



GRADUATE/DOCTORAL/PROFESSIONAL PROGRAM OUTCOMES MAP
Core Courses Mapped to Program Outcomes

Academic Unit: Speed School of Engineering

Program Name: PhD in Translational Bioengineering

Chairperson: Ayman El-Baz

Form completed by: Patricia Soucy

This program has a program-specific accreditation curriculum map: NO | YES | N/A

OUTCOME		
#1 Competency Related to Content Knowledge: Students will be able to critically evaluate the literature in the field of Bioengineering and be able to synthesize that information in a manner that represents a multidisciplinary perspective toward research.	#2 Competency Related to Engagement in Research: Students will demonstrate the impact of their independent research in Translational Bioengineering through the formulation of research questions, testable hypotheses, and oral and written communication.	#3 Competency Related to Professional Practice/Experience: Students will author scholarly work for dissemination at professional conferences and in publication in a peer-reviewed journal.

CORE COURSES: Courses that all students are required to take.							
COURSE 1: BE 601 Bioengineering Seminar	I/E	P	N/A			I/E	P
COURSE 2: BE 621 Bioinstrumentation	I/E	P	I/E	P	A	N/A	
COURSE 3: BE 654	I/E	P	N/A			I/E	P

Resources: louisville.edu/oapa/ie

For assistance, contact: brit.thompson@louisville.edu - or - 852.3950

Advanced Physiology for Engineers									
COURSE 4: BE 695 Bioengineering Research Design & Methods	I/E	P	A	I/E	P	A	I/E	P	
COURSE 5: ME 565 Advanced Engineering Mathematics I	I/E			N/A			N/A		
COURSE 6: BE 603 Bioengineering Research Ethics	N/A			N/A			I/E		
COURSE 7a: BE 668: Bioengineering Teaching Practicum	N/A			N/A			I/E	P	A
COURSE 7b: BE 692: Bioengineering Clinical Rotation	N/A			N/A			I/E	P	A

** If you need additional rows, please hover your cursor over the left edge of this box and click the '+' button

LEGEND: I/E Introduced and/or Emphasized P Practiced A Assessed

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DEFINITIONS:

[I and/or E] Introduced and/or Emphasized: learning outcome is explored in more profound depth (e.g. concepts have already been introduced, reinforced, and practiced in previous curriculum from undergraduate degree, but here they are working on it at a more complex level)

[P]: Practiced: application of learning outcomes via measurable activity are assessed to determine whether students have successfully achieved competency related to learning outcomes (e.g. exams; papers; projects)

[A] Assessed: students have achieved mastery of learning outcome as demonstrated through major culminating project (e.g. final exam, thesis or dissertation, practicum, recital, clinical experience, final presentation, internship, professional development experience, student-teaching experience, etc.) TIP: review courses in SLO reports

Resources:

[Course Catalog - Graduate](#)

[Course Catalog - Professional](#)