Pre-Approved Technical Electives

Chemical Engineering

Bioengineering (NOTE: Bioengineering Technical Electives ≠ Bioengineering Electives)[i]

updated 10/2007

Course #	Title	Offered	Credits
BCHM 441	Biochemistry of Macromolecules	[F]	3
BIOL 301	Principles of Genetics	[F,S]	3
BIOL 302	Advanced Cell and Molecular Biology	[S]	3
BREN 434	Groundwater Supply and Remediation	[S]	3
BREN 441	Natural Treatment Systems	[S]	3
CE 340	Environmental Engineering	[F,S]	3
CHBE 452	Advanced Engineering Materials	[on demand]	3
CHBE 463	Composite Materials	[F odd]	3
CHBE 467	Intro. to Polymer Engineering	[on demand]	3
CHBE 490	Undergraduate Thesis	[F,S,Su]	1 to 8
CHEM 228	Analytical Chemistry	[S]	4
CHEM 323	Physical Chemistry I	[F]	3
CHEM 325	Physical Chemistry Laboratory I	[F]	1
CHEM 326	Physical Chemistry Laboratory II	[S]	2
CHEM 334	Inorganic Chemistry	[S]	3
CHEM 417	Synthetic Chemistry	[S odd]	3
CHEM 426	Instrumental Analysis	[F]	3
CHEM 428	Instrumental Analysis Lab	[F]	2
ENVE 443	Air Pollution Control	[F even]	3
ENVE 444	Hazardous Waste Management	[S even]	3
ENVE 445	Hazardous Waste Treatment	[F odd]	3
EE 206	Circuits & Electronics Fundamentals I	[F,S]	4
EE 207	Circuits & Electronics Fundamentals II	[S]	4
EE 250	Circuits, Devices, and Motors	[F,S]	4
EM 251	Statics and Particle Dynamics	[F,S,Su]	3
EM 252	Rigid Body Dynamics	[F,S,Su]	3
EM 253	Mechanics of Materials	[F,S]	3
I&ME 313	Work Analysis & Design	[S]	3
I&ME 350	Applied Eng. Data Analysis	[F,S,Su]	2
I&ME 354	Engineering Statistics I	[F]	3
LRES 355	Environmental Chemistry	[S odd]	3
MB 301	General Microbiology I	[F,S]	5
MB 420	Medical Physiology	[F]	3
MB 432	Industrial Microbiology and Biotech	[S]	3
MB 433	Applied and Env Microbiology	[F]	4
MB 449	Microbial Genetics	[S]	3

Note: Other courses may be allowed for technical elective credit, but you should get any course you are considering approved prior to enrolling. See the Department Certifying Officer, Max Deibert, about approving potential technical elective courses.

ME 251	Materials Science Laboratory	[F,S]	1
ME 255	Manufacturing Processes	[F,S]	3
ME 321	Thermodynamics II	[F,S]	3
ME 355	Computer-Aided Manufacturing	[on demand]	3
ME 450	Metallic Materials	[on demand]	3
ME 464	Mechanical Behavior of Materials	[F even]	3
PHYS 213	General & Modern Physics III	[S]	4
PHYS 231	Intro. to Theoretical Physics	[S]	3
PHYS 425	Thermo. & Statistical Physics	[S odd]	3
PHYS 426	Modern Optics	[S even]	3
PHYS 427	Laser Applications	[S odd]	3
PHYS 441	Solid State Physics	[F even]	3

[i] The Bioengineering curriculum includes 11 credits of *technical electives*, and 9 credits of *bioengineering electives*. The courses on this list are pre-approved as technical electives, but are not (generally) suitable for use as bioengineering electives.