Biomedical Engineering
typical four-year plan for "calculus-ready" first-year student
94-96 program credits (127-129 overall credits minimum)
"odd fall" start

Important Note: Not every course will necessarily be offered as shown below – upper level courses are usually offered on an alternate year schedule. This is an **example only.** You **must** stay in contact with BME program advisors about current and upcoming courses for planning purposes.

Semester 1 – Fall 2023, 2025, 2027		**Semester 2 – Spring 2024, 2026, 2028**	
WRT 188 First Year College Writing	3 cr.	COMM 111 Intro to Public Speaking	3 cr.
XC Q1 USP Culture/Quest 1	3 cr.	XS Q2 USP Society/Quest 2	3 cr.
MATH 171 Calculus I (XM)	5 cr.	MATH 172 Calculus II (NS)	4 cr.
BIO 105 Bio Concepts - Unity	4 cr.	BIO 211 Human Anatomy	4 cr.
EGR 105 Engineering Fundamentals	3 cr.	EGR 106 Biomedical Engr Seminar	1 cr.
		EGR 242 Programming for Engineers	3 cr.
Total Credits	**18 cr.**	**Total Credits**	**18 cr.**

Semester 3 – Fall 2024, 2026, 2028		**Semester 4 – Spring 2025, 2027, 2029**	
BIO 212 Human Physiology	4 cr.	MATH 371 Differential Equations	3 cr.
PHYS 191 University Physics I	5 cr.	PHYS 192 University Physics II	5 cr.
CHEM 105 General Chemistry I	5 cr.	CHEM 106 General Chemistry II	5 cr.
EGRT 130 Basic Electrical Circuits I	4 cr.	EGRT 131 Basic Electrical Circuits II	4 cr.
Total Credits	**18 cr.**	**Total Credits**	**17 cr.**

Semester 5 – Fall 2025, 2027, 2029		**Semester 6 – Spring 2026, 2028, 2030**	
WRT 288 Connect: Advanced Writing	3 cr.	HIST USP History Course	3 cr.
USP Society/Quest 3	3 cr.		
MATH 301 Statistics	3 cr.	BIO 323 Molecular & Cell Biology	3 cr.
KINES 410 Applied Biomechanical Principles & Techniques	3 cr.	EGR 336 Biomedical Devices	3 cr.
EGR 310 Biomedical Materials	3 cr.	EGR 354 Medical Imaging	3 cr.
EGR 326 Signals & Systems	3 cr.	Major Elective	3 cr.
Total Credits	**18 cr.**	**Total Credits**	**15 cr.**

Semester 7 – Fall 2026, 2028, 2030		**Semester 8 – Spring 2027, 2029, 2031**	
XS GC USP Society/Global Citizen	3 cr.	ENG USP Literature	3 cr.

XC ES USP Culture/Ethnic Studies	3 cr.	XC USP Culture	3 cr.
EGRT 284 Professional Skills	1 cr.		
EGR 392 Biomedical Design Project	3 cr.	EGR 400 or 410 Internship/Capstone	1-3 cr.
Major Elective	3 cr.	Major Elective	3 cr.
Total Credits	**13 cr.**	**Total Credits**	**10-12 cr.**

Biomedical Engineering
typical four-year plan for "calculus-ready" first-year student
94-96 program credits (127-129 overall credits minimum)
"even fall" start

Important Note: Not every course will necessarily be offered as shown below – upper level courses are usually offered on an alternate year schedule. This is an **example only.** You **must** stay in contact with BME program advisors about current and upcoming courses for planning purposes.

Semester 1 – Fall 2024, 2026, 2028		**Semester 2 – Spring 2025, 2027, 2029**	
WRT 188 First Year College Writing	3 cr.	COMM 111 Intro to Public Speaking	3 cr.
XC Q1 USP Culture/Quest 1	3 cr.	XS Q2 USP Society/Quest 2	3 cr.
MATH 171 Calculus I (XM)	5 cr.	MATH 172 Calculus II (NS)	4 cr.
EGR 105 Engineering Fundamentals	3 cr.	EGR 106 Biomedical Engr Seminar	1 cr.
EGRT 130 Basic Electrical Circuits I	4 cr.	EGR 242 Programming for Engineers	3 cr.
		EGRT 131 Basic Electrical Circuits II	4 cr.
Total Credits	**18 cr.**	**Total Credits**	**18 cr.**

Semester 3 – Fall 2025, 2027, 2029		**Semester 4 – Spring 2026, 2028, 2030**	
BIO 105 Bio Concepts - Unity	4 cr.	BIO 211 Human Anatomy	4 cr.
PHYS 191 University Physics I	5 cr.	MATH 371 Differential Equations	3 cr.
CHEM 105 General Chemistry I	5 cr.	PHYS 192 University Physics II	5 cr.
EGR 326 Signals & Systems	3 cr.	CHEM 106 General Chemistry II	5 cr.
Total Credits	**17 cr.**	**Total Credits**	**17 cr.**

Semester 5 – Fall 2026, 2028, 2030		**Semester 6 – Spring 2027, 2029, 2031**	
WRT 288 Connect: Advanced Writing	3 cr.	HIST USP History Course	3 cr.
USP Society/Quest 3	3 cr.	MATH 301 Statistics	3 cr.

BIO 212 Human Physiology	4 cr.	BIO 323 Molecular & Cell Biology	3 cr.
KINES 410 Applied Biomechanical Principles & Techniques	3 cr.	EGR 336 Biomedical Devices	3 cr.
EGR 310 Biomedical Materials	3 cr.	EGR 354 Medical Imaging	3 cr.
		Major Elective	3 cr.
Total Credits	**16 cr.**	**Total Credits**	**18 cr.**

Semester 7 – Fall 2027, 2029, 2031		**Semester 8 – Spring 2028, 2030, 2032**	
XS GC USP Society/Global Citizen	3 cr.	ENG USP Literature	3 cr.
XC ES USP Culture/Ethnic Studies	3 cr.	XC USP Culture	3 cr.
EGRT 284 Professional Skills	1 cr.	EGR 400 or 410 Internship/Capstone	1-3 cr.
EGR 392 Biomedical Design Project	3 cr.	Major Elective	3 cr.
Major Elective	3 cr.		
Total Credits	**13 cr.**	**Total Credits**	**10-12 cr.**

Biomedical Engineering
typical four-year plan for <u>"algebra-ready"</u> first-year student
94-96 program credits (132-134 overall credits minimum)
<u>"odd fall" start</u>

Important Note: Not every course will necessarily be offered as shown below – upper level courses are usually offered on an alternate year schedule. This is an **example only.** You **must** stay in contact with BME program advisors about current and upcoming courses for planning purposes.

Semester 1 – Fall 2023, 2025, 2027		**Semester 2 – Spring 2024, 2026, 2028**	
WRT 188 First Year College Writing	3 cr.	COMM 111 Intro to Public Speaking	3 cr.
XC Q1 USP Culture/Quest 1	3 cr.	XS Q2 USP Society/Quest 2	3 cr.
MATH 104 College Algebra	3 cr.	MATH 106 Trigonometry	2 cr.
BIO 105 Bio Concepts - Unity	4 cr.	BIO 211 Human Anatomy	4 cr.
EGR 105 Engineering Fundamentals	3 cr.	EGR 106 Biomedical Engr Seminar	1 cr.
		EGR 242 Programming for Engineers	3 cr.
Total Credits	**16 cr.**	**Total Credits**	**16 cr.**

Semester 3 – Fall 2024, 2026, 2028		**Semester 4 – Spring 2025, 2027, 2029**	
MATH 171 Calculus I (XM)	5 cr.	MATH 172 Calculus II (NS)	4 cr.
PHYS 191 University Physics I	5 cr.	PHYS 192 University Physics II	5 cr.
BIO 212 Human Physiology	4 cr.	CHEM 106 General Chemistry I	5 cr.
EGRT 130 Basic Electrical Circuits I	4 cr.	EGRT 131 Basic Electrical Circuits II	4 cr.
Total Credits	**18 cr.**	**Total Credits**	**18 cr.**

Semester 5 – Fall 2025, 2027, 2029		**Semester 6 – Spring 2026, 2028, 2030**	
WRT 288 Connect: Advanced Writing	3 cr.	HIST USP History Course	3 cr.
USP Society/Quest 3	3 cr.	MATH 371 Differential Equations	3 cr.
CHEM 105 General Chemistry II	5 cr.	BIO 323 Molecular & Cell Biology	3 cr.
EGR 310 Biomedical Materials	3 cr.	EGR 336 Biomedical Devices	3 cr.
EGR 326 Signals & Systems	3 cr.	EGR 354 Medical Imaging	3 cr.
EGRT 284 Professional Skills	1 cr.	Major Elective	3 cr.
Total Credits	**18 cr.**	**Total Credits**	**18 cr.**

Semester 7 – Fall 2026, 2028, 2030		**Semester 8 – Spring 2027, 2029, 2031**	
XS GC USP Society/Global Citizen	3 cr.	ENG USP Literature	3 cr.
XC ES USP Culture/Ethnic Studies	3 cr.	XC USP Culture	3 cr.
KINES 410 Applied Biomechanical Principles & Techniques	3 cr.	EGR 400 or 410 Internship/Capstone	1-3 cr.
EGR 392 Biomedical Design Project	3 cr.	Major Elective	3 cr.
MATH 301 Statistics	3 cr.	Major Elective	3 cr.
Total Credits	**15 cr.**	**Total Credits**	**13-15 cr.**

Biomedical Engineering
typical four-year plan for "algebra-ready" first-year student
94-96 program credits (132-134 overall credits minimum)
"even fall" start

Important Note: Not every course will necessarily be offered as shown below – upper level courses are usually offered on an alternate year schedule. This is an **example only.** You **must** stay in contact with BME program advisors about current and upcoming courses for planning purposes.

Semester 1 – Fall 2024, 2026, 2028		**Semester 2 – Spring 2025, 2027, 2029**	
WRT 188 First Year College Writing	3 cr.	COMM 111 Intro to Public Speaking	3 cr.
XC Q1 USP Culture/Quest 1	3 cr.	XS Q2 USP Society/Quest 2	3 cr.
MATH 104 College Algebra	3 cr.	MATH 106 Trigonometry	2 cr.
BIO 105 Bio Concepts - Unity	4 cr.	BIO 211 Human Anatomy	4 cr.
EGRT 130 Basic Electrical Circuits I	4 cr.	EGRT 131 Basic Electrical Circuits II	4 cr.
Total Credits	**17 cr.**	**Total Credits**	**16 cr.**

Semester 3 – Fall 2025, 2027, 2029		**Semester 4 – Spring 2026, 2028, 2030**	
EGR 105 Engineering Fundamentals	3 cr.	EGR 106 Biomedical Engr Seminar	1 cr.
CHEM 105 General Chemistry I	5 cr.	CHEM 106 General Chemistry II	5 cr.
MATH 171 Calculus I (XM)	5 cr.	MATH 172 Calculus II (NS)	4 cr.
PHYS 191 University Physics I	5 cr.		
		PHYS 192 University Physics II	5 cr.
		EGR 242 Programming for Engineers	3 cr.
Total Credits	**18 cr.**	**Total Credits**	**18 cr.**

Semester 5 – Fall 2026, 2028, 2030		**Semester 6 – Spring 2027, 2029, 2031**	
WRT 288 Connect: Advanced Writing	3 cr.	HIST USP History Course	3 cr.
USP Society/Quest 3	3 cr.	MATH 301 Statistics	3 cr.
BIO 212 Human Physiology	4 cr.	BIO 323 Molecular & Cell Biology	3 cr.
KINES 410 Applied Biomechanical Principles & Techniques	3 cr.	EGR 336 Biomedical Devices	3 cr.
EGR 310 Biomedical Materials	3 cr.	EGR 354 Medical Imaging	3 cr.
EGRT 284 Professional Skills	1 cr.	MATH 371 Differential Equations	3 cr.
Total Credits	**17 cr.**	**Total Credits**	**18 cr.**

Semester 7 – Fall 2027, 2029, 2031		**Semester 8 – Spring 2028, 2030, 2032**	
XS GC USP Society/Global Citizen	3 cr.	ENG USP Literature	3 cr.

XC ES USP Culture/Ethnic Studies	3 cr.	XC USP Culture	3 cr.
EGR 326 Signals & Systems	3 cr.	EGR 400 or 410 Internship/Capstone	1-3 cr.
EGR 392 Biomedical Design Project	3 cr.	Major Elective	3 cr.
Major Elective	3 cr.	Major Elective	3 cr.
Total Credits	**15 cr.**	**Total Credits**	**13-15 cr.**