

Lumpkin College of Business and Technology Office of the Dean

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July 2, 2021 (revised from June 9 report, upon receipt of revised EGT Assessment Plan)

Dr. Isaac Slaven Program Coordinator, Engineering Technology

RE: Year 2 Program Assessment Review

Documents submitted and reviewed (all with Spring 2020 in file name):

- 1) EGT Assessment Plan (xls file)
- 2) EGT Assessment Rubrics (xls file)
- 3) EGT Assessment Score Sheet (xls file)
- 4) EGT Exit Survey (word doc)

Evaluated Aspects of Program Assessment	Stage of Maturity (Beginning, Developing, Acceptable, Exemplary)
A. Student Learning Outcomes	Acceptable, w/ note on ABET requirements
B. Measurement Tools and Assignments	Acceptable
C. Data Collection and Integrity	Developing
D. Expectations and Results	Beginning
E. Discussion and Analysis	Beginning
F. Use of Assessment Results for Program Improvement	Beginning
G. Faculty Engagement in Assessment	Not reported

Summary of Assessment Evaluation:

As EGT is new to the assessment process as a program, this was a very good attempt to detail specifics in the planning process. No implementation was attempted meaning there was no data collection such that instruments and tools were utilized yet, nor was there a process of data collection, testing expectations with results, discussion and analysis or application for program improvement. There are numerous assessment plan aspects that need to be reviewed and revised prior to taking steps further; of note it was indicated to me that this program intends to apply for ABET accreditation and should be using those standards and requirements as the foundation for their assessment if that is the case.

Melody L. Thollan

Melody L Wollan, PhD, SHRM-SCP Associate Dean, Lumpkin College of Business and Technology mlwollan@eiu.edu

Academic Program	Engineering Technology
Evaluation Point	Year 2 (AY 2020) of 4
Program-level Accreditation	None
Academic Years in Reporting Cycle	AY19 - AY23
Reviewer Name, Title	Melody Wollan, LCBT Associate Dean

A. Student Learning Outcomes (SLO)

Specific statements that articulate the discipline-specific content, skills, and/or dispositions students should gain or improve through engagement in the program

- SLO does not specify what group of students will achieve mastery of it, and/or at what point(s) in their progression through the program they will do so.
- SLO contains only imprecise verbs (e.g., "know," "understand"), and thus is difficult to measure.
- SLO is too broad or vague to guide the assessment process.

BEGINNING □

- SLO is clear about what group of students will achieve mastery of it (e.g., majors, students in the program), but not at what point in their progression through the program they will do so.
- SLO contains action verbs that reflect an inadequate depth of knowledge for the program.
- SLO contains a general description of the content knowledge, skills, and/or dispositions to be measured, but the description is not disciplinespecific.

DEVELOPING

- SLO is clear about what group of students will achieve mastery of it, and at what point in their progression through the program they will do so (e.g., "seniors," "graduates").
- SLO contains precise, measurable, and observable verbs that reflect an appropriate depth of knowledge for the program.
- SLO contains a discipline-specific description of the content knowledge, skills, and/or dispositions that students will demonstrate.

ACCEPTABLE ⊠

- A reasonable number of SLOs are identified — enough to adequately accomplish the mission of the program while still being manageable to assess on an annual basis.
- Overall SLOs reflect appropriate level of expectation for the program type/level.
- Overall SLOs stated in studentcentered terms, reflecting what students should know, do, and/or think as they engage in the program of study.

EXEMPLARY \square

Comments:

EGT has four SLOs according to the Excel file "egt assessment plan sp20":

- 1. Demonstrate effective communication skills for the engineering technology industry using written, oral, and technological formats
- 2. Analyze problems and apply engineering technology solutions utilizing quantitative reasoning and critical thinking skills
- 3. Develop an awareness of ethical values and social responsibility in a multicultural environment
- 4. Demonstrate functional and operational skills relevant to the engineering technology industry

There is also indication within LCBT and the School of Technology that EGT should be on a path to ABET accreditation. If that is the case, the criteria for ETAC (Engineering Technology Accreditation Commission) of ABET indicates that

there are five SLOs that are required, and if this is the case, your assessment plan should reflect these and other criteria required by ETAC and ABET:

- (1) an ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline;
- (2) an ability to design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline;
- (3) an ability to apply written, oral, and graphical communication in broadly-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature;
- (4) an ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes; and
- (5) an ability to function effectively as a member as well as a leader on technical teams.

Source: https://www.abet.org/accreditation/accreditation-criteria/criteria-for-accrediting-engineering-technology-programs-2021-2022/

B. Measurement Tools and Assignments

Description of the measurement tool and the associated assignment, how they align with the SLO, and their validity

- SLO is assessed with only indirect measure(s) (i.e., surveys).
- No information is provided about how the measurement tool(s) and assignment(s) relate to the SLO.
- SLO is assessed with direct measure(s) (i.e., objective tests, rubrics).
- General description is provided of the measurement tool(s) and assignment(s).
- General information is provided about how the measurement tool(s) and assignment(s) relate to the SLO.

- Detailed description of measurement tool(s) and its alignment with the SLO is provided. This includes:
 - o for an objective test measurement tool, individual questions are identified and valid to the SLO (or element of the SLO), and expected levels of mastery are indicated;
 - o for an analytic rubric measurement tool, each trait is mapped to the SLO (or element of the SLO) and each level details expectations.
- Detailed description of the assignment(s) and alignment with the SLO is provided. This includes:
 - for an objective test assignment, representative test items are described to indicate relevance to the SLO and the expected level of mastery;
 - o for a performance-based assignment evaluated with an analytic rubric, the assignment prompt is described to indicate relevance to the SLO and the expected level of mastery.

- Direct measures may be supplemented with indirect measures.
- Includes both formative and summative measures.
- A description of the development process for the measurement tool(s) and assignment(s) is included to

		 Measurement tool(s) will provide a direct/observable result and are appropriate to the SLO and the level of mastery expected. Assignment(s) are appropriate to the SLO and the level of mastery expected. 							
BEGINNING	DEVELOPING	ACCEPTA	BLE 🗵		EXEMPLARY 🗆				
Assessment Methods: What type of assessment methods does the program use?	tangible, visible, and self-explain	tory evidence of what students have and have skills, attitudes, learning experiences, perceptions of services received or					udents to demonstrate knowledge and skills. Provide -explanatory evidence of what students have and have -explanatory evidence of what students have and have		eptions of services received or
Measurement Tools: What type of measurement tools does the program use?	Objective Test Measure that has right or wrong answers and can be quickly and unambiguously scored by anyone with an answer key.	Analytic Rubrics Measures that are subjective for performance-based assignments. Resembles a grid with criteria for student project listed in the leftmost column and with all levels of performance listed across the top row. The cells within the center contain descriptions of what specified criteria look like for each level of performance. Each of the criteria is scored individually Surveys							
Critical criterion achieving achieving starting workship that will not have a standard assessing performation.	I Thinking, Oral Present on that appear to be appear to be duplicated appear to be duplicated point in using rubricated there were 5 rubricated also note that you do do to report your dated. Any averages report on the average score mance scoring and control or that you do note	ccel file with 5 Rubrics and the Senior ntation, Writing, Responsible Citizen propriate components for their rubric, and beginning = 1) with description e or modified from university, colleges and conducting assessment. I ampay in data collection for raw data (and expression of the appears to be a 6th oric identified as the instrument "EG" not need a column summary of "average is to take a count of the number of street should be the calculation of the expression of the appearing them to an expectation/standard and results after intervention.	ship, and c. Each ras of the ce, or other carticular of for reportant for the ce of th	Technical Skills. Each rubric has four levels (putcomes at each level r program developed r ly pleased to see the derting the results) can tet labeled 'Quantitative ative Reasoning Rubric your input tables/scothat have obtained scothat scoring/# of studedowns in one or more	rubric lists 4 – 6 exemplary = 4, (each cell). Most of the rubrics which is a good evelopment of scoring take place. I did note e Reasoning' that does ic". ore sheets. What you will ores at your expectation ents in the class. For groupings of				

C Data Callaction a	ud lukoasiku			
C. Data Collection a	• •			
	• • • •	•	t what point in the program, and how the program ensure	s consistency across multiple
administrations of the	he tools and assignments (r	elia	bility)	
• It is unclear how the information provided relates to this assessment cycle.	• Information is provided about the data collection process in this cycle, but not enough to generate confidence in the findings (e.g., sample size is too small, student motivation conditions are inconsistent, rubric is	•	Enough information is provided about administration of the measurement tool and data collection process to generate confidence in the findings. This includes: o adequate student population targeted with an assignment and measurement tool; sufficient sample size for statistically significant results (especially if different than the student population), with a rationale for representative sampling (if appropriate); consistent student motivation conditions across multiple administrations of the assignment and	 Information provided demonstrates that data collection occurs throughout the curriculum and involves multiple faculty members. Information is included about how data are collected and responsibility is shared among faculty members.
	not normed with raters, etc.)		measurement tool; Process will provide useful information for guiding	An ongoing, inclusive, systematic process is in place for collecting
	 Process will provide limited information for guiding instruction and 		instruction and curriculum.	data to make decisions and improve learning within the program, appropriate to the program's internal and external

DEVELOPING ⊠

ACCEPTABLE \square

EXEMPLARY \square

Comments:

BEGINNING □

Because the program is at the earliest stages of planning for assessment, you will find that reporting results is going to take additional effort to determine exactly what you intend when you indicate that you are using "EGT Critical Thinking Rubric" (as an example). Does that mean you will use a composite score of all of the criteria listed within that rubric? Or will you report data by each criteria? Or some of the criteria? Likewise, indicating "EGT Senior Exit Survey" as the measurement is fine for your planning documents, but when you get to actually reporting the data in the EIU Template (Table) as required, you'll need to more fully identify which questions, which aspects of the measures are you using? These should be chosen based on content-validity in alignment with your SLO and Learning Objectives.

D. Expectations and F	Results		
SLO have clearly ident	rified expectations that reflect	t size and maturity of the program. Clear and concise illustration/pro	esentation of data
collected. Includes na	arrative or table/figure with sa	ample size, count, averages, percentages, and ranges as appropriate	to the assessment tool
 No expectations are presented, or it is unclear how the expected results relate to the SLO. No results are presented, or it is unclear how the results relate to the SLO. 	 Expectations and results are presented and relate to the SLO, but a lack of specificity does not allow useful conclusions to be drawn. Presentation is insufficiently detailed; only overall student scores or averages are presented. 	 Expectations and results are presented by SLO. Tables and graphs effectively communicate results, including sample size, count, averages, percentages, and ranges, as appropriate to the measurement tool. For objective tests, results are presented according to items or groups of items connected to a SLO. For rubrics, results are presented according to rubric trait and level, including counts and percentages. 	 Expectations and results are easily understood, as well as their implications. Results are presented for all locations and/or delivery modes showing an equivalent level of rigor and detail.
	p. cocco.	Results include all applicable locations and/or delivery modes.	
BEGINNING ⊠	DEVELOPING \square	ACCEPTABLE □	EXEMPLARY 🗆
Comments: At this	time, no data has been colle	ected, and no results are reported.	
nothing counted each creach creach score for expecta student "20% of the identity and turn and turn counter the co	g is listed for the Senior Sur d. For example, "50% of striction is equally weighted, or that rubric or use the ove ations – "25% of students in its in the summative measur f students will score 3.5 – 4 tifying the expected scores	ning document, you indicate that the expectation/desired level vey items. These expectations need further refinement into standards will score 3.0 – 4.0 on the cumulative average of the ruyou would add the scores of each line of the rubric and divide rall score/4 from your input/scoring table). You might also conthe formative measure will score 3.0 – 4.0 on the rubric average will score 3.0 – 4.0 on the rubric average will score 3.0 – 4.0". For the senion from specific items (and reporting by the specific items or if you score, the groupings of items should be included in your reporting data.	atements that can be bric" (that would be by 4 to obtain an average onsider having multiple age score", 65% of erage expectations: or exit survey, you should bu have multiple items

E. Discussion a		-					
•		•			erpretation of results) with a clear, complete, and suc	cinct analysis focusi	ng on the
interpret relation is attempte d, or the interpret ation on does not relate to the SLO and/or the results.	erpreta ltes to ults, bu erpreta nsuffic rogran ot alig rogran lans, lans, esults hought nterpre	ation is attempted, the SLO and/or ut the ition is either: ient to support mmatic decisions, ned with the m's previous action g excuses for rather than tful etations leading to ements in student	 Int Int Int Int be Int aff Int sta Int 	erpretation is aligned erpretation is explair student achievement erpretation is justified inchmarks. erpretation includes ected results. erpretation indicates keholders (e.g., prog	d with the program's SLOs. ned in terms of the desired levels of student performance and is based tof those levels. ed through current disciplinary standards, previous results and/or how courses, experiences, and/or the assessment process might have the appropriate collaboration and consensus of multiple internal tram faculty, committees, staff, and/or students).	 Interpretation directly the program's SLOs and Interpretation address student performance, Strengths and weakned learning are easily idea. New findings are come as appropriate. Interpretation identify improvement, thus in 	ses past trends in as appropriate. esses in student entified.
BEGINNING Description]		el of	•	ACCEPTABLE e program and this being the first attempt at an as acted in the Year 2 report.	EXEMPL sessment plan, no	
F. Use of Asses Strategies plant based on data a	ned a	and/or in progr	ess fo	•	nt rovement; actions designed to improve instruction an	d curriculum; ration	ale for action is
No actions propose for the next cycle. Proposed actions a not based on the d captured through t assessment proces Proposed actions a unrelated to the improvement of th educational progra and therefore stud learning.	ed re ata che s.	The connection I	oetweediscuss s are trovem ram a s do not from s perta	oo broad or vague ent of the nd student ot demonstrate more than one in only to	 Proposed actions are directly connected to the SLOs. Proposed actions are data-driven, directly related to the results/disc Proposed actions focus on the improvement of the educational progr If modifications are made to the assessment process, they are data-d Proposed actions contain a process for evaluating their effectiveness Proposed actions demonstrate evidence of input from multiple interr Carryover actions from the previous cycle are noted. If a SLO is not addressed by any proposed actions, justification is giv ongoing curriculum and instruction. 	am and student learning. riven. al stakeholders.	Proposed actions are specifically detailed, including who will be responsible for implementation, approximate dates of implementation, and notes about where in the curriculum and in what specific classes they will occur.
BEGINNING	\boxtimes	DEVE	LOPII	NG 🗆	ACCEPTABLE □		EXEMPLARY
Comments:					e program and this being the first attempt at an as acted in the Year 2 report.	sessment plan, no	interpretation,

G. Faculty Engagement in As	sessment						
Faculty engagement individu	ally and collectively in the assessn	nent process such as review of the outcomes data, r	evisions and updates to				
assessment plan, and reaffirmation of SLOs.							
 Assessment is done primarily by program coordinator/assistant chair. Data is primarily collected in capstone activities. 	 The assessment reporting and analytical processes are conducted by the program coordinator or assistant chair with data being collected by faculty. Faculty review outcomes and resulting data at least once per year. 	 The program has an organized systematic plan in which all faculty participate in at least one stage of assessment. Analysis of results informs faculty decision-making related to curricular and program improvements. Faculty review outcomes and resulting data at least once per year collectively, but those discussions influence other program discussions made throughout the year. 	 Program faculty are highly engaged throughout the assessment process as demonstrated at all stages. Faculty recommend interventions and participate in revising assessment activities for continuous program improvement. 				
BEGINNING □	DEVELOPING \square	ACCEPTABLE □	EXEMPLARY 🗆				
	s, involved faculty, or actions ta	tilized for this report and as such, question 3 wa ken for the program's assessment. Therefore, I					

DRAFT: Engineering Technology Assessment Plan Learning Outcomes	Learning Objectives	Undergraduate	Measures	Data	Desired Level
	Write critically and effectively in the discipline of digital	W	EIU EWP Ratings		At EIU average
	media technology by developing an argument and evaluating evidence, issues, ideas, and problems from	W	EGT 3414: Project Management in		2.5
	Present information using a technological tools, engage		EIU Speaking Ratings		At EIU average
Demonstrate effective communication skills for the engineering technology industry using written, oral,	in discussion of digital media concepts, explain the ideas of others, and express their own ideas with clarity.	S			At EIU average
and technological formats		s	EGT 4704: Engineering Technology Capstone		2.5
		NA	EGT Senior Exit Survey		
	Produce, analyze, interpret, and evaluate estimating and costing systems used in digital media	Q	EGT 4843: Statistical Quality and Reliability		2.5
Analyze problems and apply engineering technology	Apply critical thinking skills to interpret digital media trends.	С	EGT 4943: Manufacturing		2.5
solutions utilizing quantitative reasoning and critical hinking skills	Apply critical thinking skills to design and manage digital media production environments.	С	EGT 3703: Machine Design		2.5
i ilining akina	Create and justify cost effective digital media campaigns using various technological tools.	Q	EGT 1303: Engineering Technology		2.5
		NA	EGT Senior Exit Survey		
	Interact sensitively and ethically with people from diverse backgrounds and demonstrate understanding of the sociocultural contexts that influence individual differences in digital media studio and professional	R	EGT 2773: Safety for Engineering Technology		2.5
Develop an awareness of ethical values and social esponsibility in a multicultural environment	Implement values and systems in production environments that will lead to positive outcomes in digital media environments and a society responsive to	R	EGT 4753: Lean Manufacturing		2.5
		NA	Senior Exit Survey		
	Apply digital media knowledge and technical skills in the content areas of digital media technology.		EGT 1323: Computers for Engineering Technology Project		3
			EGT 3663: CNC and Rapid Prototyping		3
Demonstrate functional and operational skills relevant to he engineering technology industry		NA	EGT 2324: Electricity and Electronic Controls - - Final project		3
			EGT 3763: Automation and Data Capture		3
			EGT 3063: 3D Modeling - - Projects		3
			EGT Senior Exit Survey		
F or D = Formative or Summative Measures					
Tor D = Indirect or Direct Measures					
"Assessment plan, data, and rubrios are to be evaluated by faculty twice during the academic year.					

DRAFT: Engineering Technology Assessment Plan Learning Outcomes	Learning Objectives	Instrument Used	Collected	F or 8"	I or D*	When Collected
Learning Outcomes		EWP rating rubric	Collected	S	D	Annually
	Write critically and effectively in the discipline of digital media technology by developing an argument and		Course		- -	
	evaluating evidence, issues, ideas, and problems from	EGT Writing Rubric	Instructor	F	D	When course is offered
	Present information using a technological tools, engage	Primary Trait Rubric	CMN 1310G	F		Annually
Demonstrate effective communication skills for the	in discussion of digital media concepts, explain the	,	Senior	s		
engineering technology industry using written, oral,	ideas of others, and express their own ideas with clarity.	Primary Trait Rubric	Seminar	5	٠ ا	Annually
and technological formats	radad di dalara, ana aspirada andi anni radad mandiany.	EGT Oral Presentation Rubric	Course Instructor	s	D	When course is offered
		EGT Senior Exit Survey	Program Coordinator	S	I	Each semester
	Produce, analyze, interpret, and evaluate estimating and costing systems used in digital media	EGT Quantitative Reasoning Rubric	Course Instructor	F	D	When course is offered
Analyze problems and apply engineering technology	Apply critical thinking skills to interpret digital media trends.	EGT Critical Thinking Rubric	Course Instructor	S	D	When course is offered
solutions utilizing quantitative reasoning and critical hinking skills	Apply critical thinking skills to design and manage digital media production environments.	EGT Critical Thinking Rubric	Course Instructor	S	D	When course is offered
	Create and justify cost effective digital media campaigns using various technological tools.	EGT Quantitative Reasoning Rubric	Course Instructor	S	D	When course is offered
		EGT Senior Exit Survey	Program Coordinator	s	ı	Each semester
Develop an awareness of ethical values and social responsibility in a multicultural environment	Interact sensitively and ethically with people from diverse backgrounds and demonstrate understanding of the sociocultural contexts that influence individual differences in digital media studio and professional	EGT Responsible citizenship Rubric	Course Instructor	s	ı	When course is offered
	Implement values and systems in production environments that will lead to positive outcomes in digital media environments and a society responsive to	EGT Responsible citizenship Rubric	Course Instructor	S	ı	When course is offered
		Exit Survey	Program Coordinator	s	ı	Each semester
	Apply digital media knowledge and technical skills in the content areas of digital media technology.	EGT Technical Skills rubric	Course Instructor	F	D	When course is offered
		EGT Technical Skills rubric	Course Instructor	F	D	When course is offered
Demonstrate functional and operational skills relevant to he engineering technology industry		EGT Technical Skills rubric	Course Instructor	F	D	When course is offered
		EGT Technical Skills rubric	Course Instructor	F	D	When course is offered
		EGT Technical Skills rubric	Course Instructor	F	D	When course is offered
		EGT Senior Exit Survey	Program Coordinator	s	ı	Each semester
F or D = Formative or Summative Measures						
Tor D = Indirect or Direct Measures						
**Assessment plan, data, and rubrics are to be evaluated by faculty twice during the academic year.						