

BS in Engineering Curriculum – ELEC Concentration

TIER I – Math ACT of 21 or below/Math SAT of 530 or below

Freshman Fall Semester			Freshman Spring Semester		
MATH 110	Fundamentals of Math	3	MATH 111	College Algebra	3
ENGR 100	Freshman Seminar*	1	ENGR 110	Introductory Engineering Applications*	3
BIOL 111	Basic Biology & Lab	4	ENGL 102	Academic Writing & Literature	3
ENGL 101	Academic Writing	3	ECON 201	Microeconomics	3
HIST 111/2	Western Civilization 1 or 2	3	HUM/FINE ARTS	Elective	3
			CUC 100	Connections	0.5
Semester Total:		14.0	Semester Total:		15.5

Summer Semester after Freshman Year					
MATH 115	Precalculus	3	MATH 122	Calculus I	4
Semester Total:					7.0

Sophomore Fall Semester			Sophomore Spring Semester		
MATH 223	Calculus II	4	MATH 224	Calculus III	4
ENGR 120	Foundations of Engineering Design I*	3	ENGR 121	Foundations of Engineering Design II*	3
ENGL 2xx	Literature	3	PHYS 252	Fundamentals of Physics II	4
PHYS 251	Fundamentals of Physics I	4	ENGR 260	Electrical Circuits*	4
CHEM 100	Preparatory Chemistry	3	CHRS 125	Introduction to Christianity	3
CUC 200	Connections	0.5			
Semester Total:		17.5	Semester Total:		18.0

Summer Semester after Freshman Year					
CHEM 111	General Chemistry I	4	CHEM 113	General Chemistry II	4
Semester Total:					8.0

Junior Fall Semester			Junior Spring Semester		
MATH 310	Differential Equations and Linear Algebra	4	ENGR 220	Statics & Strength of Materials	3
ELEC 265	Electronics*	4	ELEC 350	Electromagnetic Theory*	4
ENGR 310	Thermodynamics*	3	ENGL 305	Technical Writing and Presentations	3
ENGR 300	Engineering Economics	3	ENGR 320	Fluids*	3
ELEC 325	Embedded Systems*	4	ELEC 365	Linear Systems	4
Semester Total:		18.0	Semester Total:		17.0

Senior Fall Semester			Senior Spring Semester		
ENGR 491	Senior Design I	4	ENGR 492	Senior Design II	2
ART 131, MUSIC 131 or THEA 131	Fine Arts	3	ENGR 460	Statistical Methods for Engineers	3
HUM/FINE ARTS or SOC/BEH SCI	Elective	3	ELEC 395	Topics in Electrical Engineering*	3
ELEC 420	Controls and Communications	4	PE 185	Lifetime Wellness	2
ELEC 435	Digital Signal Processing*	3	ELEC 440	Automation*	3
			ELEC 480	Digital System Design*	3
Semester Total:		17.0	Semester Total:		16.0
Degree Total:					136.0

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Total Math and Science Hours: 39 (includes Statistics for Engineers but not Precalculus, College Algebra, Fundamentals of Math, Preparatory Chemistry)

Total Engineering Hours: 61 (includes Engineering Economics but not Introductory Engineering Applications)

ABET Requirements (2019-2020 Cycle)

Math and Science: minimum of 30 hours

Engineering: minimum of 45 hours

LEGEND:

RED FONT - this course does not count toward the BS ENGR degree; this course is required for students who enter the program without the required pre-requisite knowledge

BOLD-FACED FONT – designates a course taught by the School of Engineering

BLUE BOX – indicates a course taken by all Tier 1 engineering students

* - indicates class-lab