

Biomedical Engineering Core subjects offered Fall 2007

20.110J Thermodynamics of Biomolecular Systems

Prereq: [18.02](#); [5.111](#), [5.112](#), or [3.091](#)

Units: 5-0-7

Limited enrollment

E. Alm, L. G. Griffith

20.309J Biological Engineering II: Instrumentation and Measurement

Prereq: [18.03](#)

Units: 3-6-3

S. Manalis, P. T. So, M. Shusteff

20.320 Analysis of Biomolecular & Cellular Systems

Prereq: [20.110J/2.772J](#); [18.03](#); [6.00](#); [5.07/7.05](#)

Units: 4-0-8

F. White, E. Fraenkel

20.370J Quantitative Physiology: Cells and Tissues

Prereq: [8.02](#); [18.03](#); [2.005](#), [6.002](#), [6.003](#), [6.071](#), [10.301](#), or permission of instructor

Units: 5-2-5

D. M. Freeman, J. Han

Biomedical Engineering Core subjects offered Spring 2008

20.310J Molecular, Cellular, and Tissue Biomechanics

Prereq: [18.03](#) or [3.016](#); [7.012](#), [7.013](#), [7.014](#), or [7.015](#); [2.370](#) or [2.772J](#)

Units: 4-0-8

M. J. Lang, R. D. Kamm

20.330J Fields, Forces and Flows in Biological Systems

Prereq: [2.005](#), [6.021](#), [20.320](#) or permission of instructor

Units: 4-0-8

J. Han, S. Manalis

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

Prereq: [5.07](#) or [7.05](#); [7.03](#); [18.03](#); [20.110](#) or [5.60](#)

Units: 3-0-6

L. G. Griffith, J. G. Fox, D. Schauer

20.371J Quantitative Physiology: Organ Transport Systems

Prereq: [18.03](#), [8.02](#), or permission of instructor

Units: 4-2-6

R. G. Mark, C. M. Stultz

20.390 Foundations of Computational and Systems Biology

Prereq: [7.05](#) or [5.07](#); or [7.01x](#) and [6.001](#); or permission of instructor

Units: 3-0-9

M. Yaffe, C. Burge, A. Keating

Biomedical Engineering Restricted Electives offered Fall 2007

20.342 Molecular Structure of Biological Materials

Prereq: [5.07](#) or [7.05](#); permission of instructor

Units: 3-0-9

S. Zhang

9.29J Introduction to Computational Neuroscience

Prereq: [18.03](#) and [8.02](#) or permission of instructor

Units: 3-0-9

M. Fee

10.28 Chemical-Biological Engineering Laboratory

Prereq: [5.310](#), [7.02](#), or [10.702](#); and [7.05](#) or [5.07](#), or permission of instructor

Units: 2-8-5

J. F. Hamel, D. I. C. Wang, K. J. Prather

16.400 Human Factors Engineering

Prereq: [16.06](#)

Units: 3-3-6

M. L. Cummings, L. R. Young

22.01 Introduction to Ionizing Radiation

Prereq: --

Units: 5-0-7

J. C. Yanch

22.058 Principles of Tomographic Imaging

Prereq: [18.03](#), [8.02](#)

Units: 3-3-6

D. G. Cory

Biomedical Engineering Restricted Electives offered Spring 2008

3.052 Nanomechanics of Materials and Biomaterials

Prereq: [3.032](#), [3.11](#), or permission of instructor

Units: 3-0-9

C. Ortiz

6.121J Bioelectronics Project Laboratory

Prereq: [6.002](#) or [6.071](#)

Units: 2-8-2

R. Sarpeshkar, D. M. Freeman, S. K. Burns

6.807 Computational Functional Genomics

Prereq: [7.012](#), [7.013](#), [7.014](#), or [7.015](#)

Units: 3-0-9

D. K. Gifford, T. S. Jaakkola

10.29 Biological Engineering Projects Laboratory

Prereq: [5.310](#), [7.02](#), or [10.702](#); [10.302](#)

Units: 3-8-4

C. K. Colton, J. F. Hamel, C. L. Cooney