

Department of Biomedical Engineering



ALL Approved Courses By Number

Courses are listed here by department designator and number
r, to aid in registration. Course descriptions are listed in the [course catalog](#).

Requirement Key:

B = Biology Elective	F = Free Elective ONLY	/ = OR
C5 = BMEn 5000 Core	M = Math-/Stat-Intensive	, = AND
C8 = BMEn 8000 Core	T = Technical Elective	

~~strike~~through = No longer offered as of 2023

E.g. **C8/B** means the course can be counted as EITHER BMEn 8000 Core OR Biology Elective.
C5/T, M means the course can be counted as EITHER BMEn 5000 Core OR Technical Elective; AND it also counts as Math-/Stat-Intensive.

AEROSPACE ENGINEERING AND MECHANICS (AEM)

- AEM 5401 - Intermediate Dynamics (3 cr) - **T**
- AEM 5451 - Optimal Estimation (= EE 5251, 3 cr) - **T, M**
- AEM 5501 - Continuum Mechanics (3 cr) - **T, M**
- AEM 5503 - Theory of Elasticity (3 cr) - **T, M**
- AEM 8201: Fluid Mechanics I (3 cr) - **T, M**
- AEM 8202: Fluid Mechanics II (3 cr) - **T, M**
- AEM 8233 - Multi-phase Flows: Fundamentals, Measurement, and Modeling (3 cr) - **T, M**
- AEM 8511 - Advanced Topics in Continuum Mechanics (3 cr) - **T, M**
- AEM 8531 - Fracture Mechanics (3 cr) - **T**
- AEM 8551: Multiscale Methods for Bridging Length and Time Scales (3 cr) - **T**

BIOPRODUCTS AND BIOSYSTEMS ENGINEERING (BBE)

- BBE 5301 - Applied Surface and Colloid Science (3 cr) - **T**

BIOCHEMISTRY (BIOC)

- ~~BioC 5001 - Biochemistry, Molecular, and Cellular Biology (5 cr) - **B**~~
- BioC 5216 - Current Topics in Signal Transduction (3 cr) - **B**

BioC 5309: Biocatalysis and Biodegradation (3 cr) - T
BioC 5351 - Protein Engineering (3 cr) - T
BioC 5352 - Biotechnology and Bioengineering for Biochemists (3 cr) - T
BIOC 5361- Microbial Genomics and Bioinformatics (3 cr) - B
BioC 5444 - Muscle (3 cr; = PHSL 5444) - B
BioC 5528 - Spectroscopy and Kinetics (4 cr) - T
BioC 6021 - Biochemistry (3 cr) - B
BioC 8002 - Molecular Biology and Regulation of Biological Processes (3 cr) - B
BioC 8005 - Biochemistry: Structure and Catalysis (2 cr) - T
BioC 8216 - Signal Transduction and Gene Expression (3 cr) - B

BIOLOGY (BIOL)

BIOL 5272 - Applied Biostatistics (4 cr) - F

BIOMEDICAL ENGINEERING (BMEN)

BMEn 5001 - Advanced Biomaterials (3 cr) - C5/T
BMEN 5011: Immunoengineering (3 cr) - T
BMEn 5031 - Engineering Extracellular Matrices (3 cr) - B
BMEn 5041 - Tissue Engineering (3 cr) - T
BMEn 5101 - Advanced Bioelectricity and Instrumentation (3 cr) - C5/T
BMEn 5111 - Biomedical Ultrasound (3 cr) - T, M
BMEn 5151 - Introduction to BioMEMS and Medical Microdevices (2 cr) - T
BMEn 5201 - Advanced Biomechanics (3 cr) - C5/T, M
BMEn 5251 - Finite Element Methods for Biomedical Engineers (3 cr) - T, M
BMEn 5311 - Advanced Biomedical Transport Processes (3 cr) - C5/T, M
BMEn 5321 - Microfluidics in Biology and Medicine (3 cr) - T
BMEn 5351 - Cell Engineering (3 cr) - C5/T
BMEn 5355 - Stem Cell & Genetic Engineering (3 cr) - B, T
BMEn 5361 - 3D Bioprinting (2 cr) - T
BMEn 5401 - Advanced Functional Biomedical Imaging (3 cr) - C5/T
BMEN 5411 - Neural Engineering (3 cr) - T
~~BMEn 5412 - Neuromodulation (3 cr) - T (no longer offered)~~
BMEn 5413 - Neural Decoding and Interfacing (3 cr) - T
BMEn 5421 - Biomedical Optics (3 cr) - T
BMEn 5444 - Muscle (3 cr; = BioC 5444 and PHSL 5444) - B (NOT OFFERED AS BMEN COURSE AFTER SP16)

BMEn 5501 - Biology for Biomedical Engineers (3 cr) - **B** - *Students who took BMEN 2501 during their UMNTC undergraduate career are not permitted to take this course.*

BMEn 5601 - Cardiovascular Devices (1 cr) - **T**

BMEn 5701 - Cancer Bioengineering (3 cr) - **B**

BMEn 5801: Biomedical Data Science (3 cr) - **C5/T**

BMEn 5910: Special Topics in Biomedical Engineering (*Note special topics change and each is subject to individual approval*)

- Intro to Digital Electronics in Medical Devices (3 cr) - **T**
- Immunoengineering (3 cr) - **T** (BMEn 5011 as of Fall 2024)
- Biomedical Data Science (3 cr) - **C5/T** (BMEn 5801 as of Fall 2025)
- Finite Element Methods for Biomedical Engineers (3 cr) - **T, M** (BMEN 5251 as of Spring 2026)
- Oncomaterials and Medical Devices (3 cr) - **T**

BMEn 8001 - Polymeric Biomaterials (3 cr) - **C8/T**

BMEn 8041 - Advanced Tissue Engineering Lab (3 cr) - **C8/B**

BMEn 8101 - Biomedical Digital Signal Processing (3 cr) - **C8/T, M**

BMEn 8151 - Biomedical Electronics and Implantable Microsystems (3 cr) - **C8/T**

BMEn 8201 - Advanced Tissue Mechanics (3 cr) - **C8/T, M**

BMEn 8301 - Functional Biomedical Imaging (3 cr) - **C8/T, M** - WILL NOT BE OFFERED IN THE FORESEEABLE FUTURE

BMEn 8381 - Bioheat and Mass Transfer (3 cr) - **C8/T, M**

BMEn 8401 - New Product Design and Business Development I (4 cr) - **T**

BMEn 8402 - New Product Design and Business Development II (4 cr) - **F**

BMEn 8421 - Biophotonics (3 cr) - **C8/T**

BMEn 8431 - Controlled Drug and Gene Delivery: Materials, Mechanisms, and Models (4 cr) - **C8/T, M**

BMEn 8501 - Dynamical Systems in Biology (3 cr) - **C8/T, M**

BMEn 8502 - Physiological Control Systems (3 cr) - **C8/T, M**

BMEn 8511 - Systems and Synthetic Biology (3 cr) - **C8/T**

BIOETHICS (BTHX)

BTHX 5000 - Current Controversies in Bioethics (2 cr) - **F**

BTHX 5100 - Introduction to Clinical Ethics (3 cr) - **F**

BTHX 5110/BTHX 8110: Ethical Issues in Pediatrics (2 cr) - **F**

BTHX 5120/8120 - Dying in Contemporary Medical Culture (2 cr) - **F**

BTHX 5210 - Ethics of Human Subjects Research (3 cr) - **F**

BTHX 5300 - Foundations of Bioethics (3 cr) - **F**

BTHX 5325 Biomedical Ethics (3 cr) - **F**

BTHX 5650: Disability Ethics (3 cr) - F

CIVIL, ENVIRONMENTAL, & GEO-ENGINEERING (CEGE)

CEGE 8401 - Fundamentals of Finite Element Method (3 cr) - T, M

COGNITIVE SCIENCE (CGSC)

CGSc 8041 - Cognitive Neuroscience (4 cr) - B

CHEMISTRY (CHEM)

Chem 8021 - Computational Chemistry (3 cr) - T

Chem 8151: Analytical Separations and Chemical Equilibria (4 cr) - T

Chem 8157 - Bioanalytical Chemistry (4 cr) - T

Chem 8411 - Introduction to Chemical Biology (4 cr) - T

CHEMICAL ENGINEERING (CHEN)

ChEn 5751 - Biochemical Eng (3 cr) - T

ChEn 5802: Applied Machine Learning in Chemical Engineering and Materials Science (3 cr) - F

ChEn 8101 - Fluid Mechanics I: Change, Deformation, Equations of Flow (3 cr) - T, M

ChEn 8201 - Applied Mathematics I: Linear Analysis (3 cr) - T, M

ChEn 8221 - Synthetic Polymer Chemistry (4 cr) - T

ChEn 8301 - Physical Rate Processes I: Transport (3 cr) - T

ChEn 8401: Physical and Chemical Thermodynamics (3 cr) - T

ChEn 8402 - Statistical Thermodynamics and Kinetics (3 cr) - T, M

ChEn 8754 - Systems Analysis of Biological Processes (3 cr) - T, M

CLINICAL PHYSIOLOGY AND MOVEMENT SCIENCE (CPMS)

CPMS 5101 - Introduction to Clinical Physiology and Movement Science (3 cr) - B

COMPARATIVE AND MOLECULAR BIOSCIENCES (CMB)

CMB 5910: Grantwriting: What Makes a Winning Proposal? (2 cr) - F

CMB 5912 - Creativity (1 cr) - F

CMB 8303 - Comparative Models of Disease (2 cr) - B

COMPUTER SCIENCE (CSCI)

CSci 5103 - Operating Systems (3 cr) - T

CSCI 5115: User Interface Design, Implementation and Evaluation (3 cr) - T

CSci 5211 - Data Communications and Computer Networks (3 cr) - T

CSci 5421 - Advanced Algorithms and Data Structures (3 cr) - T
CSci 5451 - Introduction to Parallel Computing (3 cr) - T
CSci 5461: Functional Genomics, Systems Biology, and Bioinformatics (3 cr) - T
CSci 5511 - Artificial Intelligence I (3 cr) - T
CSci 5512 - Artificial Intelligence II (3 cr) - T
CSci 5521 - Introduction to Machine Learning (3 cr) - T, M
CSci 5523 - Introduction to Data Mining (3 cr) - T
CSci 5525 - Machine Learning (3 cr) - T, M
CSci 5527 - Deep Learning (3 cr) - T
CSCI 5541: Natural Language Processing (3 cr) - T
CSci 5551 - Introduction to Intelligent Robotic Systems (3 cr) - T
CSci 5609 - Visualization (3 cr) - T
CSCI 5707- Principles of DB Systems (3 cr) - T

ECOLOGY, EVOLUTION, AND BEHAVIOR (EEB)

EEB 5371 - Principles of Systematics (3 cr) - B

ELECTRICAL AND COMPUTER ENGINEERING (EE)

EE 5141 - Introduction to Microsystem Technology (4 cr) - T
EE 5171 - Microelectronic Fabrication (3 cr) - T
EE 5239: Introduction to Nonlinear Optimization (3 cr) - T, M
EE 5251 - Optimal Filtering and Estimation (= AEM 5451, 3 cr) - T, M
EE 5323 - VLSI Design I (3 cr) - T
EE 5333 - Analog Integrated Circuit Design (3 cr) - T
EE 5393 - Circuits, Computation, and Biology (3 cr) - T
EE 5531 - Probability and Stochastic Processes (3 cr) - T, M
EE 5542 - Adaptive Digital Signal Processing (3 cr) - T, M
EE 5545 - Digital Signal Processing Design (3 cr) - T, M
EE 5561 - Image Processing and Applications (3 cr) - T, M
EE 5585: Data Compression (3 cr) - T
EE 5601 - Introduction to RF/Microwave Engineering (3 cr) - T, M
EE 5607 - Wireless Hardware System Design (3 cr) - T
EE 5621 - Physical Optics (3 cr) - T, M
EE 8601 - Adv Electromagnetic Theory (3 cr) - T
EE 8591 - Predictive Learning from Data (3 cr) - T, M

FAMILY SOCIAL SCIENCE(FSOS)

FSOS 5426: Alcohol and Drugs: Families and Culture (3 cr) - **F**

GRAD CHALLENGE CURRICULUM (GCC)

GCC 5022: The Human Experience of Sensory Loss: Seeking Equitable and Effective Solutions (3 cr) - **F**

GENETICS, CELL BIOLOGY AND DEVELOPMENT (GCD)

GCD 5005: Computer Programming for Biology (3 cr) - **T**

GCD 5036 - Molecular Cell Biology (3 cr) - **B**

GCD 8008 - Mammalian Gene Transfer and Genome Engineering (2 cr) - **B**

GCD 8103 - Human Histology (5 cr) - **B**

GCD 8111: Quantitative Fluorescence Microscopy (3 cr) - **F**

~~GCD 8136 - Techniques of Biological Electron Microscopy (4 cr) - **B**~~

GCD 8141: Computational Genomics (3 cr) - **B**

GCD 8151: Cellular Biochemistry and Cell Biology: Cell Biology/Cellular Functions (2 cr) - **B**

GCD 8151: Cellular Biochemistry and Cell Biology: Biochemistry/Biophysics (2 cr) - **T**

GCD 8161 - Advanced Developmental Biology (3 cr) - **B**

HEALTH INFORMATICS (HINF)

HInf 5430 - Health Informatics I (3 cr) - **T**

HInf 5431 - Health Informatics II (3 cr) - **T**

HINF 5660 - Applied Causal Discovery (3 cr) - **T**

HInf 8440: Foundations of Translational Bioinformatics Lab (2 cr) - **T**

HUMAN FACTORS (HUMF)

HumF 5001 - Foundations of Human Factors/Ergonomics (= Kin 5001, 3 cr) - **T**

HumF 5211 - Human Factors and Work Analysis (= IE 5511/ME 5211, 4 cr) - **T**

HumF 5874: Human Centered Design to Improve Complex Systems (4 cr) - **F**

INDUSTRIAL ENGINEERING (IE)

IE 5111 - Systems Engineering I (2 cr) - **T**

~~IE 5112 - Introduction to Operations Research (3 cr) - **T**~~

IE 5113 - Systems Engineering II (4 cr) - **T**

IE 5511 - Human Factors and Work Analysis (= HumF 5211/ME 5211, 4 cr) - **T**

IE 5522 - Quality Engineering and Reliability (4 cr) - **T, M**

IE 5524: Process Transformation through Lean Tools (2 cr) - T

IE 5533: Operations Research for Data Science (3 cr) - T

IE 5541 - Project Management (4 cr) - T

IE 5545 - Decision Analysis (4 cr) - T

IE 5553 - Simulation (4 cr) - T

IE 8564: Optimization for Machine Learning (4 cr) - T, M

KINESIOLOGY (KIN)

Kin 5643 - Applied Movement Analysis (3 cr) - T

MATHEMATICS (MATH)

Math 5248 - Cryptology and Number Theory (4 cr) - T, M

Math 5445 - Mathematical Analysis of Biological Networks (4 cr) - T, M

Math 5447 - Theoretical Neuroscience (4 cr) - T, M

Math 5465: Mathematics of Machine Learning and Data Analysis I (4 cr) - T, M

Math 5587 - Elementary Partial Differential Equations I (4 cr) - T, M

Math 5651 - Probability and Stochastic Theory (4 cr) - T, M

Math 5652 - Introduction to Stochastic Processes (4 cr) - T, M

Math 8202 - General Algebra (3 cr) - T, M

Math 8253 - Algebraic Geometry (3 cr) - T, M

Math 8441 - Numerical Analysis and Scientific Computing (3 cr) - T, M

MATERIALS SCIENCE (MATS)

MatS 8001 - Structure and Symmetry of Materials (3 cr) - T

MatS 8002 - Thermodynamics and Kinetics (3 cr) - T

MatS 8003 - Electronic Properties (3 cr) - T

MatS 8211: Physical Chemistry of Polymers (4 cr) - T

MECHANICAL ENGINEERING (ME)

~~ME 5211 - Human Factors and Work Analysis (= HumF 5211/IE 5511, 4 cr) - T~~

ME 5223: Materials in Design (4 cr) - T

ME 5228 - Intro to Finite Element Modeling, Analysis and Design (4 cr) - T, M

ME 5241 - Computer Aided Engineering (4 cr) - T

ME 5243 - Advanced Mechanism Design (4 cr) - T

ME 5247 - Stress Analysis, Sensing and Transducers (4 cr) - T

ME 5281 - Analog and Digital Control (4 cr) - T

ME 5286 - Robotics (4 cr) - T
ME 5341 - Case Studies in Thermal Engineering and Design (4 cr) - T
ME 5351 - Computational Heat Transfer (4 cr) - T, M
ME 8254 - Fundamentals of Microelectromechanical Systems (MEMS) (4 cr) - T
ME 8284 - Intermediate Robotics with Medical Applications (4 cr) - F
ME 8341 - Conduction (3 cr) - T, M
ME 8342 - Convection (3 cr) - T, M
ME 8343 - Radiation (3 cr) - T, M
ME 8345 - Computational Heat Transfer and Fluid Flow (3 cr) - T, M
ME 8390 - Biostabilization in Biomedicine and Biotechnology (2 cr) - T

MEDICINAL CHEMISTRY (MEDC)

MedC 5245 - Introduction to Drug Design (3 cr) - B
MedC 8001 - General Principles of Medicinal Chemistry I (3 cr) - B
MedC 8002 - General Principles of Medicinal Chemistry II (3 cr) - B
MedC 8070: The Chemistry and Biology of Infectious Diseases (3 cr) - B
MedC 8461 - Design of Cancer Immunotherapeutics (3 cr) - B
MedC 8753 - Molecular Targets of Drug Discovery (3 cr) - B
MedC 8760 - Design of Peptidomimetics (2 cr) - B

MEDICAL DEVICE INNOVATION (MDI)

MDI 5010: Product Innovation & Development Management (2 cr) - F (*permissions from MDI department needed but not guaranteed*).

MEDICAL LABORATORY SCIENCE PROGRAM (MLSP)

MLSP 5111 - Concepts of Diagnostic Microbiology (3 cr) - B
MLSP 5511 - Principles of Immunobiology (3 cr) - B

MICROBIOLOGY, IMMUNOLOGY, AND CANCER BIOLOGY (MICA)

MiCA 8002 - Structure, Function, and Genetics of Bacteria and Viruses (4 cr) - B
MiCA 8003 - Immunity and Immunopathology (4 cr) - B
MiCA 8004 - Cellular and Cancer Biology (4 cr) - B
MiCA 8009 - Biochemical Aspects of Normal and Abnormal Cell Growth and Death (2 cr) - B
MiCA 8011: Current Topics in Immunology (3 cr) - B

MEDICAL INDUSTRY LEADERSHIP INSTITUTE (MILI)

- MILI 5589 - Medical Technology Evaluation (2 cr) - F
- MILI 6235 - Pharmaceutical Industry: Business and Policy (2 cr) - F
- MILI 6421: Healthcare Law: Strategic and Business Implications (2 cr) - F
- MILI 6589: Medical Technology Evaluation and Market Research (2 cr) - F
- MILI 6726: Medical Device Industry: Business and Public Policy (2 cr) - F
- MILI 6995 - Medical Industry Valuation Lab (2 cr) - F
- MILI 6996: Medical Industry Valuation Laboratory II (4 cr) - F

MANAGEMENT OF TECHNOLOGY (MOT)

- MOT 5001 - Technological Business Fundamentals (2 cr) - F
- MOT 5002 - Creating Technological Innovation (2 cr) - F
- MOT 5003 - Technological Business Planning Workshop (1 cr) - F
- MOT 5004 Leading Innovation Teams (3 cr) - F
- MOT 5005 - Building Innovative Organizations (2 cr) - F
- MOT 8502: Innovation Leadership and Organizational Effectiveness (1 cr) - F

MEDICAL PHYSICS (MPHY)

- MPhy 5040 - Introduction to Medical Physics (3 cr) - T
- MPhy 5170 - Basic Radiological Physics (3 cr) - T
- MPhy 5171 - Medical and Health Physics of Imaging I (3 cr) - T
- MPhy 5172 - Radiation Biology (3 cr) - B
- MPhy 5174 - Medical and Health Physics of Imaging II (3 cr) - T
- MPhy 5178 - Physical Principles of Magnetic Resonance Imaging (3 cr) - T
- MPhy 8147 - Advanced Physics of Magnetic Resonance Imaging (3 cr) - T, M

NEUROLOGY (NEUR)

- Neur 5230 - Cerebrovascular Hemodynamics and Diseases I (4 cr) - B

NEUROSCIENCE (NSC)

- ~~NSc 5201 - Computational Neuroscience I: Membranes and Channels (3 cr) - B~~
- NSc 5202 - Theoretical Neuroscience: Systems and Information Processing (3 cr) - T
- NSc 5461 - Cellular and Molecular Neuroscience (4 cr) - B
- NSc 5462 - Neuroscience Principles of Drug Abuse (2 cr) - B
- NSc 5561 - Systems Neuroscience (4 cr) - B

NSc 5661 - Behavioral Neuroscience (2-3 cr) - B

~~NSc 5667 - Neurobiology of Disease (only the 3-cr version can be counted as a Bio Elective) - B~~

NSc 8111: Quantitative Neuroscience (3 cr) - T

NSc 8208 / PHCL 8208 / CMB 8208 / PSY 8061 - Neuropsychopharmacology (3 cr) - B

NSc 8211 - Developmental Neurobiology (3 cr) - B

NSc 8221 - Neurobiology of Pain and Analgesia (3 cr) - B

NEUROSCIENCE DEPARTMENT (NSCI)

NSci 5101 - Introduction to Neuroscience for Graduate Students (3 cr) - B

NSci 5501 - Neurodegenerative Diseases, Mechanisms to Therapies (3 cr) - B

~~NSci 5300 - Biological Microscopy and Digital Imaging (3 cr) - T~~

ORAL BIOLOGY (OBIO)

OBio 8012 - Basic Concepts in Skeletal Biology (2 cr) - B

OBio 8027 - Biomaterials in Regenerative Dentistry (2 cr) - T

OBio 8028 - Molecular Basics of Cellular Adhesion (2 cr) - B

OBio 8050: Evolution of Emerging Viruses (2 cr) - B

PHARMACY (PHAR)

PHAR 5201: Applied Medical Terminology (2 cr) - F

Phar 5204 - Drugs and the U.S. Health Care System (3 cr) - F

Phar 5700 - Fundamentals of Pharmacotherapy (3 cr) - B

PRODUCT DESIGN (PDES)

PDes 5701 - Creativity, Idea Generation, and Innovation (3 cr) - F

PDes 5702 - Concept Sketching and Rendering (3 cr) - F

PDes 5704 - Innovative Computer Modeling and Rendering for Design (3 cr) - 1 cr T + 2 cr F ONLY

PHYSIOLOGY (PHSL)

Phsl 5061 - Principles of Physiology for Biomedical Engineering (4 cr) - B - *Students who took PHsL 3061 or PHsL 4061 during their UMNTC undergraduate career are not permitted to take this course.*

Phsl 5115 - Clinical Physiology I (3 cr) - B

Phsl 5116 - Clinical Physiology II (3 cr) - B

Phsl 5197: Stress Physiology (1-3 cr) - B

Phsl 5211: Physiology of Inflammation in Disease (3 cr) - B

Phsl 5221: Systems and Computational Physiology (3 cr) - T

Phsl 5444 - Muscle (3 cr; = BioC 5444) - B

Phsl 5510 - Advanced Cardiac Physiology and Anatomy (2 or 3 cr) - B

Phsl 5525 - Anatomy and Physiology of the Pelvis and Urinary System (1 or 2 cr) - B

PHYSICS (PHYS)

Phys 5001: Quantum Mechanics I (4 cr) - T

Phys 5002: Quantum Mechanics II (4 cr) - T

Phys 5081 - Introduction to Biopolymer Physics (3 cr) - T

~~Phys 5401 - Physiological Physics (4 cr) - F~~

~~Phys 5402 - Radiological Physics (4 cr) - T~~

PSYCHOLOGY (PSY)

Psy 5015 - Cognition, Computation, and Brain (3 cr) - B

PSY 5037: Psychology of Hearing (3 cr) - B

Psy 5038W - Introduction to Neural Networks (3 cr) - T, M

Psy 5054: Psychology of Language (3 cr) - F

Psy 5062 - Cognitive Neuropsychology (3 cr) - B

Psy 5064: Brain and Emotion (3 cr) - B

Psy 5065 - Functional Imaging: Hands-on Training (3 cr) - T

Psy 8041 - Proseminar in Perception (3 cr) - B

PUBLIC HEALTH (PUBH)

PubH 6161 - Regulatory Toxicology (2 cr) - F

PUBH 6420: Introduction to SAS Programming (1 cr) - F

~~PubH 6415 - Biostatistical Methods II (3 cr) - T~~

PubH 6450 - Biostatistics I (4 cr) - T, M

PubH 6451 - Biostatistics II (4 cr) - T, M

PubH 6555: Health Economics (2 cr) - F

PubH 7415 - Introduction to Clinical Trials (3 cr) - F

PUBH 7420 - Clinical Trials: Design, Implementation, and Analysis (3 cr) - F

PubH 7440 - Introduction to Bayesian Analysis (3 cr) - T, M

PUBH 7461: Exploring and Visualizing Data in R (2 cr) - T

PubH 7475 - Statistical Learning and Data Mining (3 cr) - T, M

PubH 8446 - Advanced Topics in Omics Data Analysis (3 cr) - T

PubH 8452 - Models for Dependent Data (4 cr) - T, M

PubH 8475 - Advanced Topics on Machine Learning (3 cr) - T

REHABILITATION SCIENCE (RSC)

RSC 5135 - Advanced Biomechanics I: Kinematics (3 cr) - T

RSC 5200 - Intro to Transcranial Magnetic Stimulation (3 cr) - B

RSC 5235 - Advanced Biomechanics II: Kinetics (3 cr) - T

RSC 5402 - The Shoulder in Sports Rehabilitation Science (3cr) - B

RSC 5841 - Applied Data Acquisition and Processing (4 cr) - T

RSC 8135 - Human Kinematics (3 cr) - T

RSC 8235 - Human Kinetics (3 cr) - T

RSC 8282 - Problems in Human Movement (4 cr) - B

STEM CELL BIOLOGY (SCB)

SCB 8181 - Stem Cell Biology (3 cr) - B

SPEECH-LANGUAGE-HEARING SCIENCES (SLHS)

SLHS 5605 - Language and Cognitive Disorders in Adults (3 cr) - B

SLHS 5802: Hearing Aids I (3 cr) - B,F

SLHS 5804 - Cochlear Implants (3 cr) - F

SLHS 5806 - Auditory Processing Disorders (3 cr) - B

SLHS 5808 - Hearing Disorders (3 cr) - B

SLHS 8802: Hearing Aids II (3 cr) - B,F

STATISTICS (STAT)

Stat 5021 - Statistical Analysis (4 cr) - T, M

Stat 5101 - Theory of Statistics I (4 cr) - T, M

Stat 5102 - Theory of Statistics II (4 cr) - T, M

Stat 5302 - Applied Regression Analysis (4 cr) - T, M

Stat 5303 - Designing Experiments (4 cr) - T, M

Stat 5401 - Applied Multivariate Methods (3 cr) - T, M

SUPPLY CHAIN & OPERATIONS MANAGEMENT (SCO)

SCO 6096: Supply Chain Management in the Health Care and Medical Devices Sector (2 cr) - F

VIROLOGY (VIRO)

VIRO 8010: Molecular Virology (2 cr) - B

VIRO 8020: Virus Pathogenesis and Host Interactions (2 cr) - **B**

VIRO 8050: Evolution of Emerging Viruses (2 cr) - **B**

WRIT 5001: Foundations and Futures of Technical Communication (3 cr) - **F**