

## B.S. Bioengineering Curriculum

### Freshman Year

First Semester			Lec	Lab	C	Second Semester			Lec	Lab	C
ENL	101	Critical Writing & Reading I	3	0	3	ENL	102	Critical Writing & Reading I	3	0	3
CHM	153	Principles Modern Chem. I	3	0	3	CHM	152	Principles Modern Chem. II	3	0	3
BNG	101	Intro. to Bioengineering	3	0	3	CHM	162	Intro. to Applied Chem. II	1	2	1
MTH	153	Calc for Appl Sci & Eng I	4	0	4	MTH	154	Calc for Appl Sci & Eng II	4	0	4
EGR	111	Intro Engineering & Comput.	2	3	3	PHY	111	Physics for Appl Sci & Eng I	4	2	4
					<b>16</b>						<b>15</b>

### Sophomore Year

First Semester			Lec	Lab	C	Second Semester			Lec	Lab	C
EGR	241	Engin. Mechanics: Statics	3	0	3	BNG	232	Funda. Engi. Bio. Lab		3	1
ENL	266	Technical Communication	3	0	3	BNG	255	Biology for Engineers	3	0	3
MTH	213	Calc for Appl Sci & Eng III	4	0	4	MTH	212	Differential Equations	3	0	3
PHY	112	Physics for Appl Sci & Eng II	4	2	4	MNE	220	Engin. Thermodynamics I	3	0	3
		University Studies	3	0	3	ECE	201	Circuit Theory I	3	1.5	3.5
					<b>17</b>						<b>13.5</b>

### Junior Year

First Semester			Lec	Lab	C	Second Semester			Lec	Lab	C
BNG	311	Statistics for Bioengineer	3	0	3	BNG	312	Biotransport	3	0	3
BNG	318	Biomeasurement & Control	3	0	3	BNG	315	Biomechanics	3	0	3
BNG	319	Chem Methods in Bioengin.	3	0	3	BNG	316	Biomaterials	3	0	3
BNG	320	Biomeasurement Laboratory	0	3	1	BNG	317	Biomechanics Laboratory	0	3	1
BNG	321	Quant. Physiology	3	0	3			University Study	3	0	3
BNG	322	Quant. Physiology Lab	0	3	1						
		University Study	3	0	3						
					<b>17</b>						<b>13</b>

### Senior Year

First Semester			Lec	Lab	C	Second Semester			Lec	Lab	C
EGR	497	Bioeng. Capstone Design I	1	2	2	EGR	498	Bioeng. Capstone Design II	1	2	2
BNG	411	Bioengineering Lab	2	3	3	BNG	423	Biosystems Analysis & Dsgn.	3	1.5	3.5
BNG		Specialization	3	0	3	BNG		Specialization	3	0	3
BNG		Specialization	3	0	3	BNG		Specialization	3	0	3
		University Study	3	0	3			University Study	3	0	3
					<b>14</b>						<b>14.5</b>

**Total Credits 120**

Lec = Lecture (hours)      Lab = Lab (hours)      C = Number of Credits

University Studies Requirements – Choose 1 course from each Cluster area (5 courses total)

Cluster 3 The Cultural World

- a) Literature      3 credits
- b) Visual and performing Arts      3 credits

Cluster 4 The Social World

- a) Human Questions and Contexts      3 credits
- b) The Nature of US Society      3 credits
- c) The Nature of Global Society      3 credits