

BME SUBJECTS OFFERED 2009 – 2010

FALL

SCIENCE CORE

- 5.12 Organic Chemistry
- 5.07 Biological Chemistry

ENGINEERING CORE

- 18.03 Differential Equations
- 3.016 Mathematical Methods for Materials Scientists and Engineers
- 2.003 Modeling & Dynamics Control I
- 2.005 Thermal-Fluids Engineering I
- 6.002 Circuits and Electronics
- 22.01 Introduction to Ionizing Radiation

BIOMEDICAL ENGINEERING CORE

- 20.110 Thermodynamics of Biomolecular Systems
- 20.309 Biological Engineering II: Instrumentation and Measurement
- 20.320 Analysis of Biomolecular & Cellular Systems
- 20.370 Quantitative Physiology: Cells and Tissues

BIOMEDICAL ENGINEERING RESTRICTED ELECTIVES

- 9.29 Introduction to Computational Neuroscience
- 10.28 Chemical-Biological Engineering Laboratory
- 16.400 Human Factors Engineering
- 20.342 Molecular Structure of Biological Materials
- 20.441 Biomaterials – Tissue Interactions
- 22.01 Introduction to Ionizing Radiation
- 22.058 Radiation Systems Engineering and Tomographic Imaging

SCIENCE AND ENGINEERING ELECTIVES

- 20.109 Laboratory Fundamentals in Biological Engineering
- 20.201 Mechanisms of Drug Actions
- 20.450 Molecular and Cellular Pathophysiology
- 3.034 Organic and Biomaterials Chemistry
- 7.02 Intro to Experimental Biology and Communication
- 7.03 Genetics
- 7.06 Cell Biology
- 7.20 Human Physiology
- 10.702 Intro Experimental Biology and Communication

SPRING

SCIENCE CORE

- 5.12 Organic Chemistry
- 5.07 Biological Chemistry

ENGINEERING CORE

- 18.03 Differential Equations
- 2.003 Modeling & Dynamics Control I
- 2.005 Thermal-Fluids Engineering I
- 3.022 Microstructural Evolution of Materials
- 6.002 Circuits and Electronics
- 10.301 Fluid Mechanics
- 16.003 / 16.004 Unified Engineering III/IV

BIOMEDICAL ENGINEERING CORE

- 20.309 Biological Engineering II: Instrumentation and Measurement
- 20.310 Molecular, Cellular, & Tissue Biomechanics
- 20.330 Fields, Forces, and Flows in Biological Systems
- 20.340 Materials for Biomedical Applications
- 20.361 Molecular and Engineering Aspects of Biotechnology
- 20.371 Quantitative Physiology: Organ Transplant Systems
- 20.390 Foundations of Computational and Systems Biology

BIOMEDICAL ENGINEERING RESTRICTED ELECTIVES

- 3.052 Nanomechanics of Materials & Biomaterials
- 6.555 Biomedical Signal and Image Processing
- 10.29 Biological Engineering Projects Laboratory
- 16.423 Aerospace Biomedical and Life Support Engineering
- 20.380 Biological Engineering Design
- 20.411 Cell Matrix Mechanics
- 20.451 Design of Medical Devices and Implants
- 20.482 Foundations of Algorithms and Computational Techniques in Systems Biology

SCIENCE AND ENGINEERING ELECTIVES

- 20.104 Environmental Risks for Common Disease
- 20.109 Laboratory Fundamentals in Biological Engineering
- 7.02 Intro to Experimental Biology and Communication
- 7.03 Genetics
- 7.06 Cell Biology
- 10.702 Intro Experimental Biology and Communication

NOT OFFERED THIS ACADEMIC YEAR (*SUBJECTS STILL COUNT TOWARD DEGREE*)

BIOMEDICAL ENGINEERING CORE

- 20.360 Tissue Engineering for Analysis, Prevention, and Treatment of Human Disease

BIOMEDICAL ENGINEERING RESTRICTED ELECTIVES

- 6.121 Bioelectronics Project Laboratory
- 9.641 Introduction to Neural Networks
- HST.574 Introduction to Sensorimotor Neuroengineering