, ELET141N POL2, and ELET245N POL1 were all under 5.0. The focus on improving these course POLs as described in the course assessments should improve this number for AY22-23.

STUDENT OUTCOME 5:

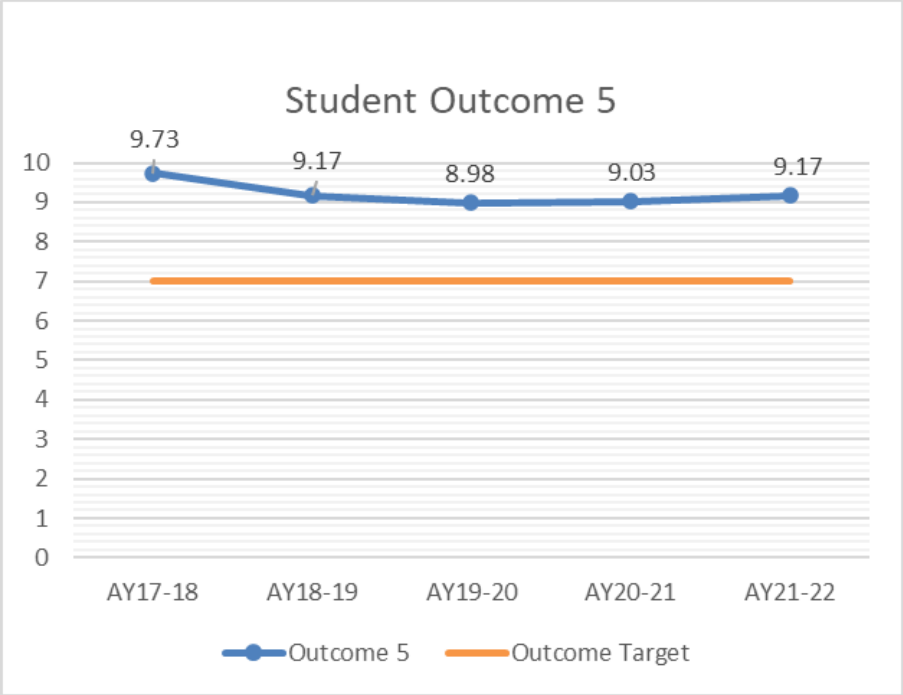
Function effectively as a member of a technical team.

B. Assessment Metrics – Points of Learning

Student outcome 5 data is calculated based on a single course POL as shown in Appendix I. This mapping was maintained for consistency with the approach used in previous years. However, the current EET faculty have concerns about using only a single POL to measure teamwork. The current EET faculty will be reviewing how the student outcome is calculated and will make recommendations. Any recommended changes will be reviewed using the documented process to establish or modify student outcomes.

	AY17-18	AY18-19	AY19-20	AY20-21	AY21-22
ELET274N POL4	9.73	9.17	8.98	9.03	9.17
Outcome 5	**9.73**	**9.17**	**8.98**	**9.03**	**9.17**
Outcome Target	7	7	7	7	7

D. Evaluation – Data for Student Outcome 5, AY17-18 to AY21-22



E. Using Results for Continuous Improvement – Summary Analysis

Student outcome 5 has been consistent over the last 5 years. There are no concerns. The ELET274N course assessment outlines suggested improvements for the course POLs. Improvements in the POL4 will improve student outcome 5.

Conclusion

For AY21-22, all student outcomes met the criteria for a value of >= 7.0. There are no major concerns. Student outcomes 1 and 4 are trending downward which causes minor concern. Working to improve the component POLs that are below 7 will improve the student outcome values.

Meeting notes recorded on Thursday, June 16, 2002.

Professor Susan Hughes (Program Coordinator)
Professor Austin Hewin