

ECU Mechanical Engineering

(Unofficial Community Colleges to ECU Curriculum)

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

Transfer GPA = 2.5

Effective: 2016

Grey Highlighted Courses – Take Courses at ECU

FRESHMAN YEAR

	<u>Fall Semester</u>	<u>Credit</u>		<u>Spring Semester</u>	<u>Credit</u>
DFT 170	ENGR 1012 Engineering Graphics	2	ECU	ENGR 1016 Intro to Engineering	3
EGR 150	ENGR 1000 Intro to Engineering	1	ECU	ENGR 2050 Computing Applications in Engineering	3
BIO 111	BIOL 1050.1051 General Biology & Lab or BIOL 1100/1101 Principles of Biology & Lab	3	MAT 272	MATH 2152 (C-)	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 ENGL 1200	1
HIS, POL, PSY, SOC	Social Science Elective	3			
16			15		

SOPHOMORE YEAR

	<u>Fall Semester</u>	<u>Credit</u>		<u>Spring Semester</u>	<u>Credit</u>
EGR 220	ENGR 2022 Statics	3	EGR 225	ENGR 2450 Dynamics	3
ECU	ENGR 2000 Engineering Design/PM I	1	ECU	ENGR 3024 Mechanics of Materials	3
ECU	ENGR 2070 Materials and Processes	3	MAT 285** & MAT 280	MATH 2154 Differential Equations & Linear Algebra	4
MAT 273	MATH 2153 Calculus III	3	PHY 252	PHYS 2360 University Physics II	4
PHY 251	PHYS 2350 University Physics I	4		Humanities and Fine Arts Elective	3
	Social Science Elective	3			
17			17		

JUNIOR YEAR

	<u>Fall Semester</u>	<u>Credit</u>		<u>Spring Semester</u>	<u>Credit</u>
ECU	ENGR 3624 Solid Mechanics	3	ECU	ENGR 3000 Engr. Design/PM II	2
ECU	MENG 3032 Thermo and Fluid Systems	4	ECU	MENG 3070 Thermodynamics I	3
ECU	EENG 3420 Engineering Economics	2	ECU	MENG 4650 Machine Design	3
ECU	ENGR 2514 Circuit Analysis	4	ECU	MENG 4153 Fluid Mechanics	3
ECU	MATH 3307 Engineering Statistics	3	ECU	ENGR 3800 Quality Control for Engineers	3
PED XXX	EXSS 1000 Lifetime Physical Activity	1	PED 110	HLTH 1000 Health in Modern Society	2
17			16		

SENIOR YEAR

	<u>Fall Semester</u>	<u>Credit</u>		<u>Spring Semester</u>	<u>Credit</u>
ECU	ENGR 4010 Senior Capstone Design I	2	ECU	ENGR 4020 Senior Capstone Design II	2
ECU	MENG 4263 Heat and Mass Transfer	3	ECU	TECH Elective	3
ECU	MENG 3050 Sensor, Meas & Circuits	3	ECU	TECH Elective	1
ECU	Tech Elective	3	HUM 110	Social Science Elective	3
PHI 240	PHIL 2274 or 2275 Professional Ethics Humanities and Fine Arts Elective	3	HIS, POL, PSY, SOC	Social Science Elective	3
	Humanities and Fine Arts Elective	2		Humanities and Fine Arts Elective	2
16			14		

ECU - Minimum Credit Hours Required for Graduation in Mechanical Engineering:

128

ECU Mechanical Engineering (continued)

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 may be substituted for CHEM 1500/1510/1511 for the Systems Engineering and Engineering Management 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:

Mechanical Engineering graduates have skills to support design and improvement of a wide range of products from supersonic aircraft to toasters and bicycles. Mechanical engineers may specialize in areas like combustion, thermal systems, machine design, and robotics, or cross over into advanced technologies such as artificial limbs and nanotechnology.

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.