

Doctor of Philosophy in Bioengineering

Track: Biomedical Product Design and Development

Students entering SP20 to present

Track Co-Directors: Lisa Friis, Ph.D. (lfriis@ku.edu) and Sara Wilson, Ph.D. (sewilson@ku.edu)

CORE	3 hours required
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C&PE 756	<i>Intro to Bioengineering - replaced with breadth</i>
BIOE 800	Bioengineering Colloquium (.5) (2 total hours req)
BIOE 801	Responsible Conduct of Research in Engineering (1)

DEPTH	18 hours required
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1. Fundamental Courses (9 credits)

ME 765	Biomaterials (3)
ME 760	Biomedical Product Development (3)
BIOE 802	Internship or Clinical Preceptorship (3)

2. Advanced Biostatistics (3 credits)

Biostatistics 720 or above

3. Design (3 credits)

ME 696	Design for Manufacturability (3)
ME 767	Molecular Biomimetics (3)
ME 790	Bioadditive Manufacturing (3)
ME 790	Biomedical Microdevices (3)
C&PE 715	Drug Delivery (3)
C&PE 757	Polymer Science & Technology (3)
AE 709	Structural Composites (3)
CE 710	Structural Mechanics (3)
EECS 644	Intro to Digital Signal Processing (3)
EECS 721	Antennas (3)
EECS 728	Fiber-Optic Measurement & Sensors (3)
EECS 739	Parallel Scientific Computing (3)
EECS 741	Computer Vision (3)

or other Design course(s) as approved by committee

4. Entrepreneurship Elective (3 credits)

ENTR 701 or 830	Entrepreneurship or Advanced Entrepreneurship (3)
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BREADTH	18 hours minimum
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1. Math; Statistics; Numerical Methods (1 course min)
2. Sciences (1 course min)
3. Advanced Engineering (1 course min)
4. Management & Business (0 required, 1 course max)

RESEARCH	18 hours minimum - 24 hours maximum
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BIOE 999	Independent Investigation (Dissertation)
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These hours are taken under your advisor/committee chair.

MINIMUM HOURS REQUIRED FOR DEGREE: 60

No more than 3 classes may be taken at the 500-600 level and counted towards the graduate degree.