# Program-Level Assessment Plan

**Program:** Biomedical Engineering  
**Department:** Engineering  
**Degree Level:** B.S.  
**College/School:** Parks College of Engineering, Aviation, and Technology  
**Date (Month/Year):** October 2020  
**Primary Assessment Contact:** Scott Sell

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

<table>
<thead>
<tr>
<th>#</th>
<th>Student Learning Outcomes</th>
<th>Curriculum Mapping</th>
<th>Assessment Methods</th>
<th>Evaluation Process (How)</th>
</tr>
</thead>
</table>
| 1 | Graduates will be able to apply knowledge of i) math, ii) science, iii) engineering and iv) empirical data to solve engineering problems. *(ABET 1)* | BME 2000  
BME 3300  
BME 3400  
BME 4950  
BME 4960 | BME 2000: Homework, quizzes, exams, project  
BME 3300: Homework, quizzes, exams  
BME 3400: Homework, quizzes, exams  
BME 4950: Preliminary Design Report  
BME 4960: Final Design Report | 1. The instructor for each course will provide an initial analysis, and the faculty within the program will review the instructor analysis at the annual assessment meeting, held at the conclusion of the academic year.  
2. While faculty are responsible for assessing each artifact individually, Outcomes are assessed via Form 3.5 each year |
| 2 | Graduates will be able to function on multi-disciplinary teams. *(ABET 5)* | BME 3150  
BME 4600  
BME 4950  
BME 4960 | BME 3150: Laboratory reports  
BME 4600: Team projects 1, 2, and 3  
BME 4950, Final Design Review  
BME 4960: FDR, Annual Design Symposium | 1. The instructor for each course will provide an initial analysis, and the faculty within the program will review the instructor analysis at the annual assessment meeting, held at the conclusion of the academic year.  
2. While faculty are responsible for assessing each artifact individually, Outcomes are assessed via Form 3.5 each year |
|   | Graduates will demonstrate an understanding of professional and ethical responsibility. *(ABET 4)* | BME 3150 | BME 4950 | BME 4960 | BME 3150: Portfolios, class participation and discussions  
BME 4950: Homework, PDR report, case study reviews  
BME 4960: FDR marketing / social / ethical phase |   | While faculty are responsible for assessing each artifact individually, Outcomes are assessed via Form 3.5 each year |
|---|---|---|---|---|---|---|---|
| 3 |   |   |   |   | 1. The instructor for each course will provide an initial analysis, and the faculty within the program will review the instructor analysis at the annual assessment meeting, held at the conclusion of the academic year.  
2. While faculty are responsible for assessing each artifact individually, Outcomes are assessed via Form 3.5 each year |
|   | Graduates will be able to communicate effectively. *(ABET 3)* | BME 3300 | BME 3400 | BME 4600 | BME 4950 | BME 4960 |   |
| 4 |   |   |   |   | BME 3300: Oral report, writing assignment  
BME 3400, Written projects 1, 2, and final presentation  
BME 4600: Project reports and oral presentation  
BME 4950: PDR written and oral components  
BME 4960: Poster, FDR written and oral |   | While faculty are responsible for assessing each artifact individually, Outcomes are assessed via Form 3.5 each year |
|   | Graduates will be able to solve problems in biological systems using i) engineering skills and tools, and ii) empirical measurements and data from living and nonliving systems. *(ABET BME A)* | BME 3150 | BME 4600 | BME 4950 | BME 4960 | BME 3150: Homework, quizzes, exams  
BME 4600, Project 2  
BME 4950: Written report and proposal  
BME 4960: FDR design solution |   | While faculty are responsible for assessing each artifact individually, Outcomes are assessed via Form 3.5 each year |
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?

An annual assessment meeting will be held at the end of the academic year. Faculty will review and discuss the assessment data, and determine any changes that are necessary.

2. How and when will the program faculty evaluate the impact of assessment-informed changes made in previous years?

Data will be compared to previous years at an annual assessment meeting to determine if changes from previous years had an effect, what the effect was, and if the effect was as intended.

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.)

Outcomes will be assessed and reviewed every 3 years in alignment with our ongoing professional assessment processes required by ABET.

2. Describe how, and the extent to which, program faculty contributed to the development of this plan.

The plan presented here is derived from our ABET processes, and faculty participate in review of the plan once each year. The current assessment plan was developed prior to most of the BME faculty joining the program, however, each faculty participates in an ongoing basis and has the opportunity to contribute to changes in our processes each year.

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