# Environmental Engineering MSEnvE

## MSEnvE Mission Statement

**Mission Statement (Full Description):**

The MS Environmental Engineering program prepares students for leadership roles by emphasizing engineering analysis and design of both technological and management-oriented solutions to environmental problems, while broadly addressing the fundamental science and regulatory aspects of the field.
Courses are taught at the Dallas main campus.
CEE graduate classes are delivered via in-person and distance. Distance sections are generally asynchronous though students may choose to participate synchronously via Zoom.

**Does your program offer courses at an off-campus instructional site (not at SMU Dallas campus)?:**
No

**Does your program offer courses through distance education technology (e.g., asynchronous, synchronous, or both)?:**
Yes

**During which academic year were students first enrolled in this program?:**
Prior to AY2022-2023

**Progress:**
Complete

## SACSCOC SO#1 Problem Solving

**Step 1A: SLO Number:**
1

**Step 1C: SLO Statement (Full Description):**

An ability to identify, formulate, and solve environmental engineering problems by applying principles of engineering, science, and mathematics.

**Step 2A: Measure:**

Student work is assessed three times during the term (near the beginning, middle, and end) using the attached rubric. Each student is rated 4 Exemplary, 3 Satisfactory, 2 Developing, or 1 Unsatisfactory.

**Step 2B: Type of Measure (check all that apply):**
Document analysis ,Essay exam,Objective Quiz or Exam ,Presentation ,Reflection,Written paper/project

**Commented [SS1]: Suggestions for Improvement**
1. **Align with SMU's Institutional Goals**: Connect the mission to SMU's broader values, such as advancing sustainable practices, promoting community resilience, or fostering technological innovation, to reinforce the program's alignment with the university's mission.
2. **Highlight Distinctive Program Features**: Describe unique aspects of the Environmental Engineering program, such as fieldwork opportunities, partnerships with regulatory agencies, or access to specialized environmental labs, to make the mission statement more attractive to prospective students.
3. **Clarify the Focus on Leadership and Practical Application**: Specify how the program develops leadership skills and practical expertise, such as through real-world projects, to highlight the program's commitment to producing industry-ready graduates.

Suggested Template
The mission of the MS in Environmental Engineering program at **Southern Methodist University (SMU)** is to prepare students for leadership roles by providing a strong foundation in engineering analysis, design, and regulatory principles to address complex environmental challenges. The program emphasizes both technological and management-oriented solutions that support sustainable and resilient communities.
In alignment with **SMU's commitment to [innovation, sustainability, and community impact]**, the Environmental Engineering program offers unique opportunities for **[fieldwork, interdisciplinary research, and partnerships with regulatory and industry organizations]**. Courses are taught at the Dallas main campus, with flexible options for both in-person and asynchronous distance learning, providing students with a comprehensive and accessible education.

**Commented [SS2]: Suggestions for Improvement**
1. **Specify Types of Environmental Problems**: Define the types of environmental issues students are expected to address, such as waste management, water resources, or sustainable infrastructure, to provide clearer focus areas.
2. **Develop Measurable Performance Indicators**: Establish a rubric to assess problem identification, solution formulation, and application of engineering principles, ensuring consistent evaluation and feedback.
3. **Add a Time-Bound Component**: Specify when students are expected to demonstrate this skill, such as by the end of a capstone project or designated course, to set clear expectations and guide progression.

Suggested Template
By the end of **[specific course or project]**, students will demonstrate the ability to identify, formulate, and solve ...

**Commented [SS3]:** Provide or Describe the Student Work, and/or instrument use to assess this SLO

**Step 2C: Is Measure direct or indirect?:**
Direct

**Step 3A: Target for Measure:**
All student assessment data from the assessed courses are combined. The sum of exemplary plus satisfactory is divided by the total (expressed as a percentage). The CEE benchmark for E+S percentage is 70% or greater.

**Step 4A: Was the target met for this Measure?:**
No data collected/reported this cycle (provided explanation in Step 4B)

**Step 4B: Results and Findings for this Measure:**
CEE student outcome assessment is on a two year cycle. This outcome was assessed last year and will be assessed again next year.

**Step 4C: Interpretation of Results:**
N/A this year.

**Step 5A: Use of Results for Seeking Improvement (Action Plan):**
N/A this year.

**Step 5B: Type of Action:**
Other

**Step 5C: Dialogue Participants (check all that apply):**
Other

**Step 5D: Evidence of Dialogue:**
N/A this year.

**Step 5E: Type of other Improvements (check all that apply):**
Other

**Step 5F: Other Improvements (Full Description):**
N/A this year.

**Step 6A: Status Update on Action(s) Identified in the Previous Assessment Cycle (Full Description):**
N/A this year.

**Step 6B: Status Update on Previously Identified Action Plan(s):**
Not applicable for this cycle (explain in Step 6A)

**Progress:**
Complete

## SACSCOC SO#2 Design

**Step 1A: SLO Number:**
2

**Step 1C: SLO Statement (Full Description):**
An ability to apply both analysis and synthesis in the environmental engineering design process, resulting in designs that meet desired needs.

**Step 2A: Measure:**
Student work is assessed three times during the term (near the beginning, middle, and end) using the attached rubric. Each student is rated 4 Exemplary, 3 Satisfactory, 2 Developing, or 1 Unsatisfactory.

Linked Documents
CEE SACS Student Outcomes Rubric MSEnvEng 2017.pdf

**Step 2B: Type of Measure (check all that apply):**
Document analysis ,Essay exam,Objective Quiz or Exam ,Presentation ,Reflection,Written paper/project

**Step 2C: Is Measure direct or indirect?:**
Direct

**Step 3A: Target for Measure:**
All student assessment data from the assessed courses are combined. The sum of exemplary plus satisfactory is divided by the total (expressed as a percentage). The CEE benchmark for E+S percentage is 70% or greater.
The benchmark is evaluated every three years. Prior to 2021, the benchmark was E+S >=60% (based upon a "passing," D, grade). At the program level, this 60% threshold was continuously met. Thus in 2021, it was raised to >=70%. In 2024, the CEE faculty examined the 70% benchmark and decided it was too early to make a change--only one complete 2-yr cycle had been completed. The CEE faculty will re-evaluate in 2027.

**Step 4A: Was the target met for this Measure?:**

**Commented [SS4]: Suggestions for Improvement**
1.**Specify Types of Environmental Design Challenges**: Define specific areas of environmental engineering design, such as sustainable water treatment systems or waste management, to make the SLO more relevant and focused for students.
2.**Develop Measurable Performance Indicators**: Create a rubric that assesses accuracy in analysis, innovation in synthesis, and overall effectiveness of the design in meeting environmental needs, ensuring consistency in evaluation.
3.**Add a Time-Bound Component**: Define when students are expected to demonstrate proficiency in analysis and synthesis, such as by the end of a capstone project or key course, to align expectations with the program structure.
Template>
By the end of **[specific course or design project]**, students will demonstrate the ability to apply both analysis and synthesis in the environmental engineering design process to create solutions that meet specified needs. This includes:
- Conducting a comprehensive analysis of design requirements for **[specific environmental challenges, such as water quality improvement, air pollution reduction, or sustainable waste management]**.
- Synthesizing findings to develop innovative, practical designs that address **[specific sustainability goals, regulatory standards, or community needs]**.
- Producing designs that are functional, sustainable, and responsive to identified needs.

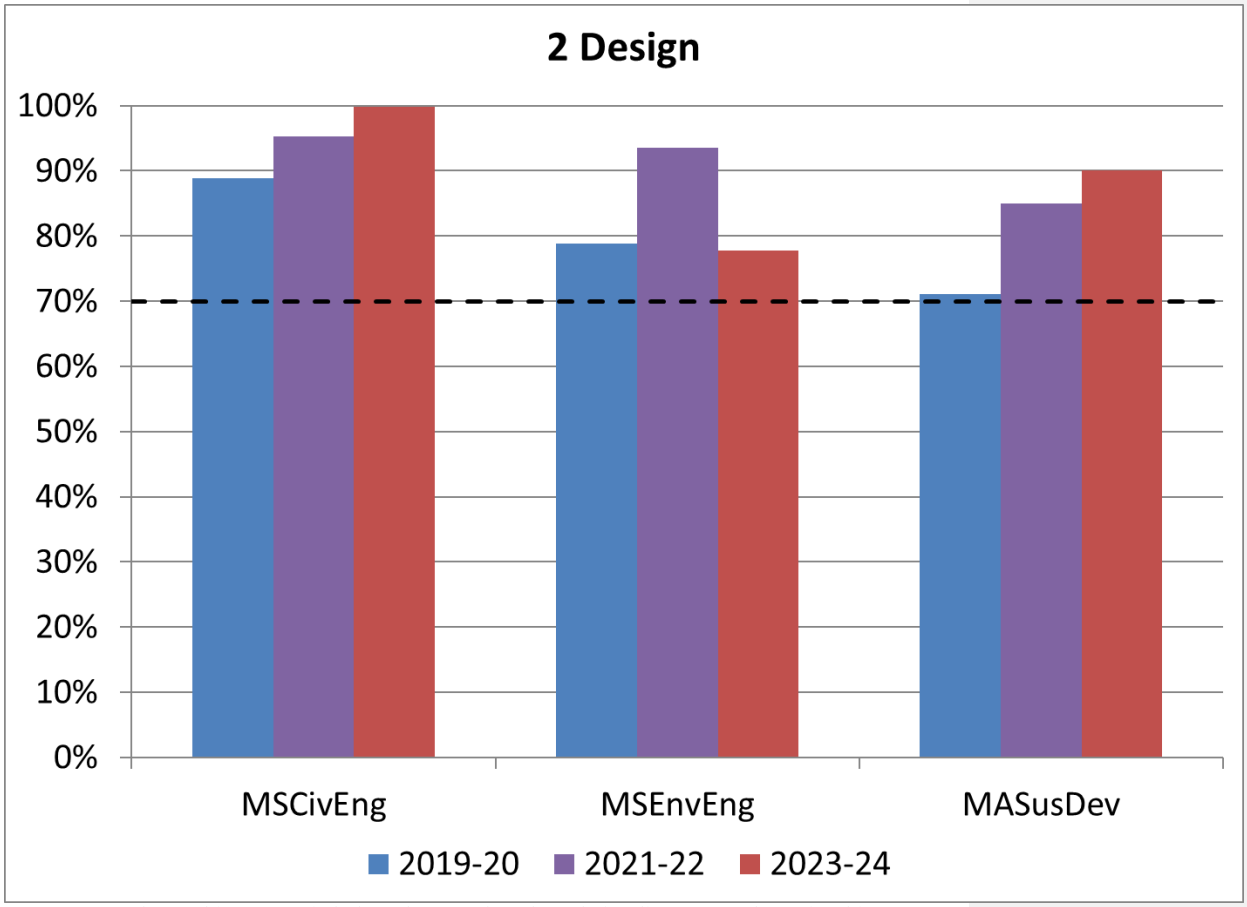
Students' abilities in analysis and synthesis will be assessed through **[design projects, case studies, or presentations]**, using a rubric that evaluates analytical depth, creativity in synthesis, and effectiveness in meeting design requirements. The target is for **X% of students** to achieve a rating of **"Meets Expectations" or higher** in all rubric categories by the end of the term.

Partially Met

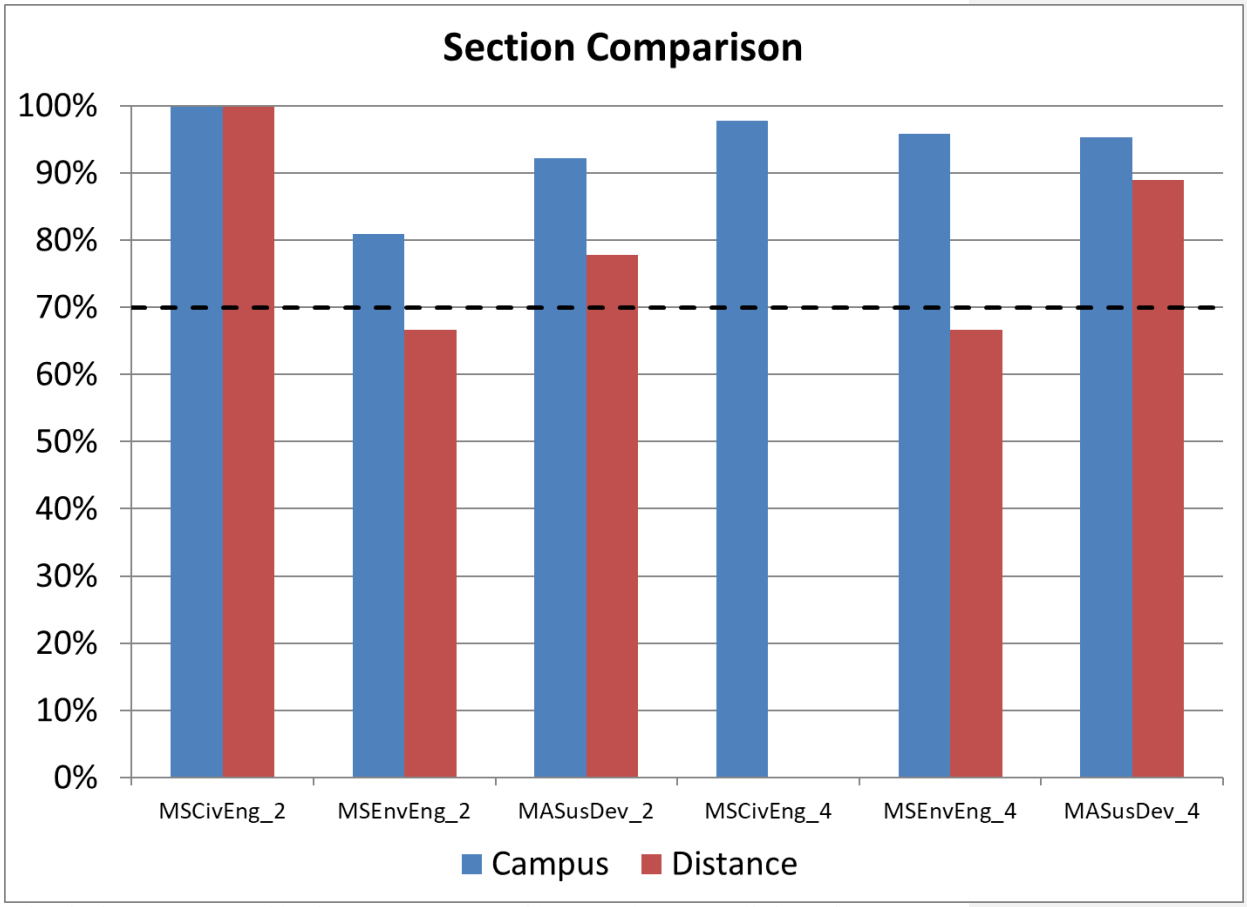
**Step 4B: Results and Findings for this Measure:**
The results for this outcome are (expressed as % E+S): 81% (on-campus) and 67% (distance), 78% combined. Please see attached "Assessment Data Summary" for summary data and calculations. Assessment instruments (test questions, homework problems, projects, etc.) and example student work (displays) are also attached.

Linked Documents
2023-24 MS EnvEng SACS 2 instruments.pdf
CEE SACS Assessment Data Summary - 2023-24.pdf
2023-24 MS EnvEng SACS 2 displays.pdf

**Step 4C: Interpretation of Results:**
Please see attached "Assessment Data Summary." No program improvements are deemed necessary for this outcome. Student achievement (combined on-campus and distance) is well above the target and has been for the past three assessment cycles as shown in the center grouped columns on the following graph. The red column is the 78% E+S for this year.




However, student achievement is below the 70% benchmark for distance students for this outcome. The percentage achieving E+S, by on-campus versus distance is shown below. Note the red bar in the second grouped column (MSEnvEng_2). Only 12 assessments of student outcome 2 was conducted on distance students. Since each student in a course is assessed 3 times, this means only 4 students were in distance sections of the assessed courses. The breakdown of the 67% was 8 assessments at E+S and 4 at U (unsatisfactory). The four U's were scored in one course: CEE 7322, by two distance students. It is difficult to make changes to the program based upon the achievement of only two students in a single course, especially considering the high achievement by the on-campus students (42 assessments yielded 81% E+S). It is also difficult to state that the achievement is different between groups--again one group's score is driven by only two students.




When both groups are combined (54 assessments), achievement is 78%--well above the 70% threshold.

Though not strictly program assessment, CEE also tracks student achievement in individual courses. One course missed the benchmark for this SO:

- CEE 7322: 33% E+S for on-campus students and 56% E+S for distance.

**Step 5A: Use of Results for Seeking Improvement (Action Plan):**

Again, the "miss" for the distance students on this outcome came from one course. This course was CEE 7322 and a corrective action memo (linked below) was sent to the instructor, Dr. Easton. Please note in his response to the memo, Dr. Easton states that the two students were from SMU's GEI program and he believes ESL issues led to the students having difficulty writing about their design results and interpreting the design instructions. Dr. Easton plans to inquire about the GEI program as to whether these students participate in the same ESL

immersion course as past students from China. Also, he plans to encourage GEI distance students to attend class on this nights the design projects' instructions are given so he can gauge their understanding. Or, if the students can not attend, he plans to set individual meetings via zoon at the launch of each design project to go over the instructions in detail.
The on-campus students missed the 70% benchmark in CEE 7322 too. Please see the linked memo and response in which Dr. Easton states that this result is driven by two students achievement on two parts of the same assignment (design project #2). He notes these two did not check preliminary results with him as they did with the first design project and exhibited overconfidence in their abilities. He will use these students as examples in future classes to ensure students do check preliminary results with him and thus improve their achievement in design.
This assessment loop is closed.

Linked Documents
CQI Corrective Action Memo_1242 CEE 7322_SACS SO 2 and 4.pdf

**Step 5B: Type of Action:**
Additional emphasis or time on content,Faculty involvement,Other

**Step 5C: Dialogue Participants (check all that apply):**
Administrator,Faculty,Staff

**Step 5D: Evidence of Dialogue:**
Please see the updated CQI memo linked here. Dr. Easton met with Jenny Chen and Jason Li from GEI. Results:

- Incoming GEI students are assigned 1, 2, or 3 semesters of ESL classes based on TOEFL scores. Typically, the students do one graduate course and an ESL program for their first semester. If they score a B or better in the graduate course, they are allowed to enroll in course full time. This is comparable, perhaps even better, than my past experience with
  Chinese students.
- We discussed how it can be difficult for instructors and students to communicate well if the students attend class via zoom with their cameras off. SMU's GEI folks will be telling their incoming students to attend Zoom classes with cameras on. I feel this change (plus those mentioned previously) should be a sufficient corrective action.

This assessment loop is closed.

Linked Documents
CQI Corrective Action Memo_1242 CEE 7322_SACS SO 2 and 4_GEI response.pdf

**Step 5E: Type of other Improvements (check all that apply):**
Other

**Step 5F: Other Improvements (Full Description):**
None.

**Step 6A: Status Update on Action(s) Identified in the Previous Assessment Cycle (Full Description):**
There were no open assessment loops for this student outcome from AY 2021-22 (prior cycle). The 2021-22 CQI presentation to the faculty is presented as evidence.

Linked Documents
CQI presentation to CEE 2022.pptx

**Step 6B: Status Update on Previously Identified Action Plan(s):**
Not applicable for this cycle (explain in Step 6A)

**Progress:**
Complete

## SACSCOC SO#3 Experiments and Data

**Step 1A: SLO Number:**
3

**Step 1C: SLO Statement (Full Description):**
An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use environmental engineering judgment to draw conclusions.

**Step 2A: Measure:**
Student work is assessed three times during the term (near the beginning, middle, and end) using the attached rubric. Each student is rated 4 Exemplary, 3 Satisfactory, 2 Developing, or 1 Unsatisfactory.

**Step 2B: Type of Measure (check all that apply):**
Document analysis ,Essay exam,Objective Quiz or Exam ,Presentation ,Reflection,Written paper/project

**Step 2C: Is Measure direct or indirect?:**
Direct

**Step 3A: Target for Measure:**

All student assessment data from the assessed courses are combined. The sum of exemplary plus satisfactory is divided by the total (expressed as a percentage). The CEE benchmark for E+S percentage is 70% or greater.

**Step 4A: Was the target met for this Measure?:**
No data collected/reported this cycle (provided explanation in Step 4B)

**Step 4B: Results and Findings for this Measure:**
CEE student outcome assessment is on a two year cycle. This outcome was assessed last year and will be assessed again next year.

**Step 4C: Interpretation of Results:**
N/A this year.

**Step 5A: Use of Results for Seeking Improvement (Action Plan):**
N/A this year.

**Step 5B: Type of Action:**
Other

**Step 5C: Dialogue Participants (check all that apply):**
Other

**Step 5D: Evidence of Dialogue:**
N/A this year.

**Step 5E: Type of other Improvements (check all that apply):**
Other

**Step 5F: Other Improvements (Full Description):**
N/A this year.

**Step 6A: Status Update on Action(s) Identified in the Previous Assessment Cycle (Full Description):**
N/A this year.

**Step 6B: Status Update on Previously Identified Action Plan(s):**
Not applicable for this cycle (explain in Step 6A)

**Progress:**
Complete

## SACSCOC #4 Communications

**Step 1A: SLO Number:**
4

**Step 1C: SLO Statement (Full Description):**
An ability to communicate environmental engineering topics effectively with a range of audiences.

**Step 2A: Measure:**
Student work is assessed three times during the term (near the beginning, middle, and end) using the attached rubric. Each student is rated 4 Exemplary, 3 Satisfactory, 2 Developing, or 1 Unsatisfactory.

Linked Documents
CEE SACS Student Outcomes Rubric MSEnvEng 2017.pdf

**Step 2B: Type of Measure (check all that apply):**
Document analysis ,Essay exam,Objective Quiz or Exam ,Presentation ,Reflection,Written paper/project

**Step 2C: Is Measure direct or indirect?:**
Direct

**Step 3A: Target for Measure:**
All student assessment data from the assessed courses are combined. The sum of exemplary plus satisfactory is divided by the total (expressed as a percentage). The CEE benchmark for E+S percentage is 70% or greater.

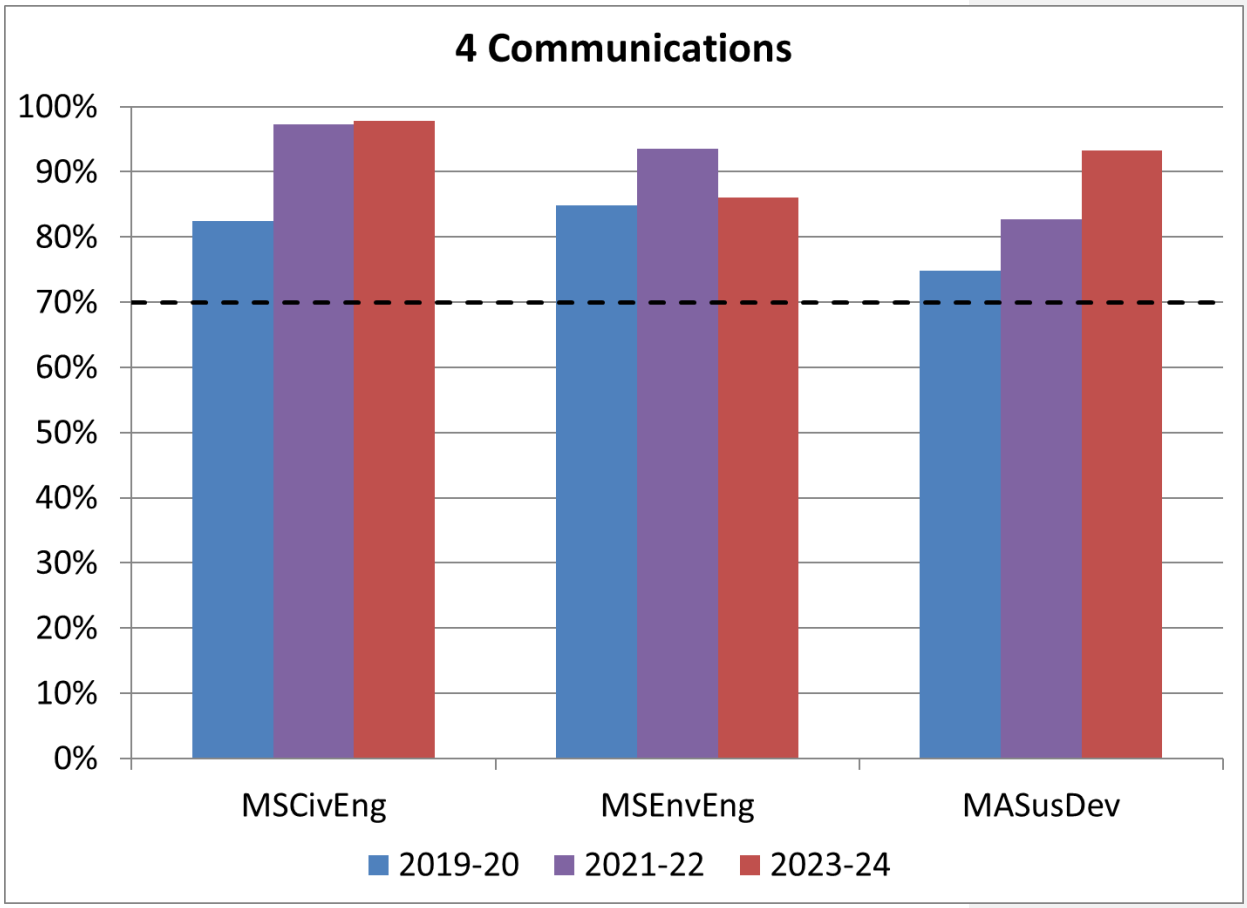
**Step 4A: Was the target met for this Measure?:**
Partially Met

**Step 4B: Results and Findings for this Measure:**
The results for this outcome are (expressed as % E+S): 96% (on-campus) and 67% (distance), 86% combined. Please see attached "Assessment Data Summary" for summary data and calculations. Assessment instruments (test questions, homework problems, projects, etc.) and example student work (displays) are also attached.

Linked Documents

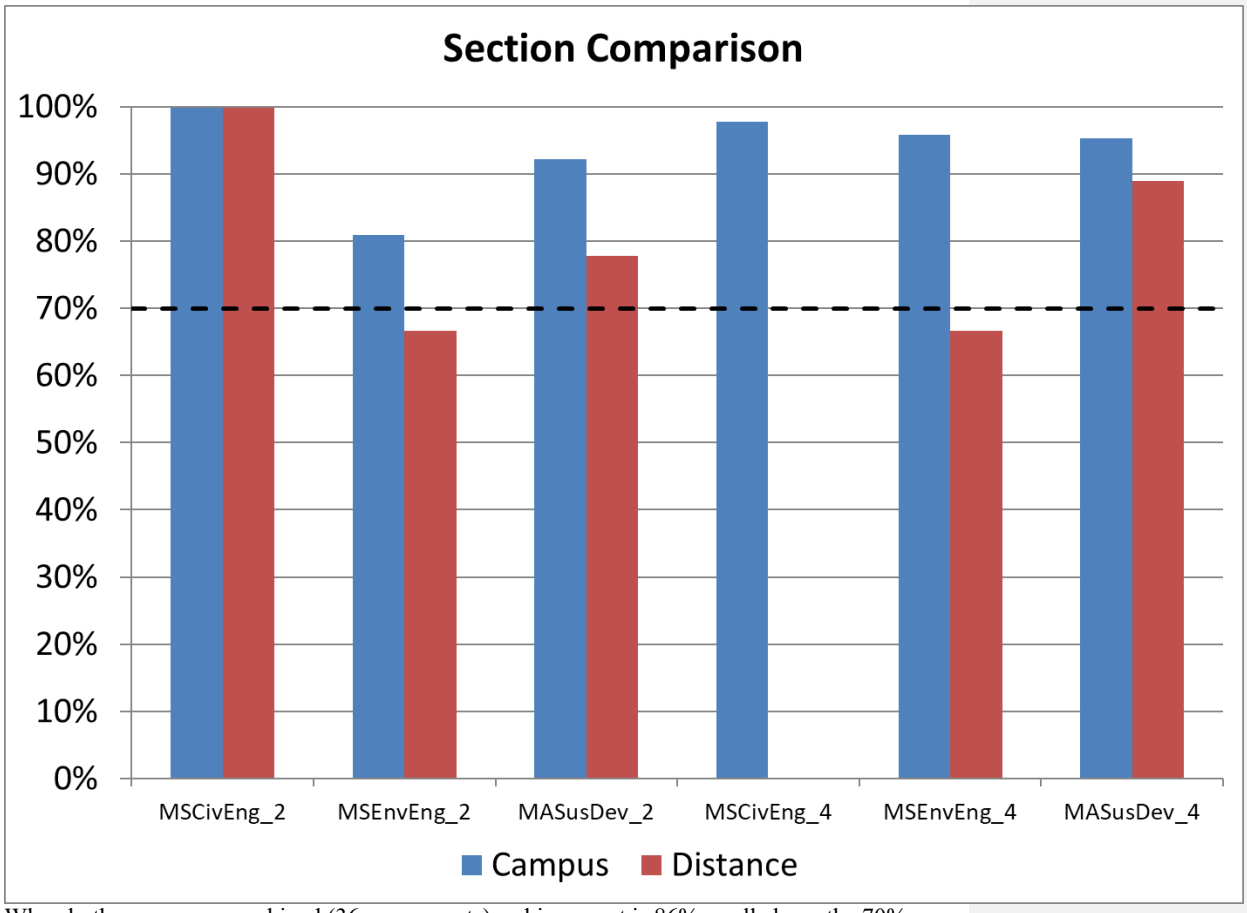
2023-24 MS EnvEng SACS 4 displays.pdf
2023-24 MS EnvEng SACS 4 instruments.pdf
CEE SACS Assessment Data Summary - 2023-24.pdf

**Step 4C: Interpretation of Results:**
Please see attached "Assessment Data Summary." No program improvements are deemed necessary for this outcome. Student achievement (combined on-campus and distance) is well above the target and has been for the past three assessment cycles as shown in the center grouped columns on the following graph. The red column is the 86% E+S for this year.




However, student achievement is below the 70% benchmark for distance students for this outcome. The percentage achieving E+S, by on-campus versus distance is shown below. Note the red bar in the fifth grouped column (MSEnvEng_4). Only 12 assessments of student outcome

4 was conducted on distance students. Since each student in a course is assessed 3 times, this means only 4 students were in distance sections of the assessed courses. The breakdown of the 67% was 8 assessments at E+S, 2 at D (developing) and 2 at U (unsatisfactory). The four D's and U's were scored in one course: CEE 7322, by two distance students. It is difficult to make changes to the program based upon the achievement of only two students in a single course, especially considering the high achievement by the on-campus students (24 assessments yielded 96% E+S). It is also difficult to state that the achievement is different between groups--again one group's score is driven by only two students.




When both groups are combined (36 assessments), achievement is 86%--well above the 70% threshold.

Though not strictly program assessment, CEE also tracks student achievement in individual courses. One course missed the benchmark for this SO:

- CEE 7322: 56% E+S for distance students.

**Step 5A: Use of Results for Seeking Improvement (Action Plan):**
Again, the "miss" for the distance students on this outcome came from one course. This course was CEE 7322 and a corrective action memo (linked below) was sent to the instructor, Dr. Easton. Please note in his response to the memo, Dr. Easton states that the two students were from SMU's GEI program and he believes ESL issues led to the students having difficulty writing reports. Dr. Easton plans to inquire about the GEI program as to whether these students participate in the same ESL immersion course as past students from China. Also, he plans to encourage GEI distance students to attend class on this nights the design projects' instructions are given so he can gauge their understanding. Or, if the students can not attend, he plans to set individual meetings via zoon at the launch of each design project to go over the instructions in detail.
This assessment loop is closed.

Linked Documents
CQI Corrective Action Memo_1242 CEE 7322_SACS SO 2 and 4.pdf

**Step 5B: Type of Action:**
Additional emphasis or time on content,Faculty involvement,Other

**Step 5C: Dialogue Participants (check all that apply):**
Administrator,Faculty,Staff

**Step 5D: Evidence of Dialogue:**
Please see the updated CQI memo linked here. Dr. Easton met with Jenny Chen and Jason Li from GEI. Results:

- Incoming GEI students are assigned 1, 2, or 3 semesters of ESL classes based on TOEFL scores. Typically, the students do one graduate course and an ESL program for their first semester. If they score a B or better in the graduate course, they are allowed to enroll in course full time. This is comparable, perhaps even better, than my past experience with
  Chinese students.
- We discussed how it can be difficult for instructors and students to communicate well if the students attend class via zoom with their cameras off. SMU's GEI folks will be telling their incoming students to attend Zoom classes with cameras on. I feel this change (plus those mentioned previously) should be a sufficient corrective action.

This assessment loop is closed.

Linked Documents
CQI Corrective Action Memo_1242 CEE 7322_SACS SO 2 and 4_GEI response.pdf

**Step 5E: Type of other Improvements (check all that apply):**
Other

**Step 5F: Other Improvements (Full Description):**
None.

**Step 6A: Status Update on Action(s) Identified in the Previous Assessment Cycle (Full Description):**
There were no open assessment loops for this student outcome from AY 2021-22 (prior cycle). The 2021-22 CQI presentation to the faculty is presented as evidence.

Linked Documents
CQI presentation to CEE 2022.pptx

**Step 6B: Status Update on Previously Identified Action Plan(s):**
Not applicable for this cycle (explain in Step 6A)

**Progress:**
Complete

## Program Outcome MSEnvEng

**Step 1A: PG Number:**
1

**Step 1C: PG Statement (Full Description):**
Equip students with a deeper understanding of environmental engineering concepts.

**Step 2A: Measure:**
Program outcomes are longer term (5 year) goals. CEE measures "deeper understanding" using GPA of the program's graduates.

**Step 2B: Is Measure direct or indirect?:**
Direct

**Step 3A: Target for Measure:**
The current year's (summer thru spring terms) graduates' GPAs are averaged each year. Then, the last five years of annual GPA averages are averaged. This is compared against the goal of GPA = 3.5 or better.

**Step 4A: Was the target met for this Measure?:**

**Commented [SS5]:** Alternative Suggested Program Goals

1. **Goal: Increase Program Enrollment**
   - **Description**: Grow the number of students enrolled in the Sustainability and Development Program to ensure the program remains vibrant and well-supported.
   - **Outcome**: Achieve an annual enrollment increase of **X%** over the next three years, with a target enrollment of **[specific number of students]** by **[target year]**.
   - **Measure**: Track and report on enrollment numbers each academic year to assess growth. Utilize outreach and marketing initiatives to attract a diverse pool of applicants with a commitment to sustainability.
2. **Goal: Enhance the Quality of Enrolled Students**
   - **Description**: Attract highly qualified and motivated students with a demonstrated interest in sustainability and development.
   - **Outcome**: Maintain a high standard of incoming student qualifications, with **X%** of enrolled students meeting minimum requirements such as a **GPA of X** or higher, relevant work experience, or a background in environmental studies, social sciences, or related fields.
   - **Measure**: Review and report on the academic and professional qualifications of each cohort. Track the percentage of students meeting the program's standards and use application data to guide admissions strategies.
3. **Goal: Ensure Curriculum Quality and Relevance**
   - **Description**: Continuously improve the curriculum to ensure it reflects current sustainability and development issues, advances in the field, and industry best practices.
   - **Outcome**: Conduct annual curriculum reviews, incorporating feedback from students, alumni, faculty, and industry partners to ensure the curriculum remains rigorous, up-to-date, and relevant.
   - **Measure**: Gather feedback through course evaluations, alumni surveys, and advisory board input. Track curriculum updates and improvements, aiming for at least **two significant curriculum updates** per academic year to address emerging trends in sustainability.
4. **Goal: Improve Graduate Employability**
   - **Description**: Prepare graduates for successful careers in sustainability, development, and related fields by providing relevant skills, industry connections, and career resources.
   - **Outcome**: Achieve a **X% employment rate** within six months of graduation for students seeking work in sustainability-related fields, including roles in government, NGOs, private industry, and consulting.
   - **Measure**: Track employment outcomes through a post-graduation survey conducted six months after graduation. Monitor employment trends to identify ...

**Commented [SS6]:** See Comments on Sustainability and Development MA

Met

**Step 4B: Results and Findings for this Measure:**
The five year rolling average GPA is 3.68, goal exceeded. Please see attached "program assessment summary" for calculations.

Linked Documents
1244 SACS program assessment 2023-24.pdf

**Step 4C: Interpretation of Results:**
No improvements to this program outcome are deemed necessary at this time.

**Step 5A: Use of Results for Seeking Improvement (Action Plan):**
The Provost's office provided feedback from the 2023 CEE assessment reports for three programs: MSCE, MA SDP, and PhD CEE (attached). Though the MS EnvE was not included, the program outcomes for the MSCE and MA programs were deemed "absent" and the program outcome for this program (MS EnvE) is very similar. From the MSCE report:
Program Objective (PO) is absent. The listed item reads more like a PLO rather than a PO, which should be a specific, measurable statement about improvements a unit would like to make it its program (e.g., increasing graduation rates or recruitment numbers).
Thus, CEE will revise the program outcome for this program. Likely, our low enrollment can be addressed, e.g., increasing recruitment numbers, as well as setting a target for students' post-graduate employment. The latter can hopefully be addressed using the new Graduation Census dashboard accessible via the Tableau server:https://di.smu.edu/. Drs. Easton and Smith-Colin are investigating the data located here for use in tracking employment of our graduates.

Attached Files
Lyle_CEE_Civil and Environmental Engineering PhD.pdf
Lyle_CEE_Civil Engineering MSCE.pdf
Lyle_CEE_Sustainability and Development MA.pdf

**Step 5B: Dialogue Participants (check all that apply):**
Administrator ,Faculty

**Step 5C: Evidence of Dialogue:**
Drs. Easton and Smith-Colin reported their initial assessment of the Census Dashboard to the faculty at the April 24, 2024 meeting (please see the linked meeting minutes). Further discussions will be held at the August 21 CEE faculty meeting, planned slides also attached.

Linked Documents

CEE Dept Mtg Minutes 2023-24.pdf
CQI presentation to CEE 2023.pptx

**Step 5D: Type of other Improvements (check all that apply):**
Advertising and marketing campaigns ,Enhanced recruitment effort

**Step 5E: Other Improvements (Full Description):**
Kate Smits developed this plan, that was put in place to increase enrollment, as follows:

**Stage 1 – Program visibility and student identification**

••Extend 4+1 /white paper w/ Deadman – Zarazaga & Smits (Earth Science & Philosophy)
••Monterrey Tech recruiting visit – 11/14-11/15
••Replicate Monterrey Tech
••Global Education Institute – establish pipeline for CEE – Smits
••U. Virgin Islands outreach – Smith-Colin & Smits
••U. Hail, Saudi Arabia outreach – Abdelghany
••Actively recruit students
••Moody Recruiting Fellowship ($4K + Moody Fellow) – Smits & Story
••CECON Recruiting effort 9/14 – 9/16 - Smits, Usama, Easton, Story
••Cox Marketing Meetings
••Social Media/Communications Intern – Lexi
••Website updates, content updates
••Industry meetings to specifically discuss graduate student opportunities – Why not SMU and why UTA/UTD?

**Stage 2 – Prospective and application stages**

•Communicate message with admissions
•Focus on the process, goal of admissions in 2-4 days (currently average is 1.5 – 2 months)
•Following up with applicants – ALL

The following items were implemented:

- Extend 4+1 to Dedman College. Upper administration stopped this effort as Dedman degrees are only 120 hours so they can't have the 150 required when double-counting graduate courses into the UG degree.
- Recruiting has not followed up on the Monterrey Tech visit.
- Smits, Smith-Colin, and Abdelghany are working on duplicating the Mont Tech program at other universities but thus far it's been slow.
- The CEE faculty continues to receive Moody Fellowships.
- CECON was successful though many potential students mentioned that SMU's tuition price is a barrier.
- The CEE faculty continue to increase our social media presence and work with Lyle's marketing folks on this. (Lexi was only with us for a few months).
- The Lyle marketing group revamped the entire website. Much was lost initially, but the recent additions of programs pages show promise. The jury is still out.
- Smits reported that meetings with industry show CEE companies reimburse at lower rates than in other industries, e.g., defense. Thus, CEE is working with the Lyle Dean to scholarship and bring the tuition down more in line with CEE reimbursements.

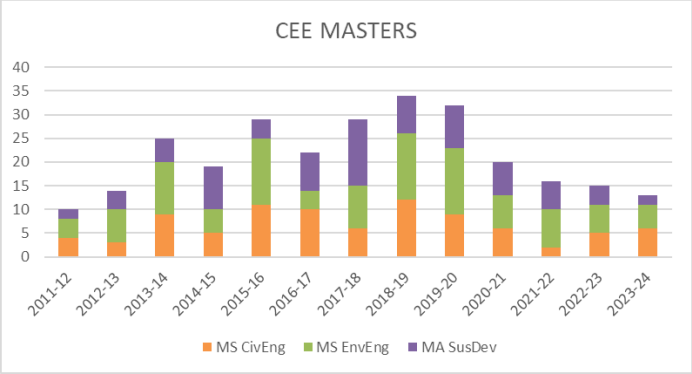
Progress is slow as the Dean's office is dealing with many other priorities. Help with graduate recruitment seems a lower priority over space, use of adjuncts, and especially faculty workloads.

- Automated reports are coming to Easton and Smits showing the status of applications. However, too many names (prospects?) are included for us to tell who we should reach-out to and/or if the recruitment office will do it. We continue to push to get our message out to recruitment/admissions.

The CEE faculty worked on those items we could in AY2023-24 but soon realized that much is outside of our control and is dependent upon the efforts of the Lyle Recruitment and Marketing offices. The efforts of these two offices, thus far, has yielded little improvement in enrollment for CEE, thus far. Please see Section 6A for further discussion.

**Step 6A: Status Update on Action(s) Identified in the Previous Assessment Cycle (Full Description):**

CEE Master's programs have suffered from low enrollment in recent years. This has resulted in CEE only be able to offer core courses and the minimum number of electives for program viability. Chart of #'s of graduates per year:




Our enrollment numbers continue to drop, as exemplified by the fewest graduates from CEE masters programs since 2011-12. This program, MS EnvE, has gone from 15+ graduates per year to 5 over the past five years, see bar chart above, green column. We need recruitment and marketing to pitch our programs and get students to us. We will continue to get this message across in 2024-25 and hope these offices make progress.

Unfortunately, it looks like their efforts of the past year have not worked. The incoming class of graduate students is very low, historically (see linked "admission funnel"). This document shows applications and admissions are down across Lyle, though it's not clear how accurate the data is. The September census will be telling. There has been a large increase in headcount in the Lyle Recruiting/Admissions and Marketing/Communications offices with little evidence of improved enrollment numbers. A few obvious examples for improvement are:

- There are no program- or department-specific marketing materials, e.g., brochures, pamphlets, etc. CEE faculty have asked for these items to take to conferences but are told there is no budget for this.
- CEE does a reasonable job of informing Marketing of noteworthy happenings but whether an item is created and promoted is a bit hit-or-miss. To get an item marketed/published, the interested faculty member must write 90% of the story, obtain quotes, select graphics, etc.. The marketing folks don't seem able to turn a 5-10 minute phone call into a story. Previously, Kate Smits would work with Central Marketing to get news stories and social media postings for her research. Central was able to create a story after a short call. This fall, she was told to stop doing that and to work with the Lyle folks only but she doesn't have the time (nor is it an effective use of her time) to write her own stories.
- CEE purchased a TV and paid to have it mounted outside our offices with the intent that we could display CEE marketing and recruiting items, e.g., research, student organizations' activities, etc. for prospective students and parents on Lyle tours and other visitors to view. But CEE is not allowed to place our own content; the TV must display the same Marketing slide-show that is on all of the monitors within Lyle, which tends to focus on AI, digital twins, and other areas not necessarily relevant to CEE.
- The strong Monterrey Tech pipeline is gone (we have no current students) and to our knowledge there are no efforts to restore it or expand this model to other international institutions.
- No webinars for CEE programs have been held this past year, as was done in years prior. Though historically, this has been questionably effective and attendance was low. One "info session" was held on campus to recruit to the Accelerated Pathways Masters (APM) program but attendance was very low and the CEE faculty do a good job recruiting to this program already. (Please see the BSCE and BS EnvE Program Outcome for our high rates of sending students to graduate school--the bulk via the APM.)
- Meetings are held between CEE and both Marketing and Recruiting but they yield little. There is no follow-up and no action items are generated. The CEE faculty attempt to explain our programs but our observation of these two offices show they only understand and speak about a few CS and ME programs.
- The application process needs work. Though the Recruitment/Admissions team has made some improvements--notably Trevor Meagher has made great progress in organizing the data within Slate--no one seems to follow-up and ensure incomplete applications are completed and admitted students are matriculated. Some student applications get held up for weeks at various stages within the process, e.g., transcript review, and no one in this office has ownership of or accountability for this process.

We are hopeful this year, 2024-25, will yield better results. The large expansion of staff in these areas has introduced many people who have a learning curve. Perhaps these offices need more time to get up to speed and get Lyle's graduate programs back to "growth."

Linked Documents
1247 Admission Funnel 20240719.pdf

**Step 6B: Status Update on Previously Identified Action Plan(s):**
In progress

**Progress:**
Complete