

Combined BS/MS Degrees in Bioengineering Plan of Study

111 Credits + 31 Graduate Credits

[9 credits are counted towards both programs.]

Freshman Year (31 cr)

First Semester		C	Second Semester		C
ENL 101	Critical Writing & Reading I	3	ENL 102	Critical Writing & Reading II	3
CHM 153	Mod&App Chem Sci&Eng I	3	CHM 152	Principles Modern Chem. II	3
BNG 101	Intro to Bioengineering	3	CHM 162	Intro. to Appld. Chem. II	1
MTH 153	Calculus for Appl Sci & Engr I	4	MTH 154	Calculus for Appl Sci & Engr II	4
EGR 111	Intro to Engrg & Computing	3	PHY 111	Physics for Appl Sci & Engr I	4
Total		16	Total		15

Sophomore Year (30 cr)

First Semester		C	Second Semester		C
BIO 121	Biology of Organisms I	3	BNG 232	Funda. BioEngr Lab	1
BIO 131	Biology of Organisms I Lab	1	BNG 255	Biology for Engineers	3
MTH 213	Calculus for Appl Sci & Engr III	4	MTH 212	Differential Equations	3
PHY 112	Physics for Appl Sci & Engr I	4	MNE 220	Engr. Thermodynamics I	3
BNG 201	Bioengineering Seminar	1	ECE 211	Elements of Electrical Engr I	3
US	University Studies	3	ECE 251	EEE I Lab	1
Total		16	Total		14

Junior Year (31 cr)

First Semester		C	Second Semester		C
BNG 311	Statistics for Bioengineering	3	ENL 266	Technical Communication	3
BNG 315	Biomechanics	3	BNG 312	Biotransport	3
BNG 317	Biomechanics Lab	1	BNG 316	Biomaterials	3
BNG 319	Chem Mthds in Bioengineering	3	BNG 318	Biomeasurement & Control	3
BNG 321	Quant. Anatomy Physiol Dsgn	3	US	University Studies	3
US	University Studies	3			
Total		16	Total		15

Senior Year (29 cr)

First Semester		C	Second Semester		C
EGR 497	Bioenr Capstone Design I	2	EGR 498	Bioenr Capstone Design II	2
BNG 411	Bioengineering Lab	3	BNG 423	Biosystems Analysis & Dsgn	3
BMB 510	Intro to Biomed Engr/Biotechn	3	BMB 520	Quantitative Physiology	3
BNG	Specialization	3	BMB/BNG	Grad. Technical Elective	3
US	University Studies	3	US	University Studies	3
			BMB571/ EGR501	Ethics	1
Total		14	Total		15

Graduate Program – MS in BMEBT – Fifth Year (21 credits)

First Semester		C	Second Semester		C
BMB 620/ BNG5xx	BMEBT Capstone Project or Technical Elective	3	BMB 690/ BMB620	BMEBT Master's Thesis or Capstone Project	3
EAS 501/502	Adv Math/Numerical Mthds	3	BMB 540	Adv Cell & Molec Biology	3
BMB/BNG	Grad. Tech. Elective	3	BMB/BNG	Grad. Tech. Elective	3
BMB/BNG	Grad. Tech. Elective	3			
Total		12	Total		9