

M.S. Energy System Management Program Assessment
December 1, 2022

1. **Name(s) of all program(s) and degree type(s) assessed** (Major, Minor, Graduate, or Non-Degree)
 - *Note:* aggregate reports should list all programs discussed in the report

M.S. in Energy Systems Management (Graduate)

2. Names and contact information of the faculty coordinating the assessment of each program and report

Fred Wellington and Jalel Sager

3. Your Mission Statement; note any changes since last report

The MS in Energy Systems Management provides students with the knowledge, skills and networks to be leaders in the transition to a clean energy future.

There were no changes in the Mission Statement

4. Your PLOs; note any changes since last report

- Analyze complex energy challenges from technological, environmental, economic and societal perspectives, with appreciation for their historical and institutional contexts.
- Demonstrate a problem-solving mindset and correctly apply an interdisciplinary toolkit including methods of science, engineering, business and policy
- Communicate effectively verbally and in writing on a wide range of energy topics
- Formulate effective strategies to lead the transition toward a more just, sustainable and climate friendly energy system

5. Your current Curricular Map; note any changes since last report

Attached. Updated courses and added detail per the new assessment process.

6. Your assessment schedule between APRs: a year by year list of PLOs assessed since your last APR and those to be assessed before your next APR (Contact your FDCD for clarification if needed)

All ESM PLOs will be assessed using the new process for the next program assessment and reporting cycle. Using the results of that assessment, ESM faculty will determine if PLOs will need to be amended in conjunction with any changes in the curriculum.

7. Description of the assessment methodology

ESM assessment methodology will consist of three components described below.

Grading data

The PLOs, as currently written, have largely guided the individual assignments and evaluation criteria in each of the courses. The majority of courses have at least two of the following three types of assignments on which the students are evaluated.

- a. Oral presentations, both individually and in student groups
- b. Written materials in the form of papers and/or briefs
- c. Quantitative problem sets

ESM will compile individual student grades for each assignment in each of our courses, which will then be evaluated in aggregate relative to the PLOs to determine whether there are any clear indications that certain PLOs are not being met. The individual grades in each course will be translated to benchmarking metrics as given in the curriculum map. This will allow for dynamic tracking of progress both within a given course and through their academic career.

2nd year Individual Student Interviews

ESM faculty and staff will conduct interviews with graduating students at the end of each year to determine if, in their opinion, the PLOs were met.

1st year Student Survey

In conjunction with the in-person interviews, ESM will survey 1st year students in a similar fashion using an online survey platform.

8. Rubrics (and other instruments, if applicable)

n/a

9. Description of your results, noting any significant findings from the data or assessment process

Results forthcoming in the next reporting cycle.

10. Description of how the results were shared with faculty and how your department/program responded to the results. This is where you should lay out any plans for future improvement or assessment of your program indicated by the results

ESM faculty will meet over the summer session to interpret the results and determine whether there need to be any changes in the curriculum or individual assignments.

11. Discussion of any significant feedback from your previous year's report and how your program responded to that feedback

n/a