

## Program Assessment Plan

**Program:** Biomedical Engineering  
**Department:** Biomedical Engineering  
**College/School:** Parks College of Engineering, Aviation and Technology  
**Date:** January 2018  
**Primary Assessment Contact:** Bledsoe, Gary

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

#	Program Learning Outcomes	Assessment Mapping	Assessment Methods	Use of Assessment Data
	<p>What do the program faculty expect all students to know, or be able to do, as a result of completing this program?</p> <ul style="list-style-type: none"> <li><i>Note: These should be measurable, and manageable in number (typically 4-6 are sufficient).</i></li> </ul>	<p>From what specific courses (or other educational/professional experiences) will artifacts of student learning be analyzed to demonstrate achievement of the outcome? Include courses taught at the Madrid campus and/or online as applicable.</p>	<p>What specific artifacts of student learning will be analyzed? How, and by whom, will they be analyzed?</p> <ul style="list-style-type: none"> <li><i>Note: the majority should provide direct, rather than indirect, evidence of achievement.</i></li> </ul> <p>Please note if a rubric is used and, if so, include it as an appendix to this plan.</p>	<p>How and when will analyzed data be used by faculty to make changes in pedagogy, curriculum design, and/or assessment work?</p> <p>How and when will the program evaluate the impact of assessment-informed changes <i>made in previous years</i>?</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.</p>	<p>BME 2000 BME 3200 BME 3840 BME 3850</p>	<p>BME 2000, Matlab coding homeworks BME 3200, Homework and quizzes BME 3840, Lab notebooks and reports BME3850, Lab notebooks and reports</p> <p>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>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. Data will be compare to previous years to determine if changes from previous years had an effect, what the effect was, and if the effect was as intended.</p>
2	<p>Graduates will be able to function on multi-disciplinary teams.</p>	<p>BME 1000 BME 1010 BME 4950</p>	<p>BME 1000, Design challenge output BME 1010, Career Video BME 4950, Final Design Review</p>	<p>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</p>

		BME 4960	BME 4960, Annual Design Symposium 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.	changes that are necessary. Data will be compare to previous years to determine if changes from previous years had an effect, what the effect was, and if the effect was as intended.
3	Graduates will demonstrate an understanding of professional and ethical responsibility.	BME 4950 BME 4960	BME 4950, Final Design Report BME 4960, Final Semester Report 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.	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. Data will be compare to previous years to determine if changes from previous years had an effect, what the effect was, and if the effect was as intended.
4	Graduates will be able to communicate effectively.	BME 3200 BME 3300 BME 3400	BME 3200, Homework and quizzes BME 3300, Homework and quizzes BME 3400, Homework and quizzes 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.	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. Data will be compare to previous years to determine if changes from previous years had an effect, what the effect was, and if the effect was as intended.
5	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.	BME 4100 BME 4200 BME 4600 BME 4650	BME 4100, Homework and Exams BME 4200, Homework and Quizzes BME 4600, Project 2 BME 4650, Project 3	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. Data will be compare to previous years 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 faculty assess each of the above-noted program learning outcomes? (*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. While our current plan was developed prior to any of our BME faculty being at SLU (except Dr. Bledsoe), each faculty participates on an ongoing basis and has the opportunity to contribute to changes in our processes each year.

3. On what schedule/cycle will faculty review and, if needed, modify this assessment plan?

Annually.

***IMPORTANT: Please remember to submit any assessment rubrics (as noted above) along with this report.***

Assessment Rubrics are being developed.