Pre-Approved[1] Bioengineering Electives for Biological Engineering

(NOTE: Technical Electives ≠ Engineering Electives ≠ Bioengineering Electives)[2]

Updated: March 2016

Course #	Title	Offered	Credits	Prereqs
BCH 441	Biochemistry of Macromolecules	[F]	3	BCH 380
BCH 444R	Biochemistry & Molecular Bio Methods	[S]	3	BCH 441
BIOB 260	Cell and Molecular Biology	[F]	4	STAT 216, CHMY 141, BIOB 256, and CHMY 143
BIOB 410	Immunology	[F]	3	Co-Req CHMY 211 or CHMY 321
BIOB 411	Immunology Lab	[F]		BIOB 410 (may be taken as co-req)
BIOB 420	Evolution	[S]	3	BIOB 375, BIOB 377 or BIOH 320
BIOB 425	Advanced Cell & Molecular Biology	[S]	3	BIOB 260 and BCH 380
BIOB 430	Plant Biotechnology	[S]	3	BCH 380
BIOB 477	Genome Science/Gene Expression	[S]	5	BCH 380
BIOB 476R	Gene Construction	[F]	3	BCH 380
BIOB 478	Functional Gene Expression	[S]	2	BCH 380
BIOB 484	Population Genetics	[F, alt]	3	BIOB 375
BIOE 370	Principles of Ecology	[S]	3	BIOB 170
BIOE 428	Freshwater Ecology	[F]	3	BIOE 370
BIOH 201	Anatomy & Physiology I	[F,S,Su]	5	CHMY 121, CHMY 141 or CHMY 151
BIOH 211	Anatomy and Physiology II	[F]	4	BIOH 201, BIOB 260, or BIOM 360
BIOH 287	Intermediate Human Physiology I	[S]	3	CHMY 121, CHMY 141 or CHMY 151
BIOH 288	Intermediate Human Physiology II	[F]	3	BIOH 201, BIOB 260, BIOH 287 or BIOM 360
BIOH 313	Neurophysiology	[F]	3	BIOB 256 and BIOB 260
BIOH 320	Biomedical Genetics	[F]	3	BIOB 214, Co-req BCH 380
BIOH 323	Human Developmental Biology	[S]	4	BIOB 170 or BIOB 258 and or BIOB 260 and BIOB 375
BIOH 411	Advanced Human Anatomy	[S]	4	Senior standing, 2 upper division biological science courses, or consent of inst.
BIOH 422	Genes and Cancer (approved 2013)	[F]	3	BIOB 375 and BIOB 425
BIOH 425	Sensory Neurophysiology	[S]	3	BIOH 313
BIOH 430	Neuroethology	On demand	3	Consent of inst.
BIOH 435	Cognitive Neuroscience	[S]	3	BIOH 313 and BCH 380, and BIOH 211, PSYZ 350 or BIOO 412
BIOH 440	Neuroscience of Mental Illness	[F]	3	BIOH 313 or BIOH 435
BIOH 455	Molecular Medicine	[S]	3	BIOB 375, BCH 380
BIOL 395	Human Pathophysiology	[S]	??	BCH 380 or consent
BIOM 250	Microbiology for Health Sci: Inf. Dis.	[F,S]	3	

Note 1: Other courses may be allowed for bioengineering elective credit, but you should get any course you are considering approved prior to enrolling. **See your advisor about approving potential technical elective courses.**

Only courses with significant biological content will be approved.

BIOM 410	Microbial Genetics	[S]	3	MB 301, BIOM 360
BIOM 415	Microbial Diversity, Ecology & Evolution	[S even]	3	BCH 380, BIOM 360, or consent
BIOM 425	Toxicology: Science of Poisons	[S]	3	CHMY 143, BIOB 160
BIOM 430	Applied and Environmental Micro,	[S]	3+1	BIOM 360
BIOM 431	Medical Bacteriology	[S]	3	BIOM 360
BIOM 435	Virology (approved 2013)	[F]	3	BIOB 260 and BIOB 425 or BCH 380
BIOM 450	Microbial Physiology	[F]	3	BIOM 360, BCH 380
BIOM 455R	Research Methods in Microbiology	[S]	4	BCH 380
BIOO 412	Animal Physiology	[F]	3	BIOB 160 or BIOB 260 and CHMY 211, CHMY 321
EBIO 461	Principles of Biomedical Engineering	[S]	3	ECHM 321
EENV 340	Principles of Enivronmental Engineering	[F,S]	3	CHMY 143 or CHMY 153
EENV 434	Ground Water Supply & Remediation	[S]	3	EGEN 335
EENV 440	Water Chemistry for Envr Engr	[S]	3	EENV 340
EENV 441	Natural Treatment Systems	[S]	3	EENV 340
EGEN 325	Engineering Economic Analysis	[F,S,Su]	3	Junior Standing. M171Q or M165Q
EGEN 330	Business Fundamentals for Technical Professionals	[F]	3	
EMAT 464	Biomedical Materials	[F]	3	ECHM 321
HDFN 451R	Sustainable Food Systems	[S]	3	HDFN 221 or consent
BIOM 452	Soil & Environmental Microbiology	[S]	3	CHMY 143, LRES 201, BIOM 360
EMEC 424	Cellular Mechanotransduction	[F]	3	M 274
ENSC 453	Soil & Environmental Physics	[F odd]	3	LRES 201 rec, M 170
ENSC 460	Soil Remediation	[S]	3	LRES 201 or consent
M 430	Mathematical Biology	[S]	3	M 273 and M 274
PSPP 423	Mycology	[F even]	3	BIOB 170
PSPP 424	Ecology of Fungi	[F odd]	3	BIOB170 and BIOB 256
PSPP 426	Plant Biotechnology	[S]	3	BCH 380