

BS in Engineering Curriculum – CHPH Concentration

CHPH ENGR - TIER II – Math ACT of 22-24/Math RSAT of 540-580

Freshman Fall Semester			Freshman Spring Semester		
MATH 111	College Algebra	3	MATH 115	Precalculus	3
ENGR 100	Freshman Seminar*	1	BIOL 111	Basic Biology	4
ENGR 110	Introductory Engineering Applications*	3	ENGR 120	Foundations of Engineering Design I*	3
ENGL 101	Academic Writing	3	ENGL 102	Academic Writing & Literature	3
CHEM 111	General Chemistry I	4	CHEM 113	General Chemistry II	4
			CUC 100	Connections	0.5
Semester Total:		14.0	Semester Total:		17.5

Summer Semester after Freshman Year					
MATH 122	Calculus I	4	ENGR 121	Foundations of Engineering Design II*	3
Semester Total:					7.0

Sophomore Fall Semester			Sophomore Spring Semester		
MATH 223	Calculus II	4	MATH 224	Calculus III	4
PHYS 251	Fundamentals of Physics I	4	ENGR 260	Electrical Circuits*	4
ENGR 220	Statics & Strength of Materials	3	CHEM 228	Organic Chemistry II	4
CHPH 215	Mass and Energy Balances	3	ECON 201	Microeconomics	3
CHEM 227	Organic Chemistry I	4	ENGL 2xx	Literature	3
CUC 200	Connections	0.5			
Semester Total:		18.5	Semester Total:		18.0

Junior Fall Semester			Junior Spring Semester		
MATH 310	Differential Equations and Linear Algebra	4	ENGR 320	Fluids*	3
BIOL 280	Essentials of Microbiology and Biochemistry*	4	ENGR 240	Engineering Materials & Processes*	4
ENGR 310	Thermodynamics*	3	CHPH 325	Heat Transport*	2
ENGL 305	Technical Writing and Presentations	3	CHPH 345	Bioprocess Engineering*	2
CHPH 315	Mass Transport*	3	CHPH 350	Reaction Engineering*	3
			ENGR 300	Engineering Economics	3
Semester Total:		17.0	Semester Total:		17.0

Senior Fall Semester			Senior Spring Semester			
CHPH 440	Process Control	3	ENGR 492	Senior Design II	2	
HIST 111 or 112	Western Civilization I or II	3	ENGR 460	Statistical Methods for Engineers	3	
ENGR 491	Senior Design I	4	HUM/FINE ARTS or SOC/BEH SCI	Elective	3	
CHPH 445	Unit Operations*	4	ART 131, MUSIC 131 or THEA 131	Fine Arts	3	
CHRS 125	Introduction to Christianity	3	PE 185	Lifetime Wellness	2	
			HUM/FINE ARTS	Elective	3	
Semester Total:		17.0	Semester Total:		16.0	
					Degree Total	136

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Total Math and Science Hours: 47 (includes Statistics for Engineers but not Pre-calculus or College Algebra)

Total Engineering Hours: 53 (includes Engineering Economics but not Introductory Engineering Applications)

ABET Requirements

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 2 engineering students

* - indicates class-lab