


ECU Biomedical Engineering

(Unofficial Community Colleges to ECU Curriculum)

Degree Earned: ECU Bachelor of Engineering – Concentration in Biomedical Engineering

Transfer GPA = 2.5

Effective: 2016

 Grey Highlighted Courses – Take Courses at ECU

FRESHMAN YEAR					
	Fall Semester	Credit		Spring Semester	Credit
DFT 170	ENGR 1012 Engineering Graphics	2	ECU	ENGR 1016 Intro to Engineering Design	2
EGR 150	ENGR 1000 Intro to Engineering	1	ECU	ENGR 2050 Computing Applications in Engineering	3
BIO 111	BIOL 1050.1051 Gen. Bio & Lab or BIOL 1100/1101 Principles of Bio & Lab	4	MAT 272	MATH 2152 Calculus II	3
MAT 271	MATH 2151 Calculus I	3	CHM 151	CHEM 1150/1151 General Chemistry I & Lab	4
ENG 111	ENGL 1100 Composition I	3	ENG 112	ENGL 1200 Composition II	3
HIS, POL, PSY, SOC	Social Science Elective	3			
16			15		
SOPHOMORE YEAR					
	Fall Semester	Credit		Spring Semester	Credit
EGR 220	ENGR 2022 Statics	3	EGR 225	ENGR 2450 Dynamics	3
ECU	ENGR 2000 Engineering Design/PM I	1	ECU	ENGR 3800 Quality Control for Engineers	3
ECU	ENGR 2070 Materials and Processing	3	MAT 285 & MAT 280	MATH 2154 Differential Equations & Linear Algebra	4
PHY 251	PHYS 2350 University Physics I	4	PHY 252	PHYS 2360 University Physics II	4
MAT 273	MATH 2153 Calculus III	3	ECU	BIME 2080 Foundations in Biomedical Engr	2
	MATH 3307 Engineering Statistics	3			
		17	16		
JUNIOR YEAR					
	Fall Semester	Credit		Spring Semester	Credit
ECU	ENGR 3024 Mechanics of Materials	3	ECU	ENGR 3034 Thermal & Fluid Systems	4
ECU	ENGR 2514 Circuit Analysis	4	ECU	ENGR 3050 Sensors Meas & Controls	3
ECU	ENGR 3420 Engineering Economics	2	ECU	ENGR 3000 Engr. Design & PM II	2
ECU	BIME 4040 Physiological Systems I	3	ECU	BIME 4050 Physiological Systems II	3
PED 110	HLTH 1000 Health in Modern Society	2	ECO 251	ECON 2113 Microeconomics	3
COM, ART, MUS	Humanities and Fine Arts Elective	3	PED XXX	EXSS 1000 Lifetime Physical Activity	1
17			16		
SENIOR YEAR					
	Fall Semester	Credit		Spring Semester	Credit
ECU	ENGR 4010 Senior Capstone Design I	2	ECU	ENGR 4020 Senior Capstone Design I	2
ECU	BIME 4200 Biomedical Instrumentation	4	ECU	BIME 4030 Biomechanics and Materials	4
PHI 240	Social Science Elective	3	ECU	Technical Elective	3
ECU	Technical Elective	3	HIS, POL, PSY, SOC	Social Science Elective	3
HUM 110	Social Science Elective	3		Humanities and Fine Arts Elective	4

ECU Biomedical Engineering (continued)

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15	16
ECU - Minimum Credit Hours Required for Graduation in Biomedical Engineering:	128

Major/Program Requirements and Footnotes

It is the responsibility of the student to meet all General Ed Requirements for this degree. The requirements are listed in the ECU Undergraduate Catalog. If you have questions contact the Department of Engineering advisor.

As with any transfer credits, 100% match-up of course content is not always possible. In any event, if a student is given credit for transfer courses, that student will be required to learn any concepts/skills that were missed.

* - CHM 151 and CHM 152 must be substituted for CHEM 1500/1510/1511 for the Bioprocess and Biomedical Engineering concentrations.

** - MAT 285 may be substituted for MATH 2151 if the MAT 271/272/273/285 sequence was completed before transferring to ECU.

Admission into the Department of Engineering for Transfer Students

Students transferring to the engineering program must have an overall GPA of 2.5 or better in all course work attempted at the college(s) from which they are transferring in addition to meeting university transfer requirements. Students who have completed an associate degree from an approved pre-engineering program will be directly admitted to the BS program. Transfer students who do not have a 2.5 or better GPA are individually evaluated and the complete academic record is examined with particular emphasis on performance in math and science classes. These students may be admitted on a provisional basis and permitted to take certain engineering courses based on a case-by-case assessment. Provisional transfer students are expected to demonstrate the ability to succeed by completing their first semester at ECU with a 2.5 GPA.

Other Notes:

Biomedical engineering draws upon all fields to deliver better patient outcomes, thus impacting modern healthcare. Biomedical engineers are transdisciplinary professionals that improve healthcare by increasing biological knowledge and facilitating the development of novel devices and drugs.

Please note that this is a **recommended** sequence and should only be used as a guide.

Check the catalog for prerequisites. Course availability may vary from semester to semester.

Please contact ECU's Department of Engineering early in your community college track to ensure a smooth transition.