

B.S. in Engineering Science with concentration in BME (136 credits minimum /Accelerated Curriculum)

FIRST YEAR:

1st semester: 18 credits

+	HUM 101	Humanities/Cultural History GUR (3-0-3)
	Phys 111	Physics I (3-0-3)
	Phys 111A	Physics I Laboratory (0-2-1)
	Phys 111W	Physics I Workshop (0-1-0)
	Chem 125	General Chemistry I (3-0-3)
	Math 111	Calculus I (4-1-4)
	FED 101	Fundamentals of Engineering Design (2-1-2)
	BME 105	Introduction to Human Physiology I (2-0-2)

2nd semester: 18 credits

+	HUM 102	Communication/Cultural History GUR (3-0-3)
	Phys 121	Physics II (3-0-3)
	Phys 121A	Physics II Laboratory (0-2-1)
	Chem 124	General Chemistry Laboratory (0-2-1)
	Chem 126	General Chemistry II (3-0-3)
	CS 101	Computer Programming and Problem Solving (2-1-2)
	Math 112	Calculus II (4-1-4)
	BME 106	Introduction to Human Physiology I (1-0-1)
	BME 101	Introduction to Biomedical Engineering (1-0-0)

SUMMER: 8 credits

	Chem 243	Organic Chemistry I (3-0-3)
	Chem 244	Organic Chemistry II (3-0-3)
	Chem 244A	Organic Chemistry Laboratory (0-4-2)

SECOND YEAR:

1st semester: 19 credits

++	Bio 101	Biology I (4-0-4)
*	BME 301	Electrical Foundations of Biomedical Engineering (4-0-4)
*	BME 302	Mechanical Foundations of Biomedical Engineering (4-0-4)
**	MTSE 301	Material Science and Engineering (3-0-3)
	Math 211	Calculus III A (3-0-3)
	Math 225	Survey of Probability and Statistics (1-0-1)

2nd semester: 18 credits

+	Elective	Basic Social Science GUR (3-0-3)
++	Bio 102	Biology II (4-0-4)
**	Mech 320	Statics and Mechanics of Materials (3-0-3)

**	BME 420	Biomaterials (3-0-3)
	Math 222	Differential Equations (4-0-4)
+	PE	(Physical Education: GUR) (0-1-1)

THIRD YEAR:

1st semester : 16 credits

+	Elective	<i>Basic Social Science GUR (3-0-3)</i>
+	Hist 2xx	<i>Communication/Cultural History GUR (3-0-3)</i>
	Elective	BME-approved elective (science or engineering) (3-0-3)
**	BME 430	Tissue Engineering (3-0-3)
*	BME 381	Engineering Models in Physiology I (3-0-3)
+	PE	(Physical Education: GUR) (0-1-1)

2nd semester : 18 credits

+	Elective	(<i>Lit/Hist/Phil/STS GUR :GUR</i>) (3-0-3) Phil 351, Hist 379, and Hist 381 are recommended
+	Elective	(Open Hum/SS: GUR) (3-0-3)
+	MGMT 390	Management GUR (3-0-3)
*	BME 382	Engineering Models in Physiology II(3-0-3)
**	BME 491	Engrg. Research & Independent Study (3-0-3)
+	Elective	Humanities Capstone (3-0-3)

+ Course or elective satisfies GUR requirements

++Course is currently administered by RU Biology Dept.

*Course fulfills concentration in BME requirement: 19 credits in BME-approved courses, which must include {BME 301, BME 302} and two of the following: {BME 310, BME 381, or BME 382}

**Suggested course to fulfill BME concentration and/or engineering credit requirement (30 engineering credits for Engineering Science degree); may be replaced by BME-approved course