

# Program-Level Assessment Plan

|                                 |   |
|---------------------------------|---|
| Program: Mechanical Engineering | Degree Level (e.g., UG or GR certificate, UG major, master's program, doctoral program): UG |
| Department: N/A                 | College/School: Parks College / School of Engineering                                       |
| Date (Month/Year): 11-5-20      | Primary Assessment Contact: McQuilling  |

Note: Each cell in the table below will expand as needed to accommodate your responses.

| # | Student Learning Outcomes  | Curriculum Mapping   | Assessment Methods   |  |
|---|--|--|--|--|
|   |  |  | Artifacts of Student Learning (What)   | Evaluation Process (How)   |
|   | <p>What do the program faculty expect all students to know or be able to do as a result of completing this program?</p> <p>Note: These should be measurable and manageable in number (typically 4-6 are sufficient).</p> | <p>In which courses will faculty intentionally work to foster some level of student development toward achievement of the outcome? Please clarify the level at which student development is expected in each course (e.g., introduced, developed, reinforced, achieved, etc.).</p>   | <p>1. What artifacts of student learning will be used to determine if students have achieved this outcome?</p> <p>2. In which courses will these artifacts be collected?</p>   | <p>1. What process will be used to evaluate the artifacts, and by whom?</p> <p>2. What tools(s) (e.g., a rubric) will be used in the process?</p> <p>Note: Please include any rubrics as part of the submitted plan documents.</p>   |
| 1 | To practice the principles of engineering in mechanical or allied organizations  | <p>This criterion maps well to our existing ABET accreditation criterion 1, which includes three assessment points:</p> <ul style="list-style-type: none"> <li>- Early/introduced: ESCI 2100 Statics</li> <li>- Middle/developed: MENG 2300 Applied Thermodynamics</li> <li>- Late/reinforced: MENG 3510 Material Science</li> </ul> | <ol style="list-style-type: none"> <li>1. Artifacts will include collections of exam problems and projects that demonstrate competence in the listed outcome.</li> <li>2. The courses are identified in the previous block at left.</li> </ol> | <ol style="list-style-type: none"> <li>1. Faculty in charge of each class collect the materials and fill out a form including their judgement of achieving the outcome, and then faculty convene to discuss all assessments for all courses</li> <li>2. The assessment forms will be used (a sample is included with this plan document).</li> </ol> |
| 2 | To pursue further learning in mechanical engineering or in allied disciplines  | <p>This criterion maps well to our existing ABET accreditation criterion 7, which includes three assessment points:</p> <ul style="list-style-type: none"> <li>- Early/introduced: ESCI 2300 Thermodynamics</li> <li>- Middle/developed: AENG 3100 Computer-Aided Engineering</li> </ul>   | Same as above  | Same as above  |

|   |  |   |               |               |
|---|--|---|---------------|---------------|
|   |  | - Late/reinforced: MENG 4004 Design I   |               |               |
| 3 | To function as effective engineers with professional knowledge, skills, and values | This criterion maps well to our existing ABET accreditation criterion 4, which includes three assessment points:<br><ul style="list-style-type: none"> <li>- Early/introduced: MENG 1001 Intro to Engineering</li> <li>- Middle/developed: MENG 2000 Foundations to Engineering Design</li> <li>- Late/reinforced: MENG 4014 Design II</li> </ul> | Same as above | Same as above |
| 4 |  |   |               |               |
| 5 |  |   |               |               |

### Use of Assessment Data

1. How and when will analyzed data be used by program faculty to make changes in pedagogy, curriculum design, and/or assessment practices?  
 Criterion-specific data will be analyzed by program faculty in a meeting to occur at the end of every semester along with the assessment for our ABET accreditation. The next planned assessment meeting will occur before the spring 2021 semester.
2. How and when will the program faculty evaluate the impact of assessment-informed changes made in previous years?  
 Program faculty will evaluate the impact of changes by comparing the assessment scores achieved on the assessment forms completed for each program outcome listed above. Again, as they already map well to existing ABET accreditation processes, we will additionally consider them for HLC purposes as well.

### Additional Questions

1. On what schedule/cycle will program faculty assess each of the program's student learning outcomes? (Please note: It is not recommended to try to assess every outcome every year.)  
 As mentioned above, program objective 1 maps to ABET criterion 1, which will be evaluated on a three-year cycle according to the ME assessment plan already established for our ABET accreditation. Similarly, program objective 2 maps to ABET criterion 7 and program objective 3 maps to ABET criterion 4, and both of these will be evaluated every three years according to the ABET assessment plan. A copy of this plan for 2019-2021 is included with this document.
2. Describe how, and the extent to which, program faculty contributed to the development of this plan.  
 All program faculty have discussed the ABET accreditation plan and agreed upon the artifacts, methods, and timing of assessments during the spring 2019 semester.

**IMPORTANT: Please remember to submit any rubrics or other assessment tools along with this plan.**