SACS Assessment Plan for Master of Environmental Studies (MSVS) Program

Degree: Master of Environmental Studies (MSVS) 2023-2024 Assessment Plan		
	Student Learning Outcome #1	Students will be able to explain and provide examples of the impact of human activities to the natural environment.
PLAN	**Assessment Method(s)**	(1) Comprehensive Exam (Breadth) (2) Comprehensive Exam (Depth)
	Proficiency	Minimum acceptable is 3 out of 4
DO	**Benchmark**	75% of students achieve the proficiency mentioned above
	Results of Assessment	For the reporting period 1 student **(non-thesis)** graduated in the Master of Environmental studies (MSVS) program. Average comprehensive score for SLO 1 is **3.87** (Appendix A_ Assessment rubric) All students were evaluated 2 times in each indicator, by committee of a minimum two faculty members. Assessment instruments are the performance in comprehensive exam (breadth and depth).
S T U D Y	**Analysis of Results**	100% of the students achieved the proficiency mentioned above. The student scored well above the minimum acceptable proficiency level. The student reflected favorably to the self-assessment in the survey. Overall, the students expressed satisfaction for SLO1.

ACT	**Improvement Plan for 2024-2025**	With passing scores in all three PI categories for SLO1, we don't anticipate major changes. However, to keep with the advancement in the industry and demand for improved learning, it is important the program maintain continuous improvement to increase the overall scores for PIs and for SLO. For the next academic year, the following improvement steps are proposed: • Present the findings to the department faculty and maintain and ensure the rigor of all courses. • Develop Environmental Engineering/Studies Laboratory graduate class. • Develop and offer more courses aligned with the current industrial needs and advancements. • Provide wide variety of courses using adjuncts. • Improve the curriculum using more interdisciplinary project-based modules. • Offer Engineering with Nature Class (4 graduate classes) through US Army Corps of Engineers.

Degree: Master of Environmental Studies (MSVS) 2023-2024 Assessment Plan		
	Student Learning Outcome #3	Students will demonstrate an ability to design engineering components for mitigating pollutants in the environment
PLAN	**Assessment Method(s)**	(1) Questions, projects and assignments aimed at the design of engineering components in CVEN 5331Biological Wastewater Treatment or CVEN 5329 Water Supply and Treatment (2) Comprehensive Exam
	Proficiency	Minimum acceptable is 3 out of 4
DO	**Benchmark**	75% of students achieve the proficiency mentioned above
	Results of Assessment	For the reporting period 1 student **(non-thesis)** graduated in the Master of Environmental studies (MSVS) program. Average comprehensive score for SLO 2 is **3.50** (Appendix A_ Assessment rubric) All students were evaluated 2 times in each indicator, by committee of a minimum two faculty members. Assessment instruments are the performance in projects and assignments in CVEN5331 and CVEN5329 class and comprehensive exam (breadth and depth).
S T U D Y	**Analysis of Results**	100% of the students achieved the proficiency mentioned above. The student scored well above the minimum acceptable proficiency level. The student reflected favorably to the self-assessment in the survey. Overall, the students expressed satisfaction for SLO2.
ACT	**Improvement Plan for 2024-2025**	With passing scores in all three PI categories for SLO2, we don't anticipate major changes. However, to keep with the advancement in the industry and demand for improved learning, it is important the program maintain continuous improvement to increase the overall scores

		for PIs and for SLO. For the next academic year, the following improvement steps are proposed: • Present the findings to the department faculty and maintain and ensure the rigor of all courses. • Develop Environmental Engineering/ studies Laboratory graduate class. • Develop and offer more courses aligned with the current industrial needs and advancements. • Provide wide variety of courses using adjuncts. • Improve the curriculum using more interdisciplinary project-based modules. • Offer Engineering with Nature Class (4 graduate classes) through US Army Corps of Engineers.

Degree: Master of Environmental Studies (MSVS) 2023-2024 Assessment Plan		
	Student Learning Outcome #3	Students will demonstrate the ability to survey and organize peer-reviewed literature in environmental engineering for problem solving tasks
PLAN	**Assessment Method(s)**	(1) Thesis defense or Comprehensive Examination (2) Projects and assignments in CVEN 5329; CVEN 5331
	Proficiency	Minimum acceptable is 3 out of 4
DO	**Benchmark**	75% of students achieve the proficiency mentioned above
	Results of Assessment	For the reporting period 1 student **(non-thesis)** graduated in the Master of Environmental studies (MSVS) program. Average comprehensive score for SLO 3 is **3.62** (Appendix A_ Assessment rubric) All students were evaluated 2 times in each indicator, by committee of a minimum two faculty members. Assessment instruments are the performance in projects and assignments in CVEN5331 and CVEN5329 class and comprehensive exam (breadth and depth).
S T U D Y	**Analysis of Results**	100% of the students achieved the proficiency mentioned above. The student scored well above the minimum acceptable proficiency level. The student reflected favorably to the self-assessment in the survey. Overall, the students expressed satisfaction for SLO3.
ACT	**Improvement Plan for 2024-2025**	With passing scores in all three PI categories for SLO3, we don't anticipate major changes. However, to keep with the advancement in the industry and demand for improved learning, it is important the program maintain continuous improvement to increase the overall scores

		for PIs and for SLO. For the next academic year, the following improvement steps are proposed: • Present the findings to the department faculty and maintain and ensure the rigor of all courses. • Coordinate with Department faculty to include more opportunities to the students to review and survey more peer-reviewed literature. • Develop Environmental Engineering/ Studies Laboratory graduate class. • Develop and offer more courses aligned with the current industrial needs and advancements. • Provide wide variety of courses using adjuncts. • Improve the curriculum using more interdisciplinary project-based modules. • Offer Engineering with Nature Class (4 graduate classes) through US Army Corps of Engineers.

Degree: Master of Environmental Studies (MSVS) 2023-2024 Assessment Plan		
	Student Learning Outcome #4	Students must demonstrate the ability to complete a masters thesis successfully and effectively communicate the thesis work orally and in Writing
PLAN	**Assessment Method(s)**	(1) Thesis Report (2) Final Thesis Defense
	Proficiency	Minimum acceptable is 3 out of 4
DO	**Benchmark**	75% of students achieve the proficiency mentioned above
	Results of Assessment	N/A
STUDY	**Analysis of Results**	N/A
ACT	**Improvement Plan for 2024-2025**	

Appendix A
Faculty Evaluation Sheets

Performance Indicators and Rubrics for Outcome #1:

An understanding of the impact of human activities to the atmospheric and aquatic environment.

Performance Indicator	Excellent 4	Good 3	Satisfactory 2	Unsatisfactory 1
An understanding of pollution sources	Evidence of ability to describe pollution sources from human activity in both qualitative and quantitative fashion	Evidence of ability to describe pollution sources from human activity in qualitative fashion	Little evidence of ability to describe pollution sources from human activity	No knowledge of pollution processes from human activity
Literacy in environmental media	Evidence of insight to the characteristics of water and air in qualitative and quantitative terms	Evidence of insight to the characteristics of water and air in qualitative terms only	Little evidence of insight to the characteristics of water and air	No knowledge on the characteristics of water and air

Performance Indicators and Rubrics for Outcome #2:

An ability to design engineering components to meet the desired needs for pollution control in air and water.

Performance Indicator	Excellent 4	Good 3	Satisfactory 2	Unsatisfactory 1
Use of engineering principles	Clear evidence of ability to use engineering principles to design/analyze components of pollution control	Some evidence of ability to use engineering principles to design/analyze components of pollution control	Little evidence of ability to use engineering principles to design/analyze components of pollution control	No evidence of ability to use engineering principles to design/analyze components of pollution control
Design process	Clear evidence of ability to understand the design requirements, analyze different alternatives, and provide a feasible design	Some evidence of ability to understand the design requirements, analyze different alternatives, and provide a feasible design	Little evidence of ability to understand the design requirements, analyze different alternatives, and provide a feasible design	No evidence of ability to understand the design requirements, analyze different alternatives, and provide a feasible design

Performance Indicators and Rubrics for Outcome #3:

An ability to survey and organize peer-reviewed literature in environmental sciences and engineering for problem solving.

Performance Indicator	Excellent 4	Good 3	Satisfactory 2	Unsatisfactory 1
Knowledge of available literature in environmental science and engineering	Can identify the names and describe the scopes of more than 10 peer-review journals	Can identify the names and describe the scopes of more than 5 peer-review journals	Can identify the names of a few peer-review journals but not clear about the scopes	Do not know the meaning of peer-reviewed literature
Ability of organizing the information published in peer-review literature	Clear evidence of ability to use, assess, and cite the knowledge in peer-review literature in written form	Some evidence of ability to ability to use, assess, and cite the knowledge in peer-review literature in written form	Little evidence of ability to ability to use, assess, and cite the knowledge in peer-review literature in written form	No evidence of ability to ability to use, assess, and cite the knowledge in peer-review literature

Performance Indicators and Rubrics for Outcome #4:

An ability to complete a master thesis and effectively communicate the thesis work orally and in writing.

Performance Indicator	Excellent 4	Good 3	Satisfactory 2	Unsatisfactory 1
Thesis significance	Clear definition of thesis topic and the thesis results are significant and can be published in peer-reviewed platforms.	Clear definition of thesis topic and the thesis results are meaningful and can be organized in a presentable form to the committee.	Somewhat unclear definition of thesis topic but with justified contributions.	The thesis topic is ill-defined and lacks significance.
Organization of thesis	Organizational scheme is logical and complete and makes report especially pleasurable to read.	Organizational scheme shows planning and logical order.	Organizational scheme is not apparent and the readability has room for improvement.	Thesis is not organized and difficult to read.
Thesis presentation & delivery	Presentation is clear, organized, professional and use visual displays well.	Presentation is somewhat lacking in one of the following: clarity, organization, professionalism, or use of visual displays.	Presentation is weak in two or three of the critical areas: clarity, organization, professionalism, and visual displays.	Presentation is weak in all critical areas: clarity, organization, professionalism, and visual displays.
Question & answer - impromptu skills	Answers reflect understanding of thesis context. Responses are fluent, spontaneous, sincere and confident.	Answers demonstrate knowledge and understanding of the thesis. Responses are relaxed and sincere.	Answers do not covey necessary information. Responses are strained.	Answers to questions show lack of understanding of the thesis. Responses are strained and awkward.