M.S. MECHANICAL ENGINEERING—BIOMECHANICS

MASTERS OF SCIENCE in MECHANICAL ENGINEERING

Thesis Option	**30 credit hours: 24 credit hours courses, 6 credit hours CE5559 Thesis**
Project Option	**30 credit hours: 27 credit hours courses, 3 credit hours CE5500 Problems**
Coursework Option	**30 credit hours: 30 credit hours courses**

ADVANCED MATH (MINIMUM OF 2 COURSES)

ME 5501-Optimization of Engineering Systems	**(EVEN Spring Semesters)**
CE 5516—Advanced Engineering Math	**(EVEN Fall Semesters)**
ME 5572-Advanced Statistics	**(EVERY Spring Semesters)**
or 400/500 course from MATH department,	**(Discuss options with advisor)**

EMPHASIS CORE COURSES (MINIMUM OF 3 COURSES)

ME 5511-Intro to Biomechanics	**(EVERY Fall Semester)**
ME 5512-Biodynamics	**(EVERY Spring Semester)**
ME 5501-Biomedical Device Design	**(EVERY Spring Semester)**

REGULARLY OFFERED ELECTIVE (MAXIMUM OF 5 COURSES)

ME 5501-Imaging to Modeling

ME 5501-Advanced Topics in Heat Transfer (EVERY Fall)

ME 5501-Advanced Topics in Fluids (EVERY Fall)

ME 5501-Additive Manufacturing (EVERY Fall)

ME 5501-Robotics and Unmanned Systems (EVERY Spring)

ME 5501-Robotic System Identification (EVERY Spring)

ME 5501-Advanced Dynamics and Modeling (EVERY Fall)

ME 5501-Introduction to Biomaterials (EVERY Fall)

ME 5501—Multiphase Flow (EVEN Spring)

ME 5501—Turbulent Flow (ODD Spring)

ME 5501-Applied Computational Fluid Dynamics (EVERY Spring)

ME 5501-Fracture and Fatigue (EVERY Spring)

ME 5513-Experimental Methods in Biomechanics (Odd Spring)

ME 5514-Material Selection (EVERY Fall)

ME 5524—Non-Metallic Materials (EVERY Fall)

ME 5525-Failure Analysis (EVERY Spring)

ME 5526-Introduction to Manufacturing Management (EVERY Fall)

ME 5533-Advanced Thermodynamics (ODD Spring)

ME 5544-Composites (EVERY Spring)

ME 5554-Power Generation Systems (EVERY Spring)

ME 5558-Modern Control Systems (EVERY Spring)

ME 5567—Fuel Cells and Renewable Energy (EVERY Spring)

ME 5586-Applied Finite Element Analysis (EVERY Fall)

ME 5593-Intermediate Dynamics (EVERY Fall)