



Doctor of Philosophy in Bioengineering
Track: Biomechanics & Neural Engineering

Students entering SP20 to present

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

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| CORE | 6 hours required |
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| C&PE 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) |
| C&PE 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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1. Math; Statistics; Numerical Methods (1 course min)
2. Sciences (1 course min)
3. Advanced Engineering (1 course min)

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| RESEARCH | 18 hours minimum - 24 hours maximum |
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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 3 classes may be taken at the 500-600 level and counted towards the graduate degree.