

# KU BIOENGINEERING GRADUATE PROGRAM

The University of Kansas

## Doctor of Philosophy in Bioengineering Track: Biomechanics & Neural Engineering

Students entering FA16 to present

Track Director: Terence McIff, Ph.D. (tmciff@kumc.edu)

<b>CORE</b>	<b>6 hours required</b>
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CPE 756	Intro to Bioengineering (3)
BIOE 800	Bioengineering Colloquium (.5) (2 total hours req)
BIOE 801	Responsible Conduct of Research in Engineering (1)

<b>DEPTH</b>	<b>15 hours required</b>
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**1. Mechanics (2 course min)**

ME 633	Basic Biomechanics (3)
ME 722	Modeling Dynamics of Mechanical Systems (3)
ME 750	Biomechanics of Human Motion (3)
ME 751	Exp. Methods in Biomechanics (3)
ME 753	Bone Biomechanics (3)
ME 755	Computer Simulation in Biomechanics
ME 757	Biomechanical Systems (3)
ME 760	Biomedical Product Design (3)
ME 765	Biomaterials (3)
ME 854	Continuum Mechanics for Soft Tissues (3)
CPE 751	Basic Rheology (3)

**2. Physiology (2course max)**

ME 758	Physiological System Dynamics (3)
HSES 810	Advanced Exercise Physiology (3)
PHSL 800 or above	

**3. Computing/Signal Processing (2 course max)**

EECS 639	Introduction to Scientific Computing (3)
EECS 739	Parallel Scientific Computing (3)
EECS 868	Mathematical Optimization with Applications (3)
EECS 644	Intro to Digital Signal Processing (3)
EECS 744	Digital Signal Processing (3)
EECS 861	Random Signals & Noise (3)

<b>BREADTH</b>	<b>18 hours minimum</b>
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*Choose appropriate courses from the Master Breadth Course List.*

1. Advanced Engineering (700 or above) (1 course minimum)
2. Life Sciences (1 course minimum)
3. Math, Statistics, Numerical Methods (1 course minimum)

<b>RESEARCH</b>	<b>18 hours minimum - 24 hours maximum</b>
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BIOE 999	Independent Investigation (Dissertation) <i>These hours are taken under your advisor/committee chair.</i>
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**MINIMUM HOURS REQUIRED FOR DEGREE: 60**

No more than 2 classes may be taken at the 500-600 level  
and counted towards the graduate degree.