STUDENT LEARNING ASSESSMENT PROGRAM
SUMMARY FORM AY 2023-204

Degree and Program Name:	Master of Science in Sustainability Lumpkin College of Business and Technology
Submitted By:	Dr. Nichole Hugo, Graduate Coordinator

PART ONE

At the start of the program (SP20) the MS in Sustainability had a total of 9 students, with that number dropping down to 5 during the COVID pandemic. At the start of the Fall 2024 semester, a total of 37 students were enrolled with an additional 3 students from other programs adding Sustainability as a second degree in the first two months of the semester. Students are assessed based on their performance in core courses, research and conference participation, and internship evaluations.

	SP 20	FA 20	SP 21	FA 21	SP 22	FA 22	SP 23	FA 23	SP 24	FA24
Sustainability degree only	**6**	**4**	**4**	**8**	**4**	**9**	**13**	**15**	**20**	**22**
2 degrees	**3**	**1**	**1**	**2**	**7**	**10**	**11**	**16**	**16**	**15**
Total Students	**9***	**5**	**5**	**10**	**11**	**19**	**24**	**31**	**36**	**37**

*Includes students from the previous Sustainable Energy program

What are the learning objectives?	**How, where, and when are they assessed?**	**What are the expectations?**	**What are the results?**	**Committee/ person responsible? How are results shared?**
1. Students will demonstrate understanding of principles related to the field of sustainability (CGS goal: depth of content knowledge)	The Sustainability program design was based on studying sustainability with an interdisciplinary focus. The scientific knowledge and skills are addressed by departments, including Geology and Geography, Political Science, and School of Technology.	Students are expected to understand: • The three pillars of sustainability (economic, social and environmental) and the extent of the impacts in which sustainability attempts to balance these areas of concern	24/24 students enrolled in CERE 5100 in Fall 2023 semester met expectations of 80% or higher on HW Assignment 1 (Pillars of Sustainability) 16/17 students enrolled in GEO 5200 in Spring 2024	Faculty members are contacted individually by the graduate coordinator for feedback. Information is articulated individually with faculty.

	There are six (6) required core courses that all students must take, regardless of which option they are pursuing. Three (3) focus on sustainability content: • CERE 5100 Intro to Sustainability • GEO 5200 Human Impact and the Environment • PLS 4763 Environmental Politics and Policy Students are assessed in the above courses in terms of the depth of knowledge of sustainability principles. Either class projects or comprehensive research papers were used to assess the knowledge acquisition of the respective science disciplines by students. Many students voluntarily attend a LEED (Leadership in Energy and Environmental Design) study group in order to prepare for their certification exam. Successful completion of the exam is recorded. At the end of every semester, assessment data will be submitted by faculty teaching the courses that are on regular rotation.	• How greenhouse gases contribute to global changes • Political policy and its role in minimizing negative impacts to the three pillars of sustainability Students are expected to score an 80% or higher on their assessment in order to meet expectations. Students are expected to pass the LEED certification exam	semester met expectations of 80% or higher on Assignment 6 (Copenhagen Consensus Center's 12 SDGs) 8/12 students enrolled in PLS 4763 in Spring 24 semester met expectations of 80% or higher on midterm exam. In the 23/24 academic year, 5 students passed the LEED GA exam, with two going on to complete the LEED AP BD+C	
2. Students will be able to apply leadership and managerial practices in sustainability (CGS goal:	Students will be assessed in leadership and managerial practices in:	The following Likert statements were used to assess leadership and managerial skills:	1. 2/4 Strongly Agree; 2/4 Agree (0 did not meet expectations) 2. 1/4 Strongly Agree; 3/4	Faculty members are contacted individually by the graduate coordinator for feedback. Information

depth of content knowledge)	TEC 5980: Internship Students are assessed by their site supervisors on their final evaluation survey. At the end of every semester, assessment data will be submitted by faculty teaching the courses that are regular rotation.	1. Displays leadership skills 2. Takes initiative 3. Adapts readily to new situations and responsibilities 4. Ability to respond to problems well Students are expected to score a 1 or 2 (Agree or Strongly Agree) to meet expectations.	Agree (0 did not meet expectations) 3. 2/4 Strongly Agree; 2/4 Agree (0 did not meet expectations) 4. 2/4 Strongly Agree; 2/4 Agree (0 did not meet expectations)	is articulated individually with faculty.
3. Students will be able to apply critical thinking and problem solving skills in the areas of sustainability. (CGS goal: Effective critical thinking and problem solving)	CERE 5100 gives students opportunities to connect what they learned in classroom to real-world applications. This is one of the best ways to promote and test students' problem solving skills. The final paper in this course has them address a specific issue and analyze how to address it with recommendations for solutions In terms of critical thinking and problem solving skills, students will be assessed in the following venue: CERE 5100 Final Research Paper At the end of the semester, assessment data will be submitted by faculty when the course is offered.	Students are expected to score an 80% or higher on their final paper in order to meet expectations.	24/24 students enrolled in CERE 5100 in Fall 2023 met expectations of 80% or higher on their Final Paper	Faculty members are contacted individually by the graduate coordinator for feedback. Information is articulated individually with faculty.
4. Students will be able to conduct intellectual research related to sustainability. (CGS goal:	Students will understand the appropriate procedures for conducting research in either:	At the end of the program, students must demonstrate their ability to conduct meaningful research, related to	1 student completed a research project for course credit.	Faculty members are contacted individually by the graduate coordinator for feedback. Information

Advanced scholarship through research or creative activity)	• TEC 5143 Research in Technology OR • PLS 5054 Applied Research Methods in Public Policy OR • CMN Communication Research Methods Students are assessed in the above courses in terms of the depth of science knowledge. Either class projects or comprehensive research papers were used to assess the knowledge acquisition of the respective leadership or management principles by students. At the end of every semester, assessment data will be submitted by faculty teaching the courses that are regular rotation. Optional: CERE 5953 Sustainability Research (Students must conduct independent research, write a research paper and defend results to a committee of at least 3 Graduate Faculty members, similar to a thesis) While not required, students are strongly encouraged to apply for research funding, present research at conferences, and publish in journal articles. Totals will be kept of these extracurricular research activities.	sustainability. As students have the option to take three different research methods classes, with a wide variety of instructors, it is difficult to assess the varying assignments. Therefore, an overview of research presentations and awards is provided.	3 students presented at national conferences Research Awards (2024): • 1 Williams Travel Grants • **2** Graduate School Research and Creative Activity Award • **1** King-Mertz Research and Creative Activity Award of Excellence, LCBT	is articulated individually with faculty.

5. Students will develop effective oral and written communication skill (CGS goal: effective oral and written communication)	1. Students will be assessed in the following required course: CERE 5100 Written communication is assessed through the final project, the culminating assignment for the semester. At the end of semester when the course is offered, assessment data will be submitted by the faculty team teaching the course.	Students possess effective oral and written communication skills, related to sustainability. Students are expected to score an 80% or higher on their assessment in order to meet expectations.	23/24 students enrolled in CERE 5100 in Fall 2023 semester met expectations of 80% or higher on Final Paper	Faculty members are contacted individually by the graduate coordinator for feedback. Information is articulated individually with faculty.
6. Students will be able to apply concepts of ethical and professional responsibility through the awareness of codes of ethics in sustainability, respect and value for diversity and inclusion, and commitment to respectful and responsible discourse (CGS goal: Ethical and professional responsibility)	CERE 5100 will include an essay question on the midterm to determine how well a student can apply the principles of ethical practices in the sustainability field.	Students are expected to score an 80% or higher on both assessments in order to meet expectations.	23/24 students enrolled in CERE 5100 in Fall 2023 semester met expectations of 80% or higher on midterm essay question	Faculty members are contacted individually by the graduate coordinator for feedback. Information is articulated individually with faculty.

PART TWO

Describe your program's assessment accomplishments since your last report was submitted. Discuss ways in which you have responded to the CASA Director's comments on last year's report or simply describe what assessment work was initiated, continued, or completed.

In previous years we have primarily looked a courses for data, but we are attempting to collect more data on job placement and accomplishments after students graduate. This is challenging to track, but below is the start to our job placement data.

	Graduated	2nd MS	Employer	Position
Chirayu Patel	SP23		South Central Illinois Regional Planning and Development Commision	Economic Development Planner
Joel Holison	SP23	Technology	Gallant Building Solutions	Project Engineer
Eric Ogbe	SP23	Technology	Guidehouse	Senior Consultant
Elizabeth Nwaozuru	SP23	Technology	Association for Energy Affordability	Project Manager
Avani Flanagan	SP23	Technology	Caldwell Engineering	Civil Engineering Technician
Cesar Pina	FA22	MBA		
Isra Abo Iqsaysa	FA22	Technology	PhD- Concordia University	
Marcello Verdolin	FA22		PQE Group	CSV/CSA & Data Integrity Specialist
Arwa Ibrahim	SP22		Aeon Strategy	Sustainability Consultant
Shaibu Ibrahim	SP22	Technology	Pure Power Engineering	Electrical Engineer
Martin Osei	SP22	Technology	Justrite Safety Group	Product Design Engineer
Christine Kariuki	SP21	MBA	Sprague Operating Resources LLC	Sustainability Performance Analyst
Grace Wilken	FA20	MBA	Milikin University	Instructor
Manjil Puri	SP20		Castillo Enginerring	Solar Engineer
Yasmine Ben Miloud	SP20		WaterSec	Co-Founder
Taj Ahmed	FA18		Black & Veatch	Electrical Engineer

PART THREE

*Summarize changes and improvements in **curriculum, instruction, and learning** that have resulted from the implementation of your assessment program. How have you used the data? What have you learned? In light of what you have learned through your assessment efforts this year and in past years, what are your plans for the future?*

We have started to standardize asking students about what courses they are interested in taking, as the Sustainability field is broad and different skills are required depending on what position the student is attending to apply for. We have bi-weekly meetings for students to talk with the Graduate Coordinator to discuss skills they are interested in improving upon and work on these outside of the class. We also have alumni guest speak to our current students about what they found to be beneficial or what skills they wish they developed more.