

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)

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| CORE | 6 hours required |
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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) |

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| DEPTH | 15 hours required |
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1. Mechanics (2 course min)

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| 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)

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

3. Computing/Signal Processing (2 course max)

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| 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) |

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| BREADTH | 18 hours minimum |
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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)

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| 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