CoIS Assessment: Reporting Units

School of Engineering and Technology 18sept18

Program (CoIS) - Computer Engineering BS

Program Notes: The student outcomes for the LSSU Computer Engineering program are the same as those in ABET Criterion 3 (A) through (K).
Assessment Contact: Dr. Paul Weber, Chair
Mission Statement: To produce sought-after engineers and technologists by providing a rigorous undergraduate learning experience characterized by close student-faculty interaction.

Student Learning Outcomes	*Assessment Criteria & Procedures*	*Assessment Results*	*Use of Results*
Criterion 3.a - Students will be able to an ability to apply knowledge of mathematics, science, and engineering. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Mid-Level (Analyzing/Applying) [Bloom] **Institutional Learning:** ILO2 - Use of Evidence - Students will identify the need for, gather, and accurately process the appropriate type, quality, and quantity of evidence to answer a complex question or solve a complex problem.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There are three performance indicators for Criterion 3.a. Performance Indicator (A1)-the ability to solve a partial differential equation (PDE) numerically in EGNR 340 [Numerical Methods for Engineers] on a final exam question on PDE's. Performance Indicator (A2)-the ability to apply complex mathematics to transform from the discrete time domain to the frequency domain in EGEE 425 [Digital Signal Processing] on a final exam problem on discrete Fourier transform. Performance Indicator (A3)-the ability to mathematically	**Finding Reporting Year:** 2017-2018 **Goal met:** No Performance Indicator A1- Fall 2.6, Spring 2.0 Performance Indicator A2- Not Offered Performance Indicator A3- Not Offered (05/01/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	**Use of Result:** There is a concern that student performance in this outcome is not at the expected level. Examples of issues students had meeting this outcome include: • Many students have difficulties approaching a problem and only attempt to do so on a surface level. • There is a general weakness amongst students while working with complex numbers. It was recommended that a common procedure for analyzing and solving problems along with support material be developed and used across all engineering courses. This common procedure will help reinforce the process of solving problems to students. A further recommendation is to add additional material on complex numbers to EGNR140. This

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
	characterize a digital system's input-output relationship and use it to predict its response to an input in EGEE 320 [Digital Design] on a final exam question on circuit timing. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** EGEE 425 and EGEE 320 are alternate year courses. 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary	**Finding Reporting Year:** 2016-2017 **Goal met:** No Performance Indicator A1- Fall 2.1, Spring 2.0 Performance Indicator A2- Spring 3.2 Performance Indicator A3- Fall 2.3 (05/01/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	additional exposure to complex numbers will help students gain more experience and become more comfortable using them. (08/08/2018) **Use of Result:** Continue 2 year assessment cycle in 2017-2018 (05/01/2017)
Criterion 3.b - Students will be able to design and conduct experiments, analyze and interpret data. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** High-Level (Creating/Evaluating) [Bloom] **Institutional Learning:** ILO3 - Analysis and Synthesis - Students will organize and synthesize evidence, ideas, or works of imagination to answer an open-ended question, draw a conclusion, achieve a goal, or create a substantial work of art.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There are two performance indicators for Criterion 3.b. Performance Indicator #B1-the ability to develop a valid and reliable experimental procedure that will validate a product in EGNR-495 [Engineering Design Project II] on a design review on final product testing. Performance Indicator #B2-the ability to produce control charts and use them to monitor an on-going manufacturing process in EGNR-346 [Probability and Statistics Laboratory for Engineers] on a control charts report. **Criteria Target:** 3.0 out of 4 on at	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator B1-Spring 3.0 Performance Indicator B2-Fall 3.0 (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	**Use of Result:** There is currently no concern regarding this outcome. However, because of the small number of samples in EGNR346, this performance indicator should be monitored. (08/09/2018)
		Finding Reporting Year: 2016-2017 **Goal met:** Yes Performance Indicator B1- Spring 3.3 Peformance Indicator B2-Fall 3.0 (08/09/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	**Use of Result:** Continue two-year assessment cycle in 2017-2018 (08/09/2017)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
	least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects		
Criterion 3.c - Students will have an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** High-Level (Creating/Evaluating) [Bloom] **Institutional Learning:** ILO3 - Analysis and Synthesis - Students will organize and synthesize evidence, ideas, or works of imagination to answer an open-ended question, draw a conclusion, achieve a goal, or create a substantial work of art.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There are two performance indicators for Criterion 3.c. Performance Indicator #C1-the ability to reformulate implied customer needs as specifications and produce an acceptable design solution in EGNR-491[Engineering Design Project I] on a product design review. Performance Indicator #C2-the ability to design a combined software and hardware solution that satisfies specific constraints in EGEE-355 [Microcontroller Systems] on a final design project report. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** EGEE is an alternate year course. 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator C1- Fall 3.0 Performance Indicator C2-Fall 3.7 (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	**Use of Result:** There is currently no concern regarding this outcome. More design projects and design reviews have been integrated into courses at the junior year, namely EGEE320 and EGEE355. This has taken time and effort to do but it seems that the students have benefited from this; some have noted this verbally in feedback sessions in Senior Projects (EGNR491-495). (08/09/2018)
		Finding Reporting Year: 2016-2017 **Goal met:** Yes Performance Indicator C1- Fall 3.0 Performance Indicator C2- Fall 3.6 (08/09/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	**Use of Result:** Continue two-year assessment cycle in 2017-2018 (08/09/2017)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
	High Impact Program Practices 1: Capstone Course(s), Projects		
Criterion 3.d - Students will have the ability to function on multidisciplinary teams. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Level 4 (Extended Thinking) [Webb] **Institutional Learning:** ILO4 - Professional Responsibility - Students will demonstrate the ability to apply professional ethics and intercultural competence when answering a question, solving a problem, or achieving a goal.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicators for Criterion 3.d. Performance Indicator #D1-the ability to provide constructive criticism of team members in EGNR-495 [Engineering Design Project II] on peer evaluations. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator D1-3.6 (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf **Finding Reporting Year:** 2016-2017 **Goal met:** No Performance Indicator D1- Spring 2.0 (08/09/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	**Use of Result:** There is currently no concern regarding this outcome. (08/09/2018) **Use of Result:** Continued two-year assessment cycle in 2017-2018 (08/09/2017)
Criterion 3.e - Ability to identify, formulate and solve engineering problems. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Mid-Level (Analyzing/Applying) [Bloom] **Institutional Learning:** ILO2 - Use of Evidence - Students will identify the need for, gather, and accurately process the appropriate type, quality, and quantity of evidence to answer a complex question or solve	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicators for Criterion 3.e. Performance Indicator #E1- the ability to identify a human need and translate it into technical specifications in EGEE-425 [Digital Signal Processing] on the final design project by identifying a need and	**Finding Reporting Year:** 2016-2017 **Goal met:** No Performance Indicator E1-2.5 (08/09/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	**Use of Result:** There is no concern with this outcome. However, it is clear from examining the student work that phase response needs to be better emphasized in EGEE425 earlier on. (08/09/2017)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
a complex problem.	proposing a solution. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** EGEE-425 is an alternate year course. 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary		
Criterion 3.f - Students will have an understanding of professional and ethical responsibility. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Level 4 (Extended Thinking) [Webb] **Institutional Learning:** ILO4 - Professional Responsibility - Students will demonstrate the ability to apply professional ethics and intercultural competence when answering a question, solving a problem, or achieving a goal.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicators for Criterion 3.f. Performance Indicator #F1-the ability to apply perspectives from established ethical philosophies in the analysis of a case study in EGNR-495 Engineering Design Project II on the ethics essay. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator F1-3.2 (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf **Finding Reporting Year:** 2016-2017 **Goal met:** Yes Performance Indicator F1-3.1 (08/09/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	**Use of Result:** There is no cause for concern. (08/09/2018) **Use of Result:** Continued two-year assessment cycle in 2017-2018 (08/09/2017)
Criterion 3.g - Students have the ability to communicate effectively.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes	**Use of Result:** There is no concern, even with the most

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
Goal Status: Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Level 2 (Skills and Concepts) [Webb] **Institutional Learning:** ILO1 - Formal Communication - Students will develop and clearly express complex ideas in written and oral presentations.	documented in Appendix G of the ABET report. There are two performance indicators for Criterion 3.g. Performance Indicator #G1-the ability to make formal engineering presentations in EGNR-495 [Engineering Design Project II] on the final project presentations. Performance Indicator #G2- the ability to write an engineering report in EGEE-355 [Microcontroller Systems] on the final project report. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** EGEE 355 is an alternate year course. 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects	Performance Indicator G1- Spring 3.0 Performance Indicator G2-Spring 2.7 (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf **Finding Reporting Year:** 2016-2017 **Goal met:** Yes Performance Indicator G1-Spring 3.0 Performance Indicator G2-Not offered (08/09/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	recent results from EGEE-355 since it is reinforced in EGNR-495. It is however recommended that the grading form for G1 be modified to better separate the IAB's rating for the team's ability to communicate and that of the project outcome. (08/09/2018) **Use of Result:** Continued two-year assessment cycle in 2017-2018 (08/09/2018)
Criterion 3.h. - Students will have the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Mid-Level (Analyzing/Applying) [Bloom] **Institutional Learning:** ILO4 - Professional Responsibility - Students will demonstrate the ability to apply professional ethics and	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicator for Criterion 3.h. Performance Indicator #H1-the ability to describe the sustainability of a particular design in EGEE-320 [Digital Design] on the design presentation or paper.	**Finding Reporting Year:** 2016-2017 **Goal met:** No Performance Indicator H1-Fall 1.8 (08/09/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	**Use of Result:** It is very concerning that two teams omitted answers to the sustainability questions altogether. Looking ahead to the changing ABET-EAC criteria, F, H, and J will be combined into Outcome 4. This new outcome could be appropriately addressed in the corresponding sections of the Project Definition and Plan (PDP) document that all Senior Project teams are required to write. While not necessary under

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
intercultural competence when answering a question, solving a problem, or achieving a goal.	**Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** EGEE 320 is an alternate year course. 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary		the new criteria, the current assignment from EGEE320 could be maintained. If it is kept, it might be useful to consider implementing the podcast in the form of a pass/fail grade based on whether the students cover all topics to ensure that they do not ignore this portion of the project. (08/09/2018)
Criterion 3.i - Students will have the recognition of the need for and an ability to engage in life-long learning. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Mid-Level (Analyzing/Applying) [Bloom] **Institutional Learning:** ILO4 - Professional Responsibility - Students will demonstrate the ability to apply professional ethics and intercultural competence when answering a question, solving a problem, or achieving a goal.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicator for Criterion 3.i. Performance Indicator #I1-the ability to define and clarify customer needs through technical investigation in EGNR-495 [Engineering Design Project II] on the FA evaluation of each team member at end of semester. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects	**Finding Reporting Year:** 2017-2018 **Goal met:** No Performance Indicator I1-2.8 (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf **Finding Reporting Year:** 2016-2017 **Goal met:** Yes Performance Indicator I1-3.0 (08/09/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	**Use of Result:** Since past year met expectations and this was a small class size there is presently no concern. We will monitor again next year. (08/09/2018) **Use of Result:** Continued two-year assessment cycle in 2017-2018 (08/09/2017)
Criterion 3.j - Students will have a	**Indirect - Report/Audit - Internal -**	**Finding Reporting Year:** 2016-2017	**Use of Result:** Continued two-year

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
knowledge of contemporary issues. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Low-Level (Understanding/Remembering) [Bloom] **Institutional Learning:** ILO4 - Professional Responsibility - Students will demonstrate the ability to apply professional ethics and intercultural competence when answering a question, solving a problem, or achieving a goal.	Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicator for Criterion 3.j. Performance Indicator #J1-the ability to use examples from a realistic case study in making arguments on the EGNR-495 [Engineering Design Project II] on the ethics essay. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects	**Goal met:** Yes Performance Indicator J1- Spring 3.1 (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	assessment cycle in 2017-2018 (08/09/2017)
		Finding Reporting Year: 2017-2018 **Goal met:** Yes Performance Indicator J1-Spring 3.2 (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	**Use of Result:** There is no concern. (08/09/2018)
Criterion 3.k - Students have the ability to use the techniques, skills and modern engineering tools necessary for engineering practice. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Level 2 (Skills and Concepts) [Webb] **Institutional Learning:** ILO3 - Analysis and Synthesis - Students will organize and synthesize evidence, ideas, or works of imagination to answer an open-ended question, draw a conclusion, achieve a goal, or create a substantial work of art.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicator for Criterion 3.k. Performance Indicator #K1-the ability to solve a recursive problem by writing a program in a structured programming language, implementing the recursion in an iterative loop on an EGNR340 [Numerical Methods for Engineers] exam question. Performance Indicator #K2-the ability to incorporate engineering	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator K1- Spring 2.7 Performance Indicator K.2-Spring 3.7 (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	**Use of Result:** There is no concern. Continue to monitor in future offerings. (08/09/2018)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
	software and circuit simulation software to design and simulate a high-order op-amp based circuit on the EGEE-310 [Network Analysis] final project report –via the use of MATLAB and PSpice **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** EGNR340 and EGEE 310 are alternate year courses. 1-Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary		
Program Review - The Program provides evidence in support of Program Review in accordance with the Higher Learning Commission Criteria for Accreditation (4.A. The institution demonstrates responsibility for the quality of its educational programs. 1. The institution maintains a practice of regular program reviews.) **Goal Status:** Active **Goal Category:** Periodic Program Review	**Indirect - Report/Audit - Internal -** The Program conducts evidence-supported regular program review. The Program addresses the key components of the , incorporates feedback from assessment activities, and documents the impact of assessment findings and subsequent actions on student learning. **Criteria Target:** The Program Review will address the following criteria: 1. Contribution to LSSU Mission/Vision 2. Metrics of Productivity 3. Internal and External Program Demand 4. Program Quality 5. Program Assessment 6. Opportunity Analysis	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes ABET Report Attached. (08/09/2018) **Related Documents:** ABET CE Report -Final.docx	

CoIS Assessment: Reporting Units

School of Engineering and Technology 18sept18

Program (CoIS) - Electrical Engineering BS

Mission Statement: To produce sought-after engineers and technologists by providing a rigorous undergraduate learning experience characterized by close student-faculty interaction.
Assessment Contact: Dr. Paul Weber, Chair
Program Notes: The student outcomes for the LSSU Electrical Engineering program are the same as those in ABET Criterion 3 (a) through (k).

Student Learning Outcomes	*Assessment Criteria & Procedures*	*Assessment Results*	*Use of Results*
Criterion 3.a - Students will be able to apply knowledge of mathematics, science, and engineering. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Mid-Level (Analyzing/Applying) [Bloom] **Institutional Learning:** ILO2 - Use of Evidence - Students will identify the need for, gather, and accurately process the appropriate type, quality, and quantity of evidence to answer a complex question or solve a complex problem.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There are three performance indicators for Criterion 3.a. Performance Indicator (A1)- the ability to solve a partial differential equation (PDE) numerically in EGNR-340 (Numerical Methods for Engineers) final exam question on PDE's. Performance Indicator #A2- the ability to mathematically characterize a physical system's input-output relationship and use it to predict its response to an input in EGRS-460 (Control Systems) final exam question on step response of a physical system. Performance Indicator #A3- the ability to apply vector calculus and	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator A1-Fall 2.6, Spring 2.7 Performance Indicator A2- Fall 3.8 Performance Indicator A3- Not offered (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	**Use of Result:** There is a concern that student performance in this outcome is not at the expected level. Examples of issues students had meeting this outcome include: ? Many students have difficulties approaching a problem and only attempt to do so on a surface level. ? There is a general weakness amongst students while working with complex numbers. It was recommended that a common procedure for analyzing and solving problems along with support material be developed and used across all engineering courses. This common procedure will help reinforce the process of solving problems to students. A further recommendation is to add additional material on complex numbers to EGNR-140. This additional exposure to complex

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
	Maxwell's equations in EGEE-345 (Fundamentals of Engineering Electromagnetics) final exam problem on analyzing electric field due to ring of charge. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** EGEE 345 is an alternate year course. 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary	**Finding Reporting Year:** 2016-2017 **Goal met:** No Performance Indicator #A1-Fall 2.0, Spring 2.0 Performance Indicator #A2-Fall 2.6 Performance Indicator #A3-Not Offered (08/07/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	numbers will help students gain more experience and become more comfortable using them. (08/09/2018) **Use of Result:** Continued 2 year assessment cycle in 2017-2018 (08/09/2017)
Criterion 3.b - Students will be able to design and conduct experiments, as well as to analyze and interpret data. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** High-Level (Creating/Evaluating) [Bloom] **Institutional Learning:** ILO3 - Analysis and Synthesis - Students will organize and synthesize evidence, ideas, or works of imagination to answer an open-ended question, draw a conclusion, achieve a goal, or create a substantial work of art.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There are two performance indicators for Criterion 3.b. Performance Indicator #B1- the ability to develop a valid and reliable experimental procedure that will validate a product in EGNR-495 (Engineering Design Project II) design review on final product testing. Performance Indicator #B2- the ability to produce control charts and use them to monitor an on-going manufacturing process in EGNR-346 (Probability and Statistics Laboratory for Engineers) control charts report. **Criteria Target:** 3.0 out of 4 on at least one performance indicator,	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator #B1-Spring 3.0 Performance Indicator #B2- Not Offered (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf **Finding Reporting Year:** 2016-2017 **Goal met:** Yes Performance Indicator #B1-Spring 3.3 Performance Indicator #B2- Fall 3.0 (08/16/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	**Use of Result:** There is currently no concern regarding this outcome. However, because of the small number of samples in EGNR346, this performance indicator should be monitored. (08/09/2018) **Use of Result:** Continued two-year assessment cycle in 2017-2018 (08/08/2017)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
	with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects		
Criterion 3.c - Students will be able to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** High-Level (Creating/Evaluating) [Bloom] **Institutional Learning:** ILO3 - Analysis and Synthesis - Students will organize and synthesize evidence, ideas, or works of imagination to answer an open-ended question, draw a conclusion, achieve a goal, or create a substantial work of art.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There are two performance indicators for Criterion 3.c. Performance Indicator #C1- the ability to reformulate implied customer needs as specifications and produce an acceptable design solution in a EGNR-491 (Engineering Design Project I) product design review. Performance Indicator #C2- the ability to design, construct, and evaluate a high-order filter circuit to meet technical specifications in a EGEE-310 (Network Analysis) final design project report **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** EGEE-310 (Network Analysis) is an alternating year course. 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator #C1-Fall 3.0 Performance Indicator #C2- Not Offered (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf **Finding Reporting Year:** 2016-2017 **Goal met:** Yes Performance Indicator #C1-Fall 3.0 Performance Indicator #C2-Not Offered (08/08/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	**Use of Result:** There is currently no concern regarding this outcome. While the average is a little low, only one senior project team was below standard and that is likely due to them doing the assignment on short notice. All other teams performed at the standard so there is no cause for concern at this time. (08/09/2018) **Use of Result:** Continued two-year assessment cycle in 2017-2018 (08/07/2017)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
	High Impact Program Practices 1: Capstone Course(s), Projects		
Criterion 3.d - Students will be able to function on multidisciplinary teams. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Level 4 (Extended Thinking) [Webb] **Institutional Learning:** ILO4 - Professional Responsibility - Students will demonstrate the ability to apply professional ethics and intercultural competence when answering a question, solving a problem, or achieving a goal.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicator for Criterion 3.d. Performance Indicator #D1- the ability to provide constructive criticism of team members in EGNR-495 (Engineering Design Project II) peer evaluations. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator #D1-Spring 2.6 (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf **Finding Reporting Year:** 2016-2017 **Goal met:** Yes Performance Indicator #D1-Spring 3.2 (08/08/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	**Use of Result:** There is currently no serious concern regarding this outcome given past data. (08/09/2018) **Use of Result:** Continued two-year assessment cycle in 2017-2018 (08/08/2017)
Criterion 3.e - Students will be able to identify, formulate and solve engineering problems. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Mid-Level (Analyzing/Applying) [Bloom] **Institutional Learning:** ILO2 - Use of Evidence - Students will identify the need for, gather, and accurately process the appropriate type, quality, and quantity of evidence to answer a complex question or solve	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicator for Criterion 3.e. Performance Indicator #E1- the ability to translate a human need into technical specifications in the EGEE-310 (Network Analysis) final project report.	**Finding Reporting Year:** 2017-2018 **Goal met:** No Performance Indicator #E1-Not Offered (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf **Finding Reporting Year:** 2016-2017 **Goal met:** No Performance Indicator #E1-Fall 2.3 (08/08/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	**Use of Result:** Continued two-year assessment cycle in 2018-2019 (08/09/2018) **Use of Result:** There is a slight concern that student performance in this outcome is not at the expected level. Examples of issues students had meeting this outcome include: It is apparent that the students

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
a complex problem.	**Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** EGEE-310 (Network Analysis) is an alternating year course 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary		did not demonstrate that they have the ability to translate a human need into a technical specification. With the exception of the one group, all of the others went straight from selecting cutoff frequencies to determining transfer functions without providing any additional specifications or rationale for them. However, there were also difficulties in the assigned problem that made it difficult to evaluate. The assignment could be adjusted to make it more board thereby allowing the students to better demonstrate their ability to translate. It was recommended that the assignment be monitored for one more offering and then determine if a new assignment (possibly from a different course is needed). (08/07/2017)
Criterion 3.f - Students will have an understanding of professional and ethical responsibility. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Level 4 (Extended Thinking) [Webb] **Institutional Learning:** ILO4 - Professional Responsibility - Students will demonstrate the ability to apply professional ethics and intercultural competence when answering a question, solving a problem, or achieving a goal.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicator for Criterion 3.f. Performance Indicator #F1- the ability to apply perspectives from established ethical philosophies in the analysis of a case study in a EGNR-495 (Engineering Design Project II) ethics essay. **Criteria Target:** 3.0 out of 4 on at	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator #F1-Spring 3.2 (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	**Use of Result:** There is no cause for concern. (08/09/2018)
		Finding Reporting Year: 2016-2017 **Goal met:** Yes Performance Indicator #F1-Spring 3.1 (08/08/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	**Use of Result:** Continued two-year assessment cycle in 2017-2018 (08/07/2017)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
	least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects **High Impact Program Practices 2:** Diversity/Global Learning		
Criterion 3.g - Students have the ability to communicate effectively. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Level 2 (Skills and Concepts) [Webb] **Institutional Learning:** ILO1 - Formal Communication - Students will develop and clearly express complex ideas in written and oral presentations.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There are two performance indicators for Criterion 3.g. Performance Indicator #G1- the ability to make formal engineering presentations for EGNR-495 (Engineering Design Project II) final project presentations. Performance Indicator #G2- the ability to write prose containing technical information in EGEE-345 (Fundamentals of Engineering Electromagnetics) research essays **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** EGEE-345 (Fundamentals of Engineering Electromagnetics) is an alternating	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator #G1-Spring 3.0 Performance Indicator #G2-Not Offered (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf **Finding Reporting Year:** 2016-2017 **Goal met:** Yes Performance Indicator #G1 Spring 3.0 Performance Indicator #G2 Spring 3.4 (08/08/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	**Use of Result:** There is no concern. It is however recommended that the grading form for G1 be modified to better separate the IAB's rating for the team's ability to communicate and that of the project outcome. (08/09/2018) **Use of Result:** Continued two-year assessment cycle in 2017-2018 (08/08/2017)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
	year course. 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects		
Criterion 3.h. - Students will have the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Mid-Level (Analyzing/Applying) [Bloom] **Institutional Learning:** ILO4 - Professional Responsibility - Students will demonstrate the ability to apply professional ethics and intercultural competence when answering a question, solving a problem, or achieving a goal.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicator for Criterion 3.h. Performance Indicator #H1- the ability to describe the impact of engineering solutions in a global, economic, environmental, and/or societal context in EGEE-345 (Fundamentals of Engineering Electromagnetics) research essays. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** EGEE-345 (Fundamentals of Engineering Electromagnetics) is an alternating year course. 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary	**Finding Reporting Year:** 2017-2018 **Goal met:** No Performance Indicator #H1-Not Offered (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf **Finding Reporting Year:** 2016-2017 **Goal met:** No Performance Indicator #H1 Spring 2.7 (09/07/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	**Use of Result:** Continued two-year assessment cycle in 2018-2019 (08/09/2018) **Use of Result:** Looking ahead to the changing ABET-EAC criteria, F, H, and J will be combined into Outcome 4. This new outcome could be appropriately addressed in the corresponding sections of the Project Definition and Plan (PDP) document that all Senior Project teams are required to write. While not necessary under the new criteria, the current assignment is working well in EGEE-345 and could be maintained (08/08/2017)
Criterion 3.i - Students will be able to recognize the need for and have the ability to engage in life-long learning. **Goal Status:** Active **Goal Category:** Student Learning	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicator for Criterion	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator #I1-Spring 3.2 (08/09/2018) **Related Documents:**	**Use of Result:** There are no concerns. (08/09/2018)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
Goal Level (Bloom/Webb): Mid-Level (Analyzing/Applying) [Bloom] **Institutional Learning:** ILO4 - Professional Responsibility - Students will demonstrate the ability to apply professional ethics and intercultural competence when answering a question, solving a problem, or achieving a goal.	3.i. Performance Indicator #I1- the ability to define and clarify customer needs through technical investigation in the EGNR-495 (Engineering Design Project II) FA evaluation of each team member at end of semester. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects	Appendix G - Student Outcome Evaluation Reports.pdf **Finding Reporting Year:** 2016-2017 **Goal met:** Yes Performance Indicator #I1-3.5 (08/08/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	**Use of Result:** Continued two-year assessment cycle in 2017-2018 (08/08/2017)
Criterion 3.j - Students will have knowledge of contemporary issues. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Low-Level (Understanding/Remembering) [Bloom] **Institutional Learning:** ILO4 - Professional Responsibility - Students will demonstrate the ability to apply professional ethics and intercultural competence when answering a question, solving a problem, or achieving a goal.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicator for Criterion 3.j. Performance Indicator #J1- the ability to use examples from a realistic case study in making arguments in EGNR-495 (Engineering Design Project II) ethics essay. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator #J1-Spring 3.2 (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf **Finding Reporting Year:** 2016-2017 **Goal met:** Yes Performance Indicator #J1-Spring 3.2 (08/07/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	**Use of Result:** There is no concern. (08/09/2018) **Use of Result:** Continued two-year assessment cycle in 2017-2018 (08/07/2017)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
	below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects		
Criterion 3.k - Students will have the ability to use the techniques, skills, and modern engineering tools necessary for engineering practice. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Level 2 (Skills and Concepts) [Webb] **Institutional Learning:** ILO3 - Analysis and Synthesis - Students will organize and synthesize evidence, ideas, or works of imagination to answer an open-ended question, draw a conclusion, achieve a goal, or create a substantial work of art.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There are two performance indicators for Criterion 3.k. Performance Indicator #K1- the ability to solve a recursive problem by writing a program in a structured programming language, implementing the recursion in an iterative loop on the EGNR-340 (Numerical Methods for Engineers) exam question on Newton-Raphson root search or on Euler's method for solving an ordinary differential equation (ODE). Performance Indicator #K2- the ability to incorporate engineering software and circuit simulation software to design and simulate a high-order op-amp based circuit on the EGEE-310 (Network Analysis) final project report – use of MATLAB and PSpice. **Criteria Target:** 3.0 out of 4 on at least one performance indicator,	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator #K1-Spring 2.7 Performance Indicator #K2 Not Offered (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf **Finding Reporting Year:** 2016-2017 **Goal met:** No Performance Indicator #K1-Not Offered Performance Indicator #K2- Not Offered (08/07/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports.pdf	**Use of Result:** There is no concern. (08/09/2018) **Use of Result:** Continued two-year assessment cycle in 2017-2018 (08/07/2017)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
	with no performance indicator below 2.0. **Schedule/Notes:** EGEE-310 (Network Analysis) is an alternating year course. 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary		

CoIS Assessment: Reporting Units

School of Engineering and Technology 18sept18

Program (CoIS) - Electrical Engineering Technology AS

Program Notes: A recipient of the AS degree in Electrical Engineering Technology will possess the fundamental technical skills in engineering technology required to either work as an entry-level technician in industry, or to be in a position to complete a Bachelor?s degree in an engineering technology discipline with two remaining years of full-time study. These skills include testing and utilizing of electrical hardware, programming microprocessors, writing computer code, and using engineering software.
Assessment Contact: Dr. Paul Weber, Chair
Mission Statement: To produce sought-after engineers and technologists by providing a rigorous undergraduate learning experience characterized by close student-faculty interaction.

Student Learning Outcomes	*Assessment Criteria & Procedures*	*Assessment Results*	*Use of Results*
Electrical Systems - Students will have the ability to describe and analyze circuits and other electrical systems and explain their use. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Level 2 (Skills and Concepts) [Webb] **Institutional Learning:** ILO2 - Use of Evidence - Students will identify the need for, gather, and accurately process the appropriate type, quality, and quantity of evidence to answer a complex question or solve a complex problem.	**Direct - Exam/Quiz - within the course -** Students in EGET 110 [Applied Electricity] will apply analysis techniques to series and parallel resistor circuits. **Criteria Target:** An average of 70% or higher on student work on this objective. **Schedule/Notes:** EGET 110 is an alternate year course.	**Finding Reporting Year:** 2016-2017 **Goal met:** Yes Fall: Average of 77% on student work for this objective. (08/10/2017)	**Use of Result:** No concerns at this time. Reassess in Fall 2018. (08/10/2017)
	Direct - Exam/Quiz - within the course - Students in EGET 175 [Applied Electronics] will be able to explain the concept of RLC circuits. **Criteria Target:** An average of 70% or higher on student work on this objective. **Schedule/Notes:** EGET 175 is an alternate year course.	**Finding Reporting Year:** 2016-2017 **Goal met:** No Spring: Average of 64% on student work for this objective. (08/10/2017)	**Use of Result:** This topic is a good review from EGET 110. Students struggled with converting parallel-series to parallel correctly and struggled with phasors. A variety of actions are included in the course assessment summary including providing more on-line resources and identifying student engineers as tutors for the learning center. (08/10/2017)
	Direct - Exam/Quiz - within the	**Finding Reporting Year:** 2016-2017	**Use of Result:** No concerns at this

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
	course - Students in EGET 175 [Applied Electronics] will be able to describe the operation of DC and AC motors. **Criteria Target:** An average of 70% or higher on student work on this objective. **Schedule/Notes:** EGET 175 is an alternate year course.	**Goal met:** Yes Spring: Average of 83% on student work for this objective. (08/10/2017)	time. Reassess in Spring 2019. (08/10/2017)
Technology - Students will be able to use computers, electronic instrumentation and coding to analyze, synthesize and solve problems in engineering. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Mid-Level (Analyzing/Applying) [Bloom] **Institutional Learning:** ILO3 - Analysis and Synthesis - Students will organize and synthesize evidence, ideas, or works of imagination to answer an open-ended question, draw a conclusion, achieve a goal, or create a substantial work of art.	**Direct - Exam/Quiz - within the course -** Students in EGET 110 [Applied Electricity] will use electronic instrumentation to analyze circuits. **Criteria Target:** An average of 70% or higher on student work on this objective. **Schedule/Notes:** EGET 110 is an alternate year course.	**Finding Reporting Year:** 2016-2017 **Goal met:** Yes Fall: Average of 70% on student work for this objective. (08/10/2017)	**Use of Result:** No major concerns at this time. There was some difficulty with complex calculations. (08/10/2017)
	Direct - Exam/Quiz - within the course - Students in EGEE 250 [Microcontroller Fundamentals] will be able to describe input/output hardware ports built into the 9S12, and the interfacing and programming of simple I/O devices. **Criteria Target:** An average of 70% or higher on student work on this objective.	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Fall: Average of 78% on student work for this objective. (08/10/2018)	**Use of Result:** No concerns at this time. (08/10/2018)
		Finding Reporting Year: 2016-2017 **Goal met:** Yes Fall: Average of 81% on student work for this objective. (08/10/2017)	**Use of Result:** No concerns at this time. Plan to introduce basic I/O prior to I/O communications. (08/10/2017)
	Direct - Exam/Quiz - within the course - Students in EGNR 265 ["C" Programming], will be able to write moderately involved computer programs in the C programming language to meet design specifications. **Criteria Target:** An average of 70% or higher on student work on this	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Fall: Average of 79% on student work for this objective. (08/10/2018)	**Use of Result:** No concerns at this time. (08/10/2018)
		Finding Reporting Year: 2016-2017 **Goal met:** Yes Fall: Average of 73% on student work for this objective. Spring: Average of 75% on student work for this objective. (08/10/2017)	**Use of Result:** No concerns at this time. (08/10/2018)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
	objective.		
Communication - Students will be able to apply written communication in technical environments. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Level 2 (Skills and Concepts) [Webb] **Institutional Learning:** ILO1 - Formal Communication - Students will develop and clearly express complex ideas in written and oral presentations.	**Direct - Writing Intensive** **Assignment -** Students in EGET175 [Applied Electronics] will develop written lab reports based on results from experiments. **Criteria Target:** An average of 70% or higher on student work on this objective. **Schedule/Notes:** EGET175 is an alternate year course.	**Finding Reporting Year:** 2016-2017 **Goal met:** Yes Spring: Average of 89% on student for this objective. (08/15/2017)	**Use of Result:** No concerns at this time. Need more direct means to measure outcome. Reassess in Spring 2019. (08/15/2017)
	Direct - Writing Intensive **Assignment -** Students in EGEE250 [Microcontroller Fundamentals] will be able write reports that consist of commented code, flowcharts, and executive summary. **Criteria Target:** An average of 70% or higher on student work on this objective.	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Fall: Average of 91% on student for this objective (08/15/2018)	**Use of Result:** No concerns at this time. Reassess in Fall 2018. (08/15/2018)

CoIS Assessment: Reporting Units

School of Engineering and Technology 18sept18

Program (CoIS) - Electrical Engineering Technology BS

Program Notes: The student outcomes for the LSSU Electrical Engineering Technology program are the same as those in ABET Criterion 3 (a) through (k).
Assessment Contact: Dr. Paul Weber, Chair
Mission Statement: To produce sought-after engineers and technologists by providing a rigorous undergraduate learning experience characterized by close student-faculty interaction.

Student Learning Outcomes	*Assessment Criteria & Procedures*	*Assessment Results*	*Use of Results*
Criterion 3.a - Students will be able to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Mid-Level (Analyzing/Applying) [Bloom] **Institutional Learning:** ILO2 - Use of Evidence - Students will identify the need for, gather, and accurately process the appropriate type, quality, and quantity of evidence to answer a complex question or solve a complex problem.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There are three performance indicators for Criterion 3.a. Performance Indicator #a1-the ability to use an industrial robot to automate a manufacturing process in EGRS-381[Robotics Technology Lab] using a project report and robot code on setting-up a Staubli robot for automating an advanced palletization task or a machine tending task using VAL3 programming and I/O communications. Performance Indicator #a2-the ability to use surface mount technology equipment to automate placement of electronic components on a printed circuit board in EGET-	**Finding Reporting Year:** 2016-2017 **Goal met:** No Performance Indicator #a1- no data Performance Indicator #a2- Spring 1.0 (08/10/2017)	**Use of Result:** For EGRS 381, no data was collected this term. Our action item is to assess in Fall 2018. For EGET 310, low sample size was an issue as there was only one EET student in this particular offering. There is some cause for concern since the EET student performed "Unacceptable" on a key understanding of panelization, which is widely used in industry. It is recommended that more panelization example problems be added to future lectures. (08/10/2017)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
	310 [Electronic Manufacturing Processes] on the final exam question on identifying column and row information for the starting point fiducial mark of each board in a multi-board panel. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** EGET 310 is an alternate year course. 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary		
Criterion 3.b - Students will be able to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** High-Level (Creating/Evaluating) [Bloom] **Institutional Learning:** ILO3 - Analysis and Synthesis - Students will organize and synthesize evidence, ideas, or works of imagination to answer an open-ended question, draw a conclusion, achieve a goal, or create a substantial work of art.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There are two performance indicators for Criterion 3.b. Performance Indicator #b1-the ability to apply calculus of several variables in EGNR-245 [Calculus Applications for Technology] on the project on derivation of the formula for the least-squares line. Performance Indicator #b2-apply knowledge of energy levels to determine whether materials are insulator, semiconductor or conductor in EGET-310 [Electronic Manufacturing Processes] on an exam question on material identification based on energy level diagram and placement of Fermi level.	**Finding Reporting Year:** 2016-2017 **Goal met:** Yes Performance Indicator #b1-No data Performance Indicator #b2-Spring, 4.0 (08/10/2017)	**Use of Result:** For EGNR 245, no data was collected in this offering. Our action item is to collect data in Fall 2018. For EGET 310, there was only one EET student in this offering. No cause for concern at this time. (08/10/2017)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
	Criteria Target: 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** EGET 310 is an alternate year course. 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary		
Criterion 3.c - Students will have the ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** High-Level (Creating/Evaluating) [Bloom] **Institutional Learning:** ILO3 - Analysis and Synthesis - Students will organize and synthesize evidence, ideas, or works of imagination to answer an open-ended question, draw a conclusion, achieve a goal, or create a substantial work of art.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There are two performance indicators for Criterion 3.c. Performance Indicator #c1-the ability to develop a valid and reliable experimental procedure that will validate a product in EGNR-495 [Engineering Design Project II] on the design review on final product testing. Performance Indicator #c2-the ability to use statistical methods to plan an efficient, yet effective, program of experimentation, when the output variable studied is expected to depend on multiple input variables in EGNR-310 [Quality Engineering] on the term project technical report. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0.	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator #c1- Spring 3.0 Performance Indicator #c2- Fall 2.5 (08/10/2018)	**Use of Result:** In EGNR 310 there was a low sample size, but some concern. Emphasize the necessity to document and explain methodology for construction of the test programm as part of the assignment. In EGNR 495, given that all teams met standard and that there were no common weaknesses noted, there is no cause for concern. The present setup should be continued. (08/10/2018)
		Finding Reporting Year: 2016-2017 **Goal met:** Yes Performance Indicator #c1- Spring 3.3 Performance Indicator #c2- not offered (08/10/2017)	**Use of Result:** All teams whose evaluations were recorded met the standard or were exemplary. No modifications needed; the current setup should continue to be used. (08/10/2017)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
	Schedule/Notes: EGNR 310 is an alternate year course. 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects		
Criterion 3.d - Students will have the ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** High-Level (Creating/Evaluating) [Bloom] **Institutional Learning:** ILO3 - Analysis and Synthesis - Students will organize and synthesize evidence, ideas, or works of imagination to answer an open-ended question, draw a conclusion, achieve a goal, or create a substantial work of art.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicator for Criterion 3.d. Performance Indicator #d1-the ability to reformulate implied customer needs as specifications and produce an acceptable design solution in EGNR-491 [Engineering Design Project I] on the product design review. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator #d1-Fall, 3.0 (08/10/2018) **Finding Reporting Year:** 2016-2017 **Goal met:** Yes Performance Indicator #d1-Fall, 3.0 (08/10/2017)	**Use of Result:** There is no cause for concern; the present setup should be continued. (08/10/2018) **Use of Result:** There is no cause for concern. (08/10/2017)
Criterion 3.f - Students have the ability to identify, analyze, and solve broadly-defined engineering technology problems.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There are two	**Finding Reporting Year:** 2017-2018 **Goal met:** No Performance Indicator #f1- Fall 2.75, Performance Indicator #f2- No EET students. (08/10/2018)	**Use of Result:** In EGNR 310, 3 out of 4 of the students were at "Meets Standard". No immediate concern. Continue to monitor.

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
Goal Status: Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** High-Level (Creating/Evaluating) [Bloom] **Institutional Learning:** ILO3 - Analysis and Synthesis - Students will organize and synthesize evidence, ideas, or works of imagination to answer an open-ended question, draw a conclusion, achieve a goal, or create a substantial work of art.	performance indicators for Criterion 3.f. Performance Indicator #f1-the ability to identify possible reasons that a product or process may fail to function well, and categorize these in EGNR-310 [Quality Engineering] on homework on fishbone chart exercise. Performance Indicator #f2-the ability to design an analog amplifier that maximizes the resolution of a sensor output for an embedded system in EGEE-355 [Microcontroller Systems] on exam 1 on the hardware design problem. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** EGNR-310 and EGEE-355 are alternate year courses. 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary		(08/10/2018)
Criterion 3.e - Students have the ability to function effectively as a member or leader on a technical team. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Level 4 (Extended Thinking) [Webb] **Institutional Learning:** ILO4 - Professional Responsibility - Students will demonstrate the ability to apply professional ethics and	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicator for Criterion 3.e. Performance Indicator #e1-the ability to provide constructive criticism of team members in EGNR-495 [Engineering Design Project II] on peer evaluations	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator #e1- There were no EET students in this course offering. (08/10/2018)	**Use of Result:** In the course overall, which includes students from many different engineering majors, while there are a few outliers that were below standard or unacceptable, 87.5% of the students met standard or were deemed exemplary. There is no cause for concern. The current setup should be continued. (08/25/2018)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
intercultural competence when answering a question, solving a problem, or achieving a goal.	**Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects	**Finding Reporting Year:** 2016-2017 **Goal met:** No Performance Indicator #e1-Spring, 2.9 (08/10/2017)	**Use of Result:** Continue to monitor. While the average was slightly below standard, 35 out 39 assessments were at 'Meets Standard' or 'Exemplary'. (08/10/2017)
Criterion 3.g - Students are able to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Mid-Level (Analyzing/Applying) [Bloom] **Institutional Learning:** ILO2 - Use of Evidence - Students will identify the need for, gather, and accurately process the appropriate type, quality, and quantity of evidence to answer a complex question or solve a complex problem.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There are two performance indicators for Criterion 3.g. Performance Indicator #g1-the ability to make formal engineering presentations in EGNR-495 [Engineering Design Project II] on the final project presentations. Performance Indicator #g2-ability to research and use technical specification sheets to implement a useful design element in EGET-310 [Electronic Manufacturing Processes] on the final project. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** EGET-310 is an alternate year course. **High Impact Program Practices 1:** Capstone Course(s), Projects	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator #g1, 3.0 Performance Indicator #g2, not offered. (08/10/2018)	**Use of Result:** • The teams get a lot of practice between the scope presentation, update presentations, and these final presentations and it shows. This is also externally validated to some degree by the ratings of the external reviewers (e.g. IAB members). • There is no cause for concern. This setup should be continued. (08/25/2018)
		Finding Reporting Year: 2016-2017 **Goal met:** Yes Performance Indicator #g1, Spring 3.0 Performance Indicator #g2, Spring 3.0 (08/10/2017)	**Use of Result:** No concerns. In EGEE 310, move design portion earlier in the semester and have a greater emphasis on aesthetics. (08/10/2017)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
Criterion 3.h - Students demonstrate an understanding of the need for and an ability to engage in self-directed continuing professional development. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Level 4 (Extended Thinking) [Webb] **Institutional Learning:** ILO4 - Professional Responsibility - Students will demonstrate the ability to apply professional ethics and intercultural competence when answering a question, solving a problem, or achieving a goal.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicator for Criterion 3.h. Performance Indicator #h1-the ability to define and clarify customer needs through technical investigation in EGNR-495 [Engineering Design Project II] on the FA evaluation of each team member at end of semester. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator #h1. no EET majors in this offering of EGNR 495. (08/10/2018)	**Use of Result:** • Although there were no EET majors in this offering, the overall average has been slightly over 3.0 (meeting standard) for the last two years and self-evaluation of this outcome has been relatively high on the Senior Exit Surveys, so no individual assignment is deemed necessary at present. • There is no cause for concern. (08/25/2018)
		Finding Reporting Year: 2016-2017 **Goal met:** Yes Performance Indicator #h1-Spring, 3.1 (08/10/2017)	**Use of Result:** There is no concern. (08/10/2017)
Criterion 3.i - Students have an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Level 4 (Extended Thinking) [Webb] **Institutional Learning:** ILO4 - Professional Responsibility - Students will demonstrate the ability to apply professional ethics and	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicator for Criterion 3.i. Performance Indicator #i1-the ability to apply perspectives from established ethical philosophies in the analysis of a case study in EGNR-495 [Engineering Design Project II] on the ethics essay.	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator #i1-no EET students in this offering. (08/10/2018)	**Use of Result:** This outcome was reviewed by Dr. Jason Swedene from Humanities. The overall average from the course was 3.2. All teams met standard or were deemed exemplary. There is no cause for concern. Students continued to report higher levels of engagement in the material with Dr. Swedene teaching it. The present setup with Dr. Swedene should be continued. See the course report for minor

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
intercultural competence when answering a question, solving a problem, or achieving a goal.	**Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects	**Finding Reporting Year:** 2016-2017 **Goal met:** Yes Performance Indicator #i1-Spring, 3.1 (08/10/2017)	adjustments. (08/25/2018) **Use of Result:** There is no concern. (08/10/2017)
Criterion 3.j - Students have a knowledge of the impact of engineering technology solutions in a societal and global context. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Level 4 (Extended Thinking) [Webb] **Institutional Learning:** ILO4 - Professional Responsibility - Students will demonstrate the ability to apply professional ethics and intercultural competence when answering a question, solving a problem, or achieving a goal.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicator for Criterion 3.j. Performance Indicator #i1-the ability to recognize the impact of engineering technology solutions in a societal and global context in EGET-310 [Electronic Manufacturing Processes] on the final exam question on environmental impact of engineering practices. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary	**Finding Reporting Year:** 2016-2017 **Goal met:** Yes Performance Indicator #j1-Spring, 4.0 (08/10/2017)	**Use of Result:** No concerns at this time. (08/10/2017)
Criterion 3.k - Students have a commitment to quality, timeliness, and continuous improvement. **Goal Status:** Active	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator #k1- Fall, 3.3 (08/10/2018)	**Use of Result:** Already a subject of great emphasis, and no extensive problems in performance, so no changes recommended.

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
Goal Category: Student Learning **Goal Level (Bloom/Webb):** Level 2 (Skills and Concepts) [Webb] **Institutional Learning:** ILO4 - Professional Responsibility - Students will demonstrate the ability to apply professional ethics and intercultural competence when answering a question, solving a problem, or achieving a goal.	performance indicators for Criterion 3.k. Performance Indicator #k1-the ability to analyze, by methods of statistical process control, data representing output of a continuously monitored manufacturing process, in order to make early detection of any drift away from the target values of the output in EGNR-310 [Quality Engineering] on homework 5, control charts (statistical process control). **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** EGNR-310 is an alternate year course. 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary		(08/10/2018)

CoIS Assessment: Reporting Units

School of Engineering and Technology 18sept18

Program (CoIS) - General Engineering AS

Assessment Contact: Dr. Paul Weber
Mission Statement: A recipient of the AS degree in General Engineering will possess the fundamental technical skills in engineering, spanning mechanical, electrical and computer-related subject areas, required to be in a position to complete a Bachelor?s degree in an engineering discipline with two remaining years of full-time study. These skills include computing, numerical methods, electrical circuit analysis, and mechanical force analysis.

Student Learning Outcomes	*Assessment Criteria & Procedures*	*Assessment Results*	*Use of Results*
Engineering System Analysis - Students will be able to analyze electrical and/or mechanical systems by applying math, science, and/or engineering equations and techniques. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Mid-Level (Analyzing/Applying) [Bloom] **Institutional Learning:** ILO2 - Use of Evidence - Students will identify the need for, gather, and accurately process the appropriate type, quality, and quantity of evidence to answer a complex question or solve a complex problem. **Assessment Year:** AY16-17, AY17-18, AY18-19	**Direct - Exam/Quiz - within the course -** Students in EGEE210 [Circuit Analysis] will apply analysis techniques to series and parallel resistor circuits as measured by a final exam problem on that topic. **Criteria Target:** an average grade of 70% or higher	**Finding Reporting Year:** 2016-2017 **Goal met:** No Fall 2016: 65% Spring 2017: 82% (09/03/2018)	**Use of Result:** One semester's group did not meet the target whereas the other did. Each was taught by different instructors. The two should come up with an action plan and the results should be monitored in 2017-2018. (09/03/2018)
		Finding Reporting Year: 2017-2018 **Goal met:** No Fall 2017: 62% Spring 2018: 87% (09/03/2018)	**Use of Result:** There is some concern at this time since the fall class again did not meet the target. Moving from 2 exams to 3 exams may give students more feedback and help them improve. Continue to evaluate in Fall 2018. (09/03/2018)
Communication - Students will be able to communicate in a technical environment. **Goal Status:** Active **Goal Category:** Student Learning	**Direct - Portfolio Review -** Students in EGNR101 [Introduction to Engineering] will compose a technical log of their final project as demonstrated in a team logbook	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Fall 2017: 78% (08/30/2018)	**Use of Result:** No concern at this time. Continue to evaluate in Fall 2018. (08/30/2018)
		Finding Reporting Year: 2016-2017 **Goal met:** Yes	**Use of Result:** No concern at this

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
Goal Level (Bloom/Webb): Level 2 (Skills and Concepts) [Webb] **Institutional Learning:** ILO1 - Formal Communication - Students will develop and clearly express complex ideas in written and oral presentations. **Assessment Year:** AY16-17, AY17-18, AY18-19	**Criteria Target:** An average of 70% or higher on student work **High Impact Program Practices 1:** First-year Seminar and Experiences **High Impact Program Practices 2:** Collaborative Assignments, Projects	Fall 2016: 80% (01/01/2017)	time. Continue to evaluate in Fall 2017. (01/01/2017)
Use of Technical Tools - Students will be able to us technical tools to solve engineering problems. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Mid-Level (Analyzing/Applying) [Bloom] **Institutional Learning:** ILO3 - Analysis and Synthesis - Students will organize and synthesize evidence, ideas, or works of imagination to answer an open-ended question, draw a conclusion, achieve a goal, or create a substantial work of art. **Assessment Year:** AY16-17, AY17-18, AY18-19	**Direct - Exam/Quiz - within the course -** Performance Indicator: ability to solve a recursive problem by writing a program in a structured programming language, implementing the recursion in an iterative loop on an exam question from Numerical Methods for Engineers (EGNR-340). **Criteria Target:** an average evaluation of 3.0 out of 4 on the performance indicator for at least one of the semesters with no performance indicator below 2.0	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Fall 2017: 3.1 Spring 2018: 2.0 (08/30/2018) **Finding Reporting Year:** 2016-2017 **Goal met:** Yes Fall 2016: 2.3 Spring 2017: 3.0 (08/30/2017)	**Use of Result:** Target met overall for the year. No concern at this time. Continue to evaluate in Fall 2018. (08/30/2018) **Use of Result:** Target met overall for the year. No concern at this time. Continue to evaluate in Fall 2017. (08/30/2017)

CoIS Assessment: Reporting Units

School of Engineering and Technology 18sept18

Program (CoIS) - General Engineering Technology AS

Mission Statement: A recipient of the AS degree in General Engineering Technology will possess the fundamental technical skills in engineering technology, spanning both mechanical and electrical applications, required to either work as an entry-level technician in industry, or to be in a position to complete a Bachelor?s degree in an engineering technology discipline with two remaining years of full-time study. These skills include engineering drawing, electronics, as well as other technology or engineering topics.
Assessment Contact: Dr. Paul Weber

Student Learning Outcomes	*Assessment Criteria & Procedures*	*Assessment Results*	*Use of Results*
Communication - Students will be able to communicate in a technical environment. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Level 2 (Skills and Concepts) [Webb] **Institutional Learning:** ILO1 - Formal Communication - Students will develop and clearly express complex ideas in written and oral presentations. **Assessment Year:** AY16-17, AY17-18, AY18-19	Performance Indicator: ability to compose a technical log Evaluated Material: final project team logbook produced in Introduction to Engineering (EGNR-101) **Criteria Target:** Target: an average grade of 70% or higher	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Fall 2017: 78% (01/01/2018) **Finding Reporting Year:** 2016-2017 **Goal met:** Yes Fall 2016: 80% (01/01/2017)	**Use of Result:** No concern at this time. Continue to evaluate in Fall 2018. (08/30/2018) **Use of Result:** No concern at this time. Continue to evaluate in Fall 2017. (01/01/2017)
Use of Technical Tools - Students will be able to use technical tools to solve engineering problems. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Mid-Level (Analyzing/Applying) [Bloom] **Institutional Learning:** ILO3 - Analysis and Synthesis - Students will organize and synthesize evidence,	Performance Indicator: ability to create three-dimensional parts using CAD software Evaluated Material: final project documentation and CAD work in Solid Modelling (EGME-141) **Criteria Target:** Target: an average grade of 70% or higher	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Fall 2017: 83% Spring 2018: 90% (08/30/2018) **Finding Reporting Year:** 2016-2017 **Goal met:** Yes Fall 2016: 80% Spring 2017: 89% (01/01/2017)	**Use of Result:** No concern at this time. Continue to evaluate in Fall 2018. (08/30/2018) **Use of Result:** No concerns at this time. Continue to evaluate in Fall of 2017. (01/01/2017)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
ideas, or works of imagination to answer an open-ended question, draw a conclusion, achieve a goal, or create a substantial work of art. **Assessment Year:** AY16-17, AY17-18, AY18-19			
Engineering System Analysis - Students will be able to analyze electrical and/or mechanical systems by applying math, science, and/or engineering equations and techniques. **Goal Status:** Active **Goal Category:** Student Learning **Institutional Learning:** ILO2 - Use of Evidence - Students will identify the need for, gather, and accurately process the appropriate type, quality, and quantity of evidence to answer a complex question or solve a complex problem. **Assessment Year:** AY16-17, AY17-18, AY18-19	**Direct - Exam/Quiz - within the course -** Performance Indicator: Students in EGET110 [Applied Electricity] will apply analysis techniques to series and parallel resistor circuits under DC conditions. Evaluated Material: final exam problem that solely measures the performance indicator **Criteria Target:** Target: an average grade of 70% or higher **Schedule/Notes:** EGET110 is an alternate year course.	**Finding Reporting Year:** 2016-2017 **Goal met:** Yes Fall 2016: 77% (01/01/2017)	**Use of Result:** No concern at this time. Continue to evaluate in Fall 2018. (08/30/2018)

CoIS Assessment: Reporting Units

School of Engineering and Technology 18sept18

Program (CoIS) - Manufacturing Eng Technology AS

Assessment Contact: Dr. Paul Weber, Chair

Mission Statement: A recipient of the AS degree in Manufacturing Engineering Technology will possess the fundamental technical skills in engineering technology, spanning mechanical, manufacturing, and electrical applications, required to either work as an entry-level technician in industry, or to be in a position to complete a Bachelor?s degree in an engineering technology discipline with two remaining years of full-time study. These skills include engineering drawing, electronics, manufacturing processes, and mechanics.

Student Learning Outcomes	*Assessment Criteria & Procedures*	*Assessment Results*	*Use of Results*
Communication - Students will be able to communicate in a technical environment. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Level 2 (Skills and Concepts) [Webb] **Institutional Learning:** ILO1 - Formal Communication - Students will develop and clearly express complex ideas in written and oral presentations. **Assessment Year:** AY16-17, AY17-18, AY18-19	Performance Indicator: ability to compose a technical log Evaluated Material: final project team logbook produced in Introduction to Engineering (EGNR-101) **Criteria Target:** Target: an average grade of 70% or higher	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Fall 2017: 78% (01/01/2018)	**Use of Result:** No concern at this time. Continue to evaluate in Fall 2018. (09/04/2018)
		Finding Reporting Year: 2016-2017 **Goal met:** Yes Fall 2016: 80% (01/01/2017)	**Use of Result:** No concern at this time. Continue to evaluate in Fall 2017 (01/01/2017)
	Direct - Writing Intensive Assignment - Performance Indicator: ability to write written lab reports Evaluated Material: Students in EGET175 [Applied Electronics] will develop written lab reports based on results from experiments. **Criteria Target:** An average of 70% or higher on student work on this objective. **Schedule/Notes:** EGET175 is an alternate year course.	**Finding Reporting Year:** 2016-2017 **Goal met:** Yes Spring: Average of 89% on student for this objective. (05/01/2017)	**Use of Result:** No concerns at this time. Need more direct means to measure outcome. Reassess in Spring 2019. (05/01/2017)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
Use of Technical Tools - Students will be able to use technical tools to solve engineering problems. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Mid-Level (Analyzing/Applying) [Bloom] **Institutional Learning:** ILO3 - Analysis and Synthesis - Students will organize and synthesize evidence, ideas, or works of imagination to answer an open-ended question, draw a conclusion, achieve a goal, or create a substantial work of art. **Assessment Year:** AY16-17, AY17-18, AY18-19	**Direct - Laboratory, Clinical, Skill/Competency Assessments -** Performance Indicator: Be able to create three-dimensional parts using advanced techniques of CAD software, like draft, sweep, variable section sweep, boundary blend, warp, project and surface modeling. Evaluated Material: lab work in EGME 240 Assembly Modeling and GD&T **Criteria Target:** Target: an average grade of 80% or higher	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes An average of 92.0% on this objective. (05/01/2018)	**Use of Result:** Most of the modeling topics were a review from the solid modeling course and the students seemed to have retained the material across courses. There are no concerns at this time. (05/01/2018)
	Direct - Laboratory, Clinical, Skill/Competency Assessments - Performance Indicator: 3. Students will be able to perform basic set-up and operation of the machines for the following processes: Casting and Molding, Welding and Cutting, Metal Forming, Turning, Milling, Grinding Evaluated Material: lab assignments in EGME110 Manufacturing Processes **Criteria Target:** An average of 80%	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes 90% average on this objective (05/01/2018)	**Use of Result:** We made improvements to standardizing each lab to include having all the tools and materials needed for each lab in one spot (tool box area). This improved lab efficiency. There are no concerns at this time. (09/04/2018)
Engineering System Analysis - Students will be able to analyze mechanical systems by applying math, science, and/or engineering equations and techniques. **Goal Status:** Active **Goal Category:** Student Learning **Institutional Learning:** ILO2 - Use of Evidence - Students will identify the	**Direct - Exam/Quiz - within the course -** Performance Indicator: Students in EGET110 [Applied Electricity] will apply analysis techniques to series and parallel resistor circuits under DC conditions. Evaluated Material: final exam problem that solely measures the	**Finding Reporting Year:** 2016-2017 **Goal met:** Yes Fall 2016 (01/01/2017)	**Use of Result:** No concerns at this time. Continue to evaluate in Fall 2018 (01/01/2017)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
need for, gather, and accurately process the appropriate type, quality, and quantity of evidence to answer a complex question or solve a complex problem. **Assessment Year:** AY16-17, AY17-18, AY18-19	performance indicator **Criteria Target:** Target: an average grade of 70% or higher **Schedule/Notes:** EGET110 is an alternate year course.		
	Direct - Exam/Quiz - within the course - Performance Indicator: Students in EGMT 225 [Statics and Strength of Materials] will be able to calculate stress and strain in axial loading of a bar Evaluated Material: exam 3, problem on axial loading **Criteria Target:** An average of 3 out of 4. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary	**Finding Reporting Year:** 2017-2018 **Goal met:** No Fall 2017: 2.0 (09/04/2018)	**Use of Result:** There is definitely a cause for concern since only two out of seven student work samples were “Meets Standard” or higher, while the coverage is extensive and expectation for achievement is high. (01/01/2018)

CoIS Assessment: Reporting Units

School of Engineering and Technology 18sept18

Program (CoIS) - Manufacturing Eng Technology BS

Assessment Contact: Dr. Paul Weber, Chair

Student Learning Outcomes	*Assessment Criteria & Procedures*	*Assessment Results*	*Use of Results*
Criterion 3.a - Students will be able to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities. **Goal Status:** Active **Goal Category:** Student Learning **Institutional Learning:** ILO2 - Use of Evidence - Students will identify the need for, gather, and accurately process the appropriate type, quality, and quantity of evidence to answer a complex question or solve a complex problem.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There are two performance indicators for Criterion 3.a. Performance Indicator #a1-the ability to use an industrial robot to automate a manufacturing process in EGRS-381 [Robotics Technology Lab] on a project report and robot code on setting-up a Staubli robot for automating an advanced palletization task or a machine tending task using VAL3 programming and I/O communications. Performance Indicator #a2-the ability to describe how to set-up G&M code using CAM software to machine a given part in EGMT-216 [CAM with CNC Applications] on the final exam question on setting up CAM file in CREO. **Criteria Target:** 3.0 out of 4 on at	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator #a1-No data. Performance Indicator #a2- 3.13 (08/30/2018)	**Use of Result:** For EGRS 381, we will assess in the Fall of 2018. For EGMT 216, we saw improvement over the last two offerings. The description/steps needed to meet the standard were reviewed during every lab lecture and in the course lecture. All CAM assignments involved the same steps in generating CAM files. This is a very repetitive exercise, but remains a key indicator for understanding the structure of CAM programs. We will continue to develop a laboratory manual that will document the steps for this performance indicator and can be reviewed during each laboratory CAM activity. (08/30/2018)
		Finding Reporting Year: 2016-2017 **Goal met:** No Performance Indicator #a1-No data Performance Indicator #a2-2.5 (08/30/2017)	**Use of Result:** For EGRS 381 we will collect data in the Fall of 2018. For EGMT 216, there was slight improvement over the last offering. We will continue to develop a laboratory manual that will document the steps for this

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
	least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary		performance indicator and can be reviewed during each laboratory CAM activity. (08/30/2017)
Criterion 3.b - Students will be able to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Mid-Level (Analyzing/Applying) [Bloom] **Institutional Learning:** ILO3 - Analysis and Synthesis - Students will organize and synthesize evidence, ideas, or works of imagination to answer an open-ended question, draw a conclusion, achieve a goal, or create a substantial work of art.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There are two performance indicators for Criterion 3.b. Performance Indicator #b1-the ability to apply calculus of several variables in EGNR-245 [Calculus Applications for Technology] on a project on derivation of the formula for the least-squares line. Performance Indicator #b2-the ability to implement an iterative solution to a complex problem in metallurgy in EGME-275 [Engineering Materials] on a MATLAB exercise on cold work – annealing cycles. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary	**Finding Reporting Year:** 2017-2018 **Goal met:** No Performance Indicator #b1-No data Performance Indicator #b2- 2.54 (08/23/2018)	**Use of Result:** For EGNR-245, we will collect data in the Fall of 2018. For EGME 275, the results were marginally acceptable overall given the small class size. We will need to see how this develops in the future before taking any decisions. (08/23/2018)
		Finding Reporting Year: 2016-2017 **Goal met:** No Performance Indicator #b1- no data Performance Indicator #b2- The MATLAB data was inadvertently lost. (08/23/2017)	**Use of Result:** For EGME 275, create a reminder in the grade-book spreadsheet, to retain copies of the needed MATLAB exercise. (08/23/2017)
Criterion 3.c - Students will have the ability to conduct standard tests and measurements; to conduct, analyze,	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator #c1- 3.0	**Use of Result:** In EGNR 310, in the next offering, emphasize the necessity to document and

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
and interpret experiments; and to apply experimental results to improve processes. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Mid-Level (Analyzing/Applying) [Bloom] **Institutional Learning:** ILO3 - Analysis and Synthesis - Students will organize and synthesize evidence, ideas, or works of imagination to answer an open-ended question, draw a conclusion, achieve a goal, or create a substantial work of art.	ABET report. There are two performance indicators for Criterion 3.c. Performance Indicator #c1-the ability to develop a valid and reliable experimental procedure that will validate a product EGNR-495 [Engineering Design Project II] on the design review on final product testing. Performance Indicator #c2-the ability to use statistical methods to plan an efficient, yet effective, program of experimentation, when the output variable studied is expected to depend on multiple input variables in EGNR-310 [Quality Engineering] on the term project technical report. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** EGNR 310 is an alternate year course. 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects	Performance Indicator #c2- 2.5 (08/23/2018) **Finding Reporting Year:** 2016-2017 **Goal met:** Yes Performance Indicator #c1- No MET students in this offering. Performance Indicator #c2-Alternate year course (08/23/2017)	explain methodology for construction of the test programme as part of the assignment. Although that was done verbally this time (in response to the same action plan after last offering), it needs perhaps more emphasis in the handout itself. In EGNR 495, given that all teams met standard and that there were no common weaknesses noted, there is no cause for concern. The present setup should be continued. (08/23/2018)
Criterion 3.d - Students will have the ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There are two performance indicators for Criterion 3.d.	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator #d1-3.0 Performance Indicator #d2- No data (08/23/2018)	**Use of Result:** For EGRS-481, we will collect date in the Fall of 2018. For EGNR 491, • All teams met standard and there were no common issues noted. There were no stand-outs

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
Goal Status: Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** High-Level (Creating/Evaluating) [Bloom] **Institutional Learning:** ILO2 - Use of Evidence - Students will identify the need for, gather, and accurately process the appropriate type, quality, and quantity of evidence to answer a complex question or solve a complex problem.	Performance Indicator #d1-the ability to reformulate implied customer needs as specifications and produce an acceptable design solution in EGNR-491 [Engineering Design Project I] on the product design review. Performance Indicator #d2-the ability to use a discrete event manufacturing simulation software to analyze and optimally improve the throughput of a manufacturing system in EGRS-481 [Manufacturing Automation Lab] on the lab report of Witness simulation of TV manufacturer factory. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary		but none were unacceptable either; they were all where they needed to be. From the in-person semester feedback, students indicated that most have had some experience in other classes prior to Senior Projects and the information is further reinforced here. • ICs attended all design reviews and their feedback was positive which provides a little bit of external validation. • There is no cause for concern; the present setup should be continued. (08/23/2018)
		Finding Reporting Year: 2016-2017 **Goal met:** Yes Performance Indicator #d1-3.0 Performance Indicator #d2-No data (08/23/2017)	**Use of Result:** • No modifications needed; almost all students have had some experience in other classes prior to Senior Projects and the information is further reinforced here. The current setup should continue to be used and all team evaluations should be collected. • There is no cause for concern. (08/23/2017)
Criterion 3.e - Students have the ability to function effectively as a member or leader on a technical team. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Level 4 (Extended Thinking) [Webb] **Institutional Learning:** ILO4 - Professional Responsibility -	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicator for Criterion 3.e. Performance Indicator #e1-the ability to provide constructive criticism of team members in EGNR-	**Finding Reporting Year:** 2017-2018 **Goal met:** No Performance Indicator #e1- 2.8 (08/23/2018)	**Use of Result:** Five out six met standard. Taking the EGNR 495 class as a whole, while there are a few outliers that were below standard or unacceptable, 87.5% of the students met standard or were deemed exemplary. There is no cause for concern. The current setup should be continued. (08/25/2018)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
Students will demonstrate the ability to apply professional ethics and intercultural competence when answering a question, solving a problem, or achieving a goal.	495 [Engineering Design Project II] on peer evaluations **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects	**Finding Reporting Year:** 2016-2017 **Goal met:** No Performance Indicator #e1-2.9 (08/23/2017)	**Use of Result:** A large majority of the responses (35 out of 39) were 3 or higher, so the average of 2.9 vs 3.0 does not seem statistically significant. • The completion of these 3 times during the year seems to help reinforce the ability to complete such evaluations. There is no need for modification. • There is no cause for concern. (08/23/2017)
Criterion 3.f - Students have the ability to identify, analyze, and solve broadly-defined engineering technology problems. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** High-Level (Creating/Evaluating) [Bloom] **Institutional Learning:** ILO3 - Analysis and Synthesis - Students will organize and synthesize evidence, ideas, or works of imagination to answer an open-ended question, draw a conclusion, achieve a goal, or create a substantial work of art.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There are two performance indicators for Criterion 3.f. Performance Indicator #f1-the ability to identify possible reasons that a product or process may fail to function well, and categorize these in EGNR-310 [Quality Engineering] on homework on fishbone chart exercise. Performance Indicator #f2-the ability to calculate stress and strain in axial loading of a bar in EGMT-225 on exam 3, axial loading problem. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0.	**Finding Reporting Year:** 2017-2018 **Goal met:** No Performance Indicator #f1- 2.75 Performance Indicator #f2- 2.0 (08/23/2018)	**Use of Result:** In EGNR 310, there were only four students, three of whom scored a 3. There are no large concerns. However, it was noted that we should annotate grade roster with highlighting to prompt copying and retention of the records. In EGMT 225, there is definitely a cause for concern since only two out of seven student work samples were “Meets Standard” or higher, while the coverage is extensive and expectation for achievement is high. (08/23/2018)
		Finding Reporting Year: 2016-2017 **Goal met:** No Performance Indicator #f1- Not offered Performance Indicator #f2- No data (08/23/2017)	

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
	Schedule/Notes: EGNR-310 and EGEE-355 are alternate year courses. 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary		
Criterion 3.g - Students are able to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Mid-Level (Analyzing/Applying) [Bloom] **Institutional Learning:** ILO1 - Formal Communication - Students will develop and clearly express complex ideas in written and oral presentations.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There are two performance indicators for Criterion 3.g. Performance Indicator #g1-the ability to make formal engineering presentations in EGNR-495 [Engineering Design Project II] on the final project presentations. Performance Indicator #g2-the ability to write prose containing technical information in EGME-276 [Strength of Materials Lab on the lab 3 (metallography II) technical report. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator #f1- 3.0 Performance Indicator #f2- 2.67 (08/23/2018)	**Use of Result:** For EGME 276, two out of the three students in this program scored a 3 and the other student scored a 2. No corrective action is required. For EGNR 495, • The teams get a lot of practice between the scope presentation, update presentations, and these final presentations and it shows. This is also externally validated to some degree by the ratings of the external reviewers (e.g. IAB members). • There is no cause for concern. This setup should be continued. (08/23/2018)
		Finding Reporting Year: 2016-2017 **Goal met:** Yes Performance indicator #g1-3 Performance indicator #g2-2.5 (08/23/2017)	**Use of Result:** In EGNR 495, the teams get a lot of practice between the scope presentation, update presentations, and these final presentations and it shows. There is no cause for concern. In EGME 276, three out of the four students in this program scored a 3 and the other student scored a 1. There will be no actions taken at this time, but we will continue to monitor this outcome. (08/23/2017)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
Criterion 3.h - Students demonstrate an understanding of the need for and an ability to engage in self-directed continuing professional development. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Level 4 (Extended Thinking) [Webb] **Institutional Learning:** ILO4 - Professional Responsibility - Students will demonstrate the ability to apply professional ethics and intercultural competence when answering a question, solving a problem, or achieving a goal.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicator for Criterion 3.h. Performance Indicator #h1-the ability to define and clarify customer needs through technical investigation in EGNR-495 [Engineering Design Project II] on the FA evaluation of each team member at end of semester. **Criteria Target:** 3.0 out of 4 **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects	**Finding Reporting Year:** 2017-2018 **Goal met:** No Performance Indicator #h1-2.8 (08/23/2018)	**Use of Result:** • Though the average of the MET students is slightly below 3.0, the overall average has been slightly over 3.0 (meeting standard) for the last two years and self-evaluation of this outcome has been relatively high on the Senior Exit Surveys, so no individual assignment is deemed necessary at present. • There is no cause for concern. (08/25/2018)
		Finding Reporting Year: 2016-2017 **Goal met:** Yes Performance Indicator #h1-3.1 (08/23/2017)	**Use of Result:** Based on the assessment results from the last offering, some slides in the first lecture were added to provide expectations and guidance in this area. There was a small improvement in the overall average rating, but it is difficult to discern if there was a causal relationship due to the small sample size. If this is an issue in the future, an individual assignment may be needed. There is no concern. (08/23/2017)
Criterion 3.i - Students have an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Level 4 (Extended Thinking) [Webb]	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicator for Criterion 3.i. Performance Indicator #i1-the ability to apply perspectives from	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator #i1- 3.2 (08/23/2018)	**Use of Result:** All teams met standard or were deemed exemplary. There is no cause for concern. Students continued to report higher levels of engagement in the material with Dr. Swedene teaching it. The present setup with Dr. Swedene should be continued. See the

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
Institutional Learning: ILO4 - Professional Responsibility - Students will demonstrate the ability to apply professional ethics and intercultural competence when answering a question, solving a problem, or achieving a goal.	established ethical philosophies in the analysis of a case study in EGNR-495 [Engineering Design Project II] on the ethics essay. **Criteria Target:** 3.0 out of 4 **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects	**Finding Reporting Year:** 2016-2017 **Goal met:** Yes Performance Indicator #i1-3.1 (08/23/2017)	comments in course report for minor adjustments. (08/25/2018) **Use of Result:** This year in an effort to improve this outcome, Dr. Jason K. Swedene, Professor of Philosophy and Humanities at LSSU, taught the engineering ethics portion (which is contains the contemporary topics aspects) and it seemed to go well. The students found his teaching style engaging, which is especially important for a topic that students sometimes view as peripheral rather than essential. The outcomes were satisfactory. This setup should be continued in the future. There is no cause for concern. (08/23/2018)
Criterion 3.j - Students have a knowledge of the impact of engineering technology solutions in a societal and global context. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Level 4 (Extended Thinking) [Webb] **Institutional Learning:** ILO4 - Professional Responsibility - Students will demonstrate the ability to apply professional ethics and intercultural competence when answering a question, solving a problem, or achieving a goal.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicator for Criterion 3.j. Performance Indicator #i1-the ability to recognize the impact of engineering technology solutions in a societal and global context in EGME-275 [Engineering Materials] on the final exam question on plastics recyclability **Criteria Target:** 3.0 out of 4 **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard,	**Finding Reporting Year:** 2017-2018 **Goal met:** No Performance Indicator #j1- 2.93 (08/23/2018)	**Use of Result:** Out of the 14 students, 10 met the standard or were exemplary. The action item from the last offering was to find an assignment or worked test problem more substantial than the simple multiple choice question used. This should be something requiring more in-depth consideration of societal impacts of a material selection. For instance, require a brief follow-up essay after the textbook problem 11.5, on the impact of long-term trends of reduced iron / increased aluminum usage in automobiles, reducing the

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
	4-Exemplary		average mass per vehicle; it would be useful to see whether the students make a connection to such societal impacts as net (societal) energy consumption. In this offering, the essay assignment was developed as described. No new action item seems to be necessary as the results are good, and because this is only a single year's data. (08/23/2018)
		Finding Reporting Year: 2016-2017 **Goal met:** No Performance Indicator #j1- Concerns about the assessment as written were stated in the course report. (08/23/2017)	**Use of Result:** Find an assignment or worked test problem more substantial than the simple multiple choice question used. This should be something requiring more in-depth consideration of societal impacts of a material selection. For instance, require a brief follow-up essay after the textbook problem 11.5, on the impact of long-term trends of reduced iron / increased aluminum usage in automobiles, reducing the average mass per vehicle; it would be useful to see whether the students make a connection to such societal impacts as net (societal) energy consumption. (08/23/2017)
Criterion 3.k - Students have a commitment to quality, timeliness, and continuous improvement. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Level 2 (Skills and Concepts) [Webb]	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicators for Criterion 3.k.	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator #k1-3.3 (08/23/2018)	**Use of Result:** Already a subject of great emphasis, and no extensive problems in performance, so no changes recommended. (08/23/2018)
		Finding Reporting Year: 2016-2017	

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
Institutional Learning: ILO4 - Professional Responsibility - Students will demonstrate the ability to apply professional ethics and intercultural competence when answering a question, solving a problem, or achieving a goal.	Performance Indicator #k1-the ability to analyze, by methods of statistical process control, data representing output of a continuously monitored manufacturing process, in order to make early detection of any drift away from the target values of the output in EGNR-310 [Quality Engineering] on homework 5, control charts (statistical process control). **Criteria Target:** 3.0 out of 4 **Schedule/Notes:** EGNR-310 is an alternate year course. 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary	**Goal met:** Yes Performance Indicator #k1-Not offered (alternate year course) (08/23/2017)	

CoIS Assessment: Reporting Units

School of Engineering and Technology 18sept18

Program (CoIS) - Mechanical Engineering BS

Mission Statement: To produce sought-after engineers and technologists by providing a rigorous undergraduate learning experience characterized by close student-faculty interaction.
Assessment Contact: Dr. Paul Weber, Chair
Program Notes: The student outcomes for the LSSU Mechanical Engineering program are the same as those in ABET Criterion 3 (a) through (k).

Student Learning Outcomes	*Assessment Criteria & Procedures*	*Assessment Results*	*Use of Results*
Criterion 3.a - Students will be able to apply knowledge of mathematics, science, and engineering. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Mid-Level (Analyzing/Applying) [Bloom] **Institutional Learning:** ILO2 - Use of Evidence - Students will identify the need for, gather, and accurately process the appropriate type, quality, and quantity of evidence to answer a complex question or solve a complex problem.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There are three performance indicators for Criterion 3.a. Performance Indicator #A1 - the ability to solve a partial differential equation (PDE) numerically in EGNR-340 [Numerical Methods for Engineers]– final exam question on PDE's. Performance Indicator #A2 - the ability to mathematically characterize a physical system's input-output relationship and use it to predict its response to an input in EGRS-460 [Control Systems] – final exam question on step response of a physical system. Performance Indicator #A3 - the ability to use eigenvalue analysis to	**Finding Reporting Year:** 2016-2017 **Goal met:** No Performance Indicator #A1- Fall, 2.1; Spring, 2.0 Performance Indicator #A2-Fall, 2.4 Performance Indicator #A3-Fall, 3.19 (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports (1).pdf **Finding Reporting Year:** 2017-2018 **Goal met:** No Performance Indicator #A1-Fall 2.6; Spring 1.8 Performance Indicator #A2- Fall 2.8 Performance Indicator #A3 - Fall 2.8 (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports (1).pdf	**Use of Result:** Continued two-year assessment cycle in 2017-2018 (08/09/2017) **Use of Result:** There is a concern that student performance in this outcome is not at the expected level. Examples of issues students had meeting this outcome include: •Many students have difficulties approaching a problem and only attempt to do so on a surface level. •In particular, greater facility in working with differential equations would be desirable. It was determined (ref. ME Assessment minutes, 4/20/2018) that the department should: 1) add a finite difference project for

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
	analyze critical values of physical systems to predict failure points (e.g., resonances, buckling loads, critical shaft speeds, critical vehicle speeds, etc.) in EGME-350 [Machine Design] – buckling exam problem. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Not applicable to this outcome **High Impact Program Practices 2:** Not applicable to this outcome		steady-state, 2D heat conduction, in EGME431 or 432; and, 2) implement a grade requirement of C or better for the following: MATH251 Calculus III, MATH310 Differential Equations, EGME225 Mechanics of Materials, and EGEM220 Statics as a prerequisite to EGEM320 Dynamics (note: EGEM220 already requires a C or better for graduation, and even as a prerequisite to enter EGME225, but presently, a student can enter EGEM320, even with a D- through C- grade in EGEM220). (08/09/2018)
Criterion 3.b - Students will be able to design and conduct experiments, analyze and interpret data. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** High-Level (Creating/Evaluating) [Bloom] **Institutional Learning:** ILO3 - Analysis and Synthesis - Students will organize and synthesize evidence, ideas, or works of imagination to answer an open-ended question, draw a conclusion, achieve a goal, or create a substantial work of art.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There are two performance indicators for Criterion 3.b. Performance Indicator #B1 - the ability to develop a valid and reliable experimental procedure that will validate a product in EGNR-495 [Engineering Design Project II] – design review on final product testing. Performance Indicator #B2 - the ability to interpret experimental data with limitations associated with inherent and statistical uncertainties in EGME-432 [Thermal and Fluids Lab] – experimental investigation of	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator (B1) - Spring 3.0 Performance Indicator (B2) - Fall 2.15 (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports (1).pdf **Finding Reporting Year:** 2016-2017 **Goal met:** No Performance Indicator #B1 - Spring 2.8 Performance Indicator #B2 - Fall 2.63 (08/09/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports (1).pdf	**Use of Result:** There is currently no concern regarding this outcome (08/09/2018) **Use of Result:** Continued two-year assessment cycle in 2017-2018 (08/09/2018)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
	the drag coefficient of an aerodynamic object. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects		
Criterion 3.c - Students will be able to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** High-Level (Creating/Evaluating) [Bloom] **Institutional Learning:** ILO3 - Analysis and Synthesis - Students will organize and synthesize evidence, ideas, or works of imagination to answer an open-ended question, draw a conclusion, achieve a goal, or create a substantial work of art.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There are two performance indicators for Criterion 3.c. Performance Indicator #C1 - the ability to reformulate implied customer needs as specifications and produce an acceptable design solution in EGNR-491 [Engineering Design Project I] – product design review. Performance Indicator #C2 - the ability to select values of design parameters to achieve the desired trade-off between competing priorities, such as between [strength and/or rigidity] and [product weight and/or bulk and/or cost] in EGME-350 [Machine Design] – final design review packet. **Criteria Target:** 3.0 out of 4 on at	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator #C1 - Fall 3.0 Performance Indicator #C2 - Fall 3.25 (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports (1).pdf **Finding Reporting Year:** 2016-2017 **Goal met:** Yes Performance Indicator (C1) - Fall 2.9 Performance Indicator (C2) - Fall 3.0 (08/09/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports (1).pdf	**Use of Result:** No changes recommended (08/09/2018) **Use of Result:** Continued two-year assessment cycle in 2017-2018 (08/09/2017)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
	least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects		
Criterion 3.d - Students will be able to function on multidisciplinary teams. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Level 4 (Extended Thinking) [Webb] **Institutional Learning:** ILO4 - Professional Responsibility - Students will demonstrate the ability to apply professional ethics and intercultural competence when answering a question, solving a problem, or achieving a goal.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicators for Criterion 3.d. Performance Indicator #D1 - the ability to provide constructive criticism of team members" in EGNR-495 [Senior Design Project II] – peer evaluations. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator #D1 - 2.9 (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports (1).pdf **Finding Reporting Year:** 2016-2017 **Goal met:** Yes Performance Indicator #D1 - Spring 3.1 (08/09/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports (1).pdf	**Use of Result:** There is currently no concern regarding this outcome. (08/09/2018) **Use of Result:** Continued two-year assessment cycle in 2017-2018 (08/09/2018)
Criterion 3.e - Students will be able to identify, formulate and solve engineering problems. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Mid-Level (Analyzing/Applying) [Bloom] **Institutional Learning:** ILO2 - Use of	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicators for Criterion 3.e. Performance Indicator #E1 - the	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator #E1 - Fall 3.7 (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports (1).pdf **Finding Reporting Year:** 2016-2017 **Goal met:** Yes	**Use of Result:** There is currently no concern regarding this outcome. (08/09/2018) **Use of Result:** There is currently no concern regarding this

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
Evidence - Students will identify the need for, gather, and accurately process the appropriate type, quality, and quantity of evidence to answer a complex question or solve a complex problem.	ability to restate verbal information in symbolic/quantitative form in the context of an engineering problem in EGME-350 [Machine Design] – performance analysis of machine elements in selected final exam problem[s]. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary	Performance Indicator (E1) - Fall 3.54 (08/09/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports (1).pdf	outcome. (08/09/2018)
Criterion 3.f - Students will have an understanding of professional and ethical responsibility. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Level 4 (Extended Thinking) [Webb] **Institutional Learning:** ILO4 - Professional Responsibility - Students will demonstrate the ability to apply professional ethics and intercultural competence when answering a question, solving a problem, or achieving a goal.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicators for Criterion 3.f. Performance Indicator #F1 - the ability to apply perspectives from established ethical philosophies in the analysis of a case study in EGNR-495 [Engineering Design Project II]– ethics essay. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator (F1) - Spring 3.2 (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports (1).pdf **Finding Reporting Year:** 2016-2017 **Goal met:** Yes Performance Indicator (F1) - Spring 3.1 (08/09/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports (1).pdf	**Use of Result:** There is currently no concern regarding this outcome. (08/09/2018) **Use of Result:** There is currently no concern regarding this outcome. (08/09/2018)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
Criterion 3.g - Students will have an ability to communicate effectively. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Level 2 (Skills and Concepts) [Webb] **Institutional Learning:** ILO1 - Formal Communication - Students will develop and clearly express complex ideas in written and oral presentations.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There are two performance indicators for Criterion 3.g. Performance Indicator #G1 - the ability to make formal engineering presentations in EGNR-495 [Senior Design Project II]– final project presentations. Performance Indicator #G2 - the ability to prepare a structured laboratory report with proper background, experimental procedures, expected outcomes, and discussion of results relating them to theoretical expectations in EGME-432 [Thermal and Fluids Lab] – lab report from the last experiment of the semester. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator (G1) - Spring 3.0 Performance Indicator (G2) - Fall 2.69 (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports (1).pdf **Finding Reporting Year:** 2016-2017 **Goal met:** Yes Performance Indicator (G1) - Spring 3.0 Performance Indicator (G2) - Fall 2.75 (08/09/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports (1).pdf	**Use of Result:** There is currently no concern regarding this outcome. Continue to monitor in future offerings. (08/09/2018) **Use of Result:** There is currently no concern regarding this outcome. (08/09/2018)
Criterion 3.h - Students will have the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicators for Criterion	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator #H1 - Fall 3.0 (08/09/2018) **Related Documents:**	**Use of Result:** There is currently no concern regarding performance in this outcome, but the amount of emphasis and exposure is very limited. The

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
Goal Status: Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Mid-Level (Analyzing/Applying) [Bloom] **Institutional Learning:** ILO4 - Professional Responsibility - Students will demonstrate the ability to apply professional ethics and intercultural competence when answering a question, solving a problem, or achieving a goal.	3.h. Performance Indicator #H1 - the ability to reconcile environmental and cost priorities in design work in EGME-350 [Machine Design] - design project: cost and recyclability of materials specifications. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary	Appendix G - Student Outcome Evaluation Reports (1).pdf **Finding Reporting Year:** 2016-2017 **Goal met:** No Performance Indicator (H1) - Fall N/A (08/09/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports (1).pdf	department will be exploring ways to augment. (08/09/2018) **Use of Result:** Measure was invalid. Find another assignment. (08/09/2017)
Criterion 3.i - Students will have arecognition of the need for and an ability to engage in life-long learning. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Mid-Level (Analyzing/Applying) [Bloom] **Institutional Learning:** ILO4 - Professional Responsibility - Students will demonstrate the ability to apply professional ethics and intercultural competence when answering a question, solving a problem, or achieving a goal.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicators for Criterion 3.i. Performance Indicator #I1 - the ability to define and clarify customer needs through technical investigation in EGNR-495 [Senior Design Project II] – FA evaluation of each team member at end of semester. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator I1- Spring 3.1 (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports (1).pdf **Finding Reporting Year:** 2016-2017 **Goal met:** Yes Performance Indicator I1- Spring 3.2 (08/09/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports (1).pdf	**Use of Result:** There is no concern. (08/09/2018) **Use of Result:** Continued two-year assessment cycle in 2017-2018 (08/09/2017)

Student Learning Outcomes	Assessment Criteria & Procedures	Assessment Results	Use of Results
Criterion 3.j - Students will have knowledge of contemporary issues. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Low-Level (Understanding/Remembering) [Bloom] **Institutional Learning:** ILO4 - Professional Responsibility - Students will demonstrate the ability to apply professional ethics and intercultural competence when answering a question, solving a problem, or achieving a goal.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There is one performance indicators for Criterion 3.j. Performance Indicator #J1 - the ability to use examples from a realistic case study in making arguments in EGNR-495 [Senior Design Project II] - ethics essay. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary **High Impact Program Practices 1:** Capstone Course(s), Projects	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator J1-Spring 3.2 (08/09/2018) **Related Documents:** Appendix G - Student Outcome Evaluation Reports (1).pdf	**Use of Result:** There is no concern for performance; however, the ME faculty called the relevance of the indicator into question. It will be referred to the full School (SET) faculty for discussion. The exit interviews suggest the students are unclear what "contemporary issues" might be trying to refer to. (08/09/2018)
		Finding Reporting Year: 2016-2017 **Goal met:** Yes Performance Indicator J1-Spring 3.1 (08/09/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports (1).pdf	**Use of Result:** Continued two-year assessment cycle in 2017-2018 (08/09/2017)
Criterion 3.k - Students will have an ability to use the techniques, skills and modern engineering tools necessary for engineering practice. **Goal Status:** Active **Goal Category:** Student Learning **Goal Level (Bloom/Webb):** Level 2 (Skills and Concepts) [Webb] **Institutional Learning:** ILO3 - Analysis and Synthesis - Students will organize and synthesize evidence, ideas, or works of imagination to answer an open-ended question, draw a conclusion, achieve a goal, or create a substantial work of art.	**Indirect - Report/Audit - Internal -** Assessment of this criterion is documented in Appendix G of the ABET report. There are two performance indicators for Criterion 3.k. Performance Indicator #K1 - the ability to solve a recursive problem by writing a program in a structured programming language, implementing the recursion in an iterative loop in EGNR-340 [Advanced Numerical Applications] – exam question on Newton-Raphson root search or on Euler's method for solving an ordinary differential equation (ODE).	**Finding Reporting Year:** 2017-2018 **Goal met:** Yes Performance Indicator K1- Fall 3.1, Spring 2.0 Performance Indicator K2-Not Collected (08/09/2018)	**Use of Result:** There is currently no concern. Performance Indicator A2 data should be collected. (08/09/2018)
		Finding Reporting Year: 2016-2017 **Goal met:** Yes Performance Indicator K1-Fall 2.3, Spring 3.0 Performance Indicator K2-Not Collected (08/09/2017) **Related Documents:** Appendix G - Student Outcome Evaluation Reports (1).pdf	**Use of Result:** Continued two-year assessment cycle in 2017-2018 (08/09/2018)

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	Performance Indicator #K2 - the ability to solve structural analysis problems, of such complexity as precludes hand calculation, by thoughtful usage of commercial FEA software in EGME-350 [Machine Design] – FEA assignment on aircraft door latch mechanism. **Criteria Target:** 3.0 out of 4 on at least one performance indicator, with no performance indicator below 2.0. **Schedule/Notes:** 1- Unacceptable, 2-Below Standard, 3-Meets Standard, 4-Exemplary		

CoIS Assessment: Reporting Units

School of Engineering and Technology 18sept18

Program (CoIS) - Robotics Engineering BS

Assessment Contact: Prof. James Devaprasad
Program Notes: This is a new programming, admitting it's first students in Fall 2018.

No data found for the selected criteria.