

# BS in Engineering Curriculum – CHPH Concentration

CHPH ENGR - TIER I – Math ACT of 21 or below/Math RSAT of 530 or below

Freshman Fall Semester			Freshman Spring Semester		
<b>MATH 110</b>	<b>Fundamentals of Math</b>	<b>3</b>	<b>MATH 111</b>	<b>College Algebra</b>	<b>3</b>
<b>ENGR 100</b>	<b>Freshman Seminar*</b>	<b>1</b>	<b>CHEM 100</b>	<b>Preparatory Chemistry*</b>	<b>3</b>
BIOL 111	Basic Biology	4	HUM/FA	Elective	3
ENGL 101	Academic Writing	3	ENGL 102	Academic Writing & Literature	3
HIST 111/112	Western Civilization 1 or 2	3	<b>ENGR 110</b>	<b>Introductory Engineering Applications*</b>	<b>3</b>
			CUC 100	Connections	0.5
<b>Semester Total:</b>		<b>14.0</b>	<b>Semester Total:</b>		<b>15.5</b>

Summer Semester after Freshman Year					
MATH 115	Precalculus	3	CHEM 113	General Chemistry II	4
CHEM 111	General Chemistry I	4			
<b>Semester Total:</b>					<b>11.0</b>

Sophomore Fall Semester			Sophomore Spring Semester		
MATH 122	Calculus I	4	MATH 223	Calculus II	4
<b>ENGR 120</b>	<b>Foundations of Engineering Design I*</b>	<b>3</b>	<b>ENGR 121</b>	<b>Foundations of Engineering Design II*</b>	<b>3</b>
ENGL 2xx	English Literature	3	PHYS 251	Physics I	4
CUC 200	Connections	0.5	<b>ENGR 220</b>	<b>Statics/Strength of Materials</b>	<b>3</b>
CHEM 227	Organic Chemistry I	4	<b>ENGR 300</b>	<b>Engineering Economics</b>	<b>3</b>
<b>Semester Total:</b>		<b>14.5</b>	<b>Semester Total:</b>		<b>17.0</b>

Summer Semester after Freshman Year					
MATH 224	Calculus III	4	CHEM 228	Organic Chemistry II	4
			<b>CHPH 215</b>	<b>Mass and Energy Balances</b>	<b>3</b>
<b>Semester Total:</b>					<b>11.0</b>

Junior Fall Semester			Junior Spring Semester		
MATH 310	Differential Equations and Linear Algebra	4	<b>ENGR 320</b>	<b>Fluids*</b>	<b>3</b>
BIOL 280	Biochemistry and Microbiology	4	<b>ENGR 240</b>	<b>Engineering Mat'ls &amp; Processes*</b>	<b>4</b>
<b>ENGR 310</b>	<b>Thermodynamics*</b>	<b>3</b>	<b>CHPH 325</b>	<b>Heat Transport*</b>	<b>2</b>
<b>ENGR 260</b>	<b>Electrical Circuits*</b>	<b>4</b>	<b>CHPH 345</b>	<b>Bioprocess Engineering*</b>	<b>2</b>
<b>CHPH 315</b>	<b>Mass Transport</b>	<b>3</b>	<b>CHPH 350</b>	<b>Chemical Reaction Engineering*</b>	<b>3</b>
			PE 185	Lifetime Wellness	2
<b>Semester Total:</b>		<b>18.0</b>	<b>Semester Total:</b>		<b>17.0</b>

Senior Fall Semester			Senior Spring Semester		
CHPH 440	Process Control	3	ENGR 492	Senior Design II	2
ENGR 491	Senior Design I	4	ENGR 460	Statistical Methods for Engineers	3
CHPH 445	Unit Operations	4	HUM/FA or SOC/BEH SCI	Elective	3
ENGL 305	Technical Writing and Presentations	3	ART/MUSIC/THEA 131	Fine Arts	3
CHRS 125	Introduction to Christianity	3	ECON 201	Microeconomics	3
Semester Total:		17.0	Semester Total:		14.0
Degree Total					136

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

Total Engineering Hours: 53 (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