

2023-2024 Curriculum Guide

BS Degree in Biomedical Engineering

128 Credit Hours

Florida A & M University

Cell & Bioprocess Majors

FRESHMAN YEAR (1ST)		SOPHOMORE YEAR (2ND)		JUNIOR YEAR (3RD)		SENIOR YEAR (4TH)	
Fall Semester	15	Fall Semester	16	Fall Semester	16	Fall Semester	13
CHM 1045 - Gen Chemistry I	3	ECH 3023 - Mass & Energy Bal I	3	BME 3622 - Biothermodynamics	3	BME 4332 - Cell & Tissue Engr	3
CHM 1045L - Gen Chem I Lab	1	CHM 2210 - Organic Chemistry I	3	BME 3631 - Biotransport Phenom	3	BME 4332L – Cell&TissEngr Lab	1
MAC 2311 - Calculus I ¹	4	MAC 2313 - Calculus III	5	BME 3702 - Biocomputations	4	BME 4801 - BME Design I	3
ENC 1101 - English I	3	PHY 2048 - Gen Physics I	4	BME 4403C – QtAnatSystPhys I	3	BME Senior Elective I ⁴	3
AMH 2091, AFA2000, AFA3104	3	PHY 2048L - Gen Physics I Lab	1	Social Science II (statewide/FAMU)	3	ECH 4504 - Kinetics&ReactorDes	3
EGN 1004L - 1st Yr Engr Lab	1						
Spring Semester	14	Spring Semester	16	Spring Semester	13	Spring Semester	13
CHM 1046 - Gen Chemistry II	3	ECH 3024 - Mass & Energy Bal II	4	BME 3100 - Biomaterials	3	BME 4744C - Biodynamics&Contrl	4
CHM 1046L - Gen Chem II Lab	1	ECH 3301 - Process Anly & Des	4	BME 4211 - Biomechanics	3	BME 4802 - BME Design II	3
MAC 2312 - Calculus II	4	CHM 2211 - Organic Chemistry II	3	BME 4404C - QtAnatSystPhys II	3	BME Senior Elective II ⁴	3
ENC 1102 - English II	3	PHY 2049 - Gen Physics II	4	BME 4503 - Bioinstrumentation	3	BME Senior Elective III ⁴	3
BSC 1010 - General Biology I	3	PHY 2049L - Gen Physics II Lab	1	BME 4503L - Bioinstrument Lab	1		
Summer Semester ³	9	Summer Semester ³	3	Summer Semester	0	Summer Semester	0
Humanities I (statewide list)	3	BME 3009 - Intro Biomed Engr	3				
Humanities II (statewide/FAMU)	3	<i>(see Note 3, below)</i>					
Social Science I (statewide list)	3						

¹ Students taking MAC 1105, MAC 1114, and/or MAC 1140 as prerequisites to MAC 2311 should take a math course every term (including summers) until completing the math sequence.

² History, Social Science, and Humanities electives are to be selected to satisfy the FAMU General Education requirements. This information can be found here: <https://www.famu.edu/index.cfm?Registrar&GeneralEducationCompetenciesandCoreCourses>. Please note that students beginning college in Fall 2021 must also meet the Civic Literacy requirement by taking AMH 2020 (history) or POS 1041 (social science) AND pass the Florida Civic Literacy Exam; those before must take a civics course OR pass the U.S. Naturalization exam.

³ Most courses shown in the Freshman and Sophomore years of this Guide are also taught during the Summer terms, during which students are encouraged to make up missed classes. Nine (9) hours of summer credit must be taken at one of the twelve state universities in Florida sometime during the college career.

⁴ See approved Biomedical Engineering electives on reverse side.

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128 Credit Hours

Florida A & M University

Biomaterials & Biopolymers Majors

FRESHMAN YEAR (1ST)		SOPHOMORE YEAR (2ND)		JUNIOR YEAR (3RD)		SENIOR YEAR (4TH)	
Fall Semester	15	Fall Semester	16	Fall Semester	16	Fall Semester	13
CHM 1045 - Gen Chemistry I	3	ECH 3023 - Mass & Energy Bal I	3	BME 3622 - Biothermodynamics	3	BME 4332 - Cell & Tissue Engr	3
CHM 1045L - Gen Chem I Lab	1	CHM 2210 - Organic Chemistry I	3	BME 3631 - Biotransport Phenom	3	BME 4332L - Cell&TissEngr Lab	1
MAC 2311 - Calculus I ¹	4	MAC 2313 - Calculus III	5	BME 3702 - Biocomputations	4	BME 4801 - BME Design I	3
ENC 1101 - English I	3	PHY 2048 - Gen Physics I	4	BME 4403C - QtAnatSystPhys I	3	BME Senior Elective I ⁴	3
AMH 2091, AFA2000, AFA3104	3	PHY 2048L - Gen Physics I Lab	1	Social Science II (statewide/FAMU)	3	BME Senior Elective II ⁴	3
EGN 1004L - 1st Yr Engr Lab	1						
Spring Semester	14	Spring Semester	16	Spring Semester	13	Spring Semester	13
CHM 1046 - Gen Chemistry II	3	ECH 3024 - Mass & Energy Bal II	4	BME 3100 - Biomaterials	3	BME 4744C - Biodynamics&Contrl	4
CHM 1046L - Gen Chem II Lab	1	ECH 3301 - Process Anly & Des	4	BME 4211 - Biomechanics	3	BME 4802 - BME Design II	3
MAC 2312 - Calculus II	4	CHM 2211 - Organic Chemistry II	3	BME 4404C - QtAnatSystPhys II	3	BME Senior Elective III ⁴	3
ENC 1102 - English II	3	PHY 2049 - Gen Physics II	4	BME 4503 - Bioinstrumentation	3	ECH 4823 - Polymer Sci & Engr	3
BSC 1010 - General Biology I	3	PHY 2049L - Gen Physics II Lab	1	BME 4503L - Bioinstrument Lab	1		
Summer Semester ³	9	Summer Semester ³	3	Summer Semester	0	Summer Semester	0
Humanities I (statewide list)	3	BME 3009 - Intro Biomed Engr	3				
Humanities II (statewide/FAMU)	3	(see Note 3, below)					
Social Science I (statewide list)	3						

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CHM 1045 - Gen Chemistry I	3	ECH 3023 - Mass & Energy Bal I	3	BME 3622 - Biothermodynamics	3	BME 4531 - Medical Imaging	3
CHM 1045L - Gen Chem I Lab	1	CHM 2210 - Organic Chemistry I	3	BME 3631 - Biotransport Phenom	3	BME 4531L – Medical Imag Lab	1
MAC 2311 - Calculus I ¹	4	MAC 2313 - Calculus III	5	BME 3702 - Biocomputations	4	BME 4508 - BiosignalsSystProc	3
ENC 1101 - English I	3	PHY 2048 - Gen Physics I	4	BME 4403C – QtAnatSystPhys I	3	BME 4801 - BME Design I	3
AMH 2091, AFA2000, AFA3104	3	PHY 2048L - Gen Physics I Lab	1	Social Science II (statewide/FAMU)	3	BME Senior Elective I ⁴	3
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ENC 1102 - English II	3	PHY 2049 - Gen Physics II	4	BME 4503 - Bioinstrumentation	3	BME Senior Elective III ⁴	3
BSC 1010 - General Biology I	3	PHY 2049L - Gen Physics II Lab	1	BME 4503L - Bioinstrument Lab	1		
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Humanities I (statewide list)	3	BME 3009 - Intro Biomed Engr	3				
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