

# Program-Level Assessment Plan

Program: Biomedical Engineering	Degree Level (e.g., UG or GR certificate, UG major, master’s program, doctoral program): B.S.
Department: Engineering	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.

#	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	<p>Graduates will be able to apply knowledge of i) math, ii) science, iii) engineering and iv) empirical data to solve engineering problems. <b>(ABET 1)</b></p>	<p>BME 2000 BME 3300 BME 3400 BME 4950 BME 4960</p>	<p>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</p>	<p>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.</p> <p>2. While faculty are responsible for assessing each artifact individually, Outcomes are assessed via Form 3.5 each year</p>
2	<p>Graduates will be able to function on multi-disciplinary teams. <b>(ABET 5)</b></p>	<p>BME 3150 BME 4600 BME 4950 BME 4960</p>	<p>BME 3150: Laboratory reports BME 4600: Team projects 1, 2, and 3 BME 4950, Final Design Review BME 4960: FDR, Annual Design Symposium</p>	<p>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</p>

				<p>conclusion of the academic year.</p> <p>2. While faculty are responsible for assessing each artifact individually, Outcomes are assessed via Form 3.5 each year</p>
3	<p>Graduates will demonstrate an understanding of professional and ethical responsibility. <b>(ABET 4)</b></p>	<p>BME 3150 BME 4950 BME 4960</p>	<p>BME 3150: Portfolios, class participation and discussions BME 4950: Homework, PDR report, case study reviews BME 4960: FDR marketing / social / ethical phase</p>	<p>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.</p> <p>2. While faculty are responsible for assessing each artifact individually, Outcomes are assessed via Form 3.5 each year</p>
4	<p>Graduates will be able to communicate effectively. <b>(ABET 3)</b></p>	<p>BME 3300 BME 3400 BME 4600 BME 4950 BME 4960</p>	<p>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</p>	<p>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.</p> <p>2. While faculty are responsible for assessing each artifact individually, Outcomes are assessed via Form 3.5 each year</p>
5	<p>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. <b>(ABET BME A)</b></p>	<p>BME 3150 BME 4600 BME 4950 BME 4960</p>	<p>BME 3150: Homework, quizzes, exams BME 4600, Project 2 BME 4950: Written report and proposal BME 4960: FDR design solution</p>	<p>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.</p> <p>2. While faculty are responsible for assessing each artifact individually, Outcomes are assessed via Form 3.5 each year</p>

### 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.**