GENERAL CURRICULUM IN BIOMEDICAL ENGINEERING

This is the default curriculum required for students who do not declare a concentration.

CE 207  Mechanics of Materials II  1  2-3
or EE 321  Electronics
ME 228  Engineering Design Communication  2

Approved Technical Electives  12

BMED 355  Electrical Engineering Concepts for Biomedical Engineering
BMED/CE/ME 404  Applied Finite Element Analysis
BMED 422  Medical Device Evaluation and the FDA Approval Process
BMED 432  Micro/Nano System Design
BMED 434/ MATE 430  Micro/Nano Fabrication
BMED 435  Microfabrication Laboratory
BMED 436  Characterization of Micro/Nano Scale Structures
BMED 445  Biopotential Instrumentation
BMED 459  Senior Thesis
BMED 510  Principles of Tissue Engineering
BMED 515  Introduction to Biomedical Imaging
BMED 525  Skeletal Tissue Mechanics
BMED/MATE 530  Biomaterials
BMED 535  Bioseparations and Clinical Diagnostics
BMED 550  Current and Evolving Topics in Biomedical Engineering
IME 420  Simulation
IME 430  Quality Engineering
IME 435  Reliability for Design and Testing
IME 527  Design of Experiments
MATE 380  Thermodynamics and Physical Chemistry
MATE 401  Materials Characterization Techniques
MATE 410  Nanoscale Engineering
MATE 425  Corrosion Engineering
MATE/CHEM 446  Surface Chemistry of Materials
ME 305  Introduction to Mechatronics
ME 326  Intermediate Dynamics
ME 403  Access by Design: Introduction to Rehabilitation Engineering

Approved Support Electives  12

BUS 310  Introduction to Entrepreneurship
CHEM 216  Organic Chemistry I
CHEM 217  Organic Chemistry II
& CHEM 220  and Organic Chemistry Laboratory For Life Sciences II
CHEM 218  Organic Chemistry III
& CHEM 223  and Organic Chemistry Laboratory for Life Sciences III
CHEM 312  Organic Chemistry: Fundamentals and Applications
CHEM 314  Biochemistry: Fundamentals and Applications
IME 327  Test Design and Analysis in Manufacturing Engineering
MATE 215  Materials Laboratory I
MATE 222  Materials Selection Life Cycle
MATH 344  Linear Analysis II
MCRO 224  General Microbiology I

Total units  28-29

1 For students following the General Curriculum or Mechanical Design Concentration in BS Biomedical Engineering, CE 208 (5) may substitute for both CE 204 (3) and CE 207 (2).