## Cleveland State University BS Biomedical Engineering

Name	I.D. No.

## **Curriculum Sheet (Effective Fall 2025)**

First Year									
Fall Semester	Credits	Grade	Core	Spring Semester	Credits	Grade	Core		
INQ 170 Engineering Launch*	3		IL	ESC 102 Technical Writing & Prof. Comm.	3		RPW		
ENG 101 Writing I	3		FYV	MTH 182 Calculus II	4		QFR		
MTH 181 Calculus I	4		QFR	PHY 241 University Physics I	5		SI		
BIO 200 Introductory Biology I	3		SI	CHM 261 General Chemistry I	3		SI		
BIO 201 Introductory Biology Lab I	1		SI	CHM 266 General Chemistry Lab I	1		SI		
MCE 180 Computer Aided Design I	2			MCE 181 Computer Aided Design II	2				
Semester Total	16			Semester Total	18				

Second Year									
Fall Semester	Credits	Grade	Core	Spring Semester	Credits	Grade	Core		
PHY 242 University Physics II	5		SI	BME 300 Introduction to Biomedical Engr.	3				
BIO 202 Introductory Biology II	3		SI	Society & Human Behavior Elective (Psychology)	3		SHB		
BIO 203 Introductory Biology Lab II	1		SI	BIO 266 Human Anatomy & Physiology I	3				
CHM 262 General Chemistry II	3		SI	BIO 267 Human Anatomy & Physiology Lab I	1				
CHM 267 General Chemistry Lab II	1		SI	CHM 331 Organic Chemistry I	3				
ESC 130 Engr/Comp Sci Career Preparation	1			CHM 336 Organic Chemistry Lab I	1				
ESC 250 Differential Equations	3			ESC 310 Engineering Statistics	3				
Semester Total	17			Semester Total	17				

Third Year									
Fall Semester	Credits	Grade	Core	Spring Semester	Credits	Grade	Core		
BME 302 Biofluids/Biotransport	3			BME 306 Systems Physiology	3				
BME 304 Cell & Tissue Biology	3			ESC 315 Electrical Engineering Concepts	3				
ESC 152 Programming with MATLAB	3			BME 390 Clinical Experience	1		WAC		
ESC 270 Materials Science	3			ESC 282 Engineering Economy	3				
BIO 306 Biochemistry I	3			BIO 310 Genetics	3				
BIO 307 Biochemistry I Recitation	1			BIO 311 Genetics Recitation	1				
Semester Total	16			Semester Total	14				

Fourth Year								
Fall Semester	Credits	Grade	Core	Spring Semester	Credits	Grade	Core	
PHL 215 Technology Ethics	3		HCC	BME 430 Biomed Signals & Instrumentation	3			
BME 440 BME Senior Design I	3		WAC	BME 441 BME Senior Design II	3			
BME 495 Biomedical Engineering Research	3			Global Human Perspectives Elective	3		GHP	
BME Technical Elective**	3			BME Technical Elective**	3			
African-American History & Culture Elective	3		AAHC	Diversity in Society Elective	3		DIS	
Semester Total	15			Semester Total	15			

Degree Total hours: 128

## Core Curriculum Key:

GHP = Global Human Perspectives (one course)

QFR = Quantitative & Formal Reasoning (one course)

IL = Inquiry Launch (one course)\*

RPW = Research & Professional Writing (one course, C or better required)

FYV = Finding Your Voice (one course, C or better required)

HCC = Human Culture & Creativity (one course)
WAC/SPAC = Writing/Speaking Across the Curriculum Req (2 courses, one in the major)

SI = Scientific Inquiry (two courses, one lab credit)

AAHC = African-American History & Culture (one course)

GHP = Global Human Perspectives (one course)

SHB = Society & Human Behavior (one course)

DiS = Diversity in Society (one course)

DDL = Data & Digital Literacy (one course, can be satisfied by a second FQR course)

of INQ 170 in the following cases: (a) transfer students; however, those who have had co-op experience in engineering/computer science and/or have transferred 12 credits of engineering/computer science courses can petition to waive ESC 120; (b) students who, as freshmen at CSU, started in another major and completed an Inquiry Launch course different from INQ 170; (c) Honors students who take the Honors Inquiry Launch course. Neither INQ 170 nor ESC 120 is required for transfer students with an Associates of Applied Science degree.

<sup>\*\*</sup> Students who complete cooperative education credit hours (ESC 300/400) may use up to three of these credit hours to replace one technical elective.

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