KU BIOENGINEERING GRADUATE PROGRAM
The University of Kansas

Master of Engineering in Bioengineering
Track: Computational Bioengineering

Track Director: Suzanne Shontz, Ph.D. (shontz@ku.edu)

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

DEPTH	9 hours required
1. FUNDAMENTALS COURSE (1 course minimum)	
EECS 639	Introduction to Scientific Computing (3)
EECS 730	Introduction to Bioinformatics (3)
EECS 731	Introduction to Data Science (3)
BINF 701	Computational Biology I (5) - cannot take w/ EECS 730
2. ELECTIVE COURSES (1 course minimum)	
BINF 702	Computational Biology II (5)
EECS 660	Fundamentals of Computer Algorithms (3)
EECS 738	Machine Learning (3)
EECS 739	Parallel Scientific Computing (3)
EECS 740	Digital Image Processing (3)
EECS 837	Data Mining (3)
EECS 839	Mining Special Data (3)
ME 751	Experimental Methods in Biomechanics (3)
ME 755	Computer Simulation in Biomechanics (3)
ME 854	Continuum Mechanics for Soft Tissues (3)
ME 861	Theory of the Finite Element Method (3)
EECS 868 or CPE 778	Math Opt w/ Applications or Applied Opt. Methods (3)
CE 861	Finite Element Methods for Solid Mechanics (3)
AE 746	Computational Fluid Dynamics (3)
BIOL 952	Introduction to Molecular Modeling (3)
PRVM 868	Bioinformatics Driven Clinical Research (3)
BIOS/STAT 730	Applied Linear Regression (3)
BIOS/STAT 799	Introduction to Statistical Genomics (3)
BIOS/STAT 823	Introduction to Programming & Applied Stats in R (3)

BREADTH	15 hours required

Choose appropriate courses from the Master Breadth Course List.

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

MINIMUM HOURS REQUIRED FOR DEGREE: 30

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