

Appendix VII: Examples of courses previously approved by the GEC

Updated March 2004

Biomedical Science Courses

(Partial Listing)

Notes:

1. Appearance of a course on this list does NOT guarantee that it will be accepted by the GEC for your Program of Study. The content of courses changes over time and the lists below may lag behind. Furthermore, the manner in which an individual course fits in with your overall Program of Study will vary across students.
2. Courses that do not appear in this list can be used to fulfill the various requirements if approved by the GEC.
3. If you are in doubt over whether a course will be accepted in a particular category, submit your Program of Study *PRIOR* to taking the course. You can thus be confident that the course will not be found at a later date to be ineligible by the GEC.

ANAT	414	Neuroanatomy
BIOC	408	Genes and Genetic Engineering
BIOC	409	Biochemistry Of G-Protein Coupled Receptors
BIOC	412	Intro to Physical Biochemistry
CBIO	453	Cell Biology I
CBIO	454	Cell Biology II
CLBY	518	Cell Surfaces and Matrices
EBME	408	Tissue Engineering
EBME	417	Structure and Function of Excitable Cells
EBME	451	Physiological Processes I
EBME	452	Physiological Processes II
EBME	502	Cardiac Excitation, Rhythm and Control
EBME	517	Quantitative Neurophysiology
EMAE	413	Functional Anatomy
NEUR	402	Principles of Neural Science
NEUR	405	Cellular and Molecular Neurobiology
NEUR	406	Systems Neuroscience
NEUR	473	Introduction to Neurobiology
PATH	416	Fundamental Immunology
PATH	467	Advanced Molecular Immunology
PATH	510	Basic Pathologic Mechanisms
PHOL	432	Cell Structure and Function
PHOL	460	Introduction to Molecular Biology
PHOL	466	Cell Signaling
PHOL	468	Membrane Physiology
PHOL	512	Methods in Cardiovascular Research
PHOL	514	Principles of Cardiovascular Research
PHOL	518	Integrative Approaches to Cardiorespiratory Research
PHOL	530	Chemistry and Properties of Proteins
PHRM	413	Molecular Pharmacology
PSCL	401	Sensation and Perception

Mathematical Science Courses (Partial Listing)

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EBME	431	Physics of Nuclear Magnetic Resonance Imaging
EBME	504	Transport of Biomedical Systems
EBME	519	Parameter Estimation for Biomedical Systems
EECS	416	Optimization Theory and Techniques
ECHE	461	Transport Phenomena
ECIV	420	Intro to Finite Element Methodology
MATH	431	Numerical Analysis
MATH	432	Numerical Solution
MATH	475	Mathematics of Imaging in Indus. & Med. S
MATH	440	Numerical Methods for Ill-posed Probs.
MATH	428	Fourier Analysis
MATH	471	Advanced Engineering Mathematics
MATH	475	Mathematics of Imaging in Industry and Medicine
PHYS	423	Classical Electromagnetism
STAT	412	Design and Analysis in Engineering and Science
STAT	425	Data Analysis I
STAT	433	Uncertainty in Science and Engineering

Research Ethics Courses (Partial Listing)

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IBMS	500	On Being a Professional Scientist
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Biomaterials and Tissue Engineering “Engineering Concentration” Courses

(Partial Listing)

EBME 405 Materials for Prosthetic and Orthotic Use
EBME 406 Polymers in Medicine
EBME 408 Tissue Engineering
EBME 416 Biomolecular Engineering
EBME 503 Biomolecular Forces
EBME 504 Transport of Biomedical Systems
ECHE 461 Transport Phenomena
ECHE 464 Surfaces and Adsorption
ECHE 466 Colloid Science
EMAC 470 Macromolecular Synthesis
EMAC 473 Biopolymers
EMAC 474 Macromolecular Physics
EMAC 476 Polymer Engineering
EMAC 570 Functional and Reactive Polymers

Imaging/Sensors “Engineering Concentration” Courses

(Partial Listing)

EBME 410 Fundamentals of Medical Imaging
EBME 431 Physics of Imaging
EBME 460 Advanced Topics in NMR Imaging
EBME 461 Biomedical Image Processing and Analysis
EBME 513 Biomedical Optical Diagnostics
EBME 519 Parameter Estimation for Biomedical Systems
EBME 523 Chemical and Optical Sensors
EECS 405 Data Structures & Files
EECS 452 Random Signals
EECS 454 Analysis of Algorithms
EECS 484 Computational Intelligence I
EECS 487 Computational Intelligence II
EECS 531 Computer Vision

Neural Engineering and Rehabilitation “Engineering Concentration” Courses

(Partial Listing)

EBME 402 Muscles Biomechanics Control
EBME 405 Materials for Prosthetic and Orthotic Use
EBME 407 Applied Neural Control
EBME 412 Biomedical Signal Processing
EBME 427 Movement Biomechanics and Rehabilitation
EBME 478 Computational Neuroscience
EBME 479 Seminar in Computational Neuroscience
EBME 507 Motor System Neuroprostheses
EECS 484 Computational Intelligence