

BSE CHEMICAL ENGINEERING / BS CHEMISTRY*
Dual Degree Program

	Semester	F1	W1	F2	W2	F3	W3	F4	W4	F5	W5	
Subjects required by engineering programs (53 hrs.)												
Mathematics 115+, 116+, 215+, 216+	16	4	4	4	4							
Engineering 100 or English 125+ (Engr 100 if Engr is home school)	4	4										
Engineering 101 +	4	4										
Chemistry 130 +	3	3										
Physics 140 with Lab 141+; 240 with Lab 241+	10		5					5				
Intellectual Breadth ** (to include a micro or macro economics course to meet ChE req's. and courses to fulfill LSA's race and ethnicity and ULWR*** req's)	16						4			4	8	
LS&A requirements (16 hrs.)												
Language (German recommended, some 200 level and higher courses might satisfy engineering HU or IB requirements)	16					4	4	4	4			
Upper Level Writing Requirement <see IB and HU/SS above> **												
Advanced Chemistry (Chem E)												
Chemistry 210, 211, Structure and Reactivity and Lab I +	5		5									
Chemistry 215, 216, Structure and Reactivity and Lab II +	5			5								
Chemistry 261, Introduction to Quantum Chemistry****	1				1							
Additional chemistry courses (24 hrs.)												
Chemistry 125,126, General Chemistry Lab	Term Offered											
Chemistry 125,126, General Chemistry Lab	F,W	2	2									
<i>Elect 1 of the following 2 courses:</i>		3		3								
Chemistry 302, Inorg. Chem.: Struct., Reactiv., and Funcn.	W											
Chemistry 303, Intro. Bioinorganic Chem: Role of Metals in Life	F, W											
Chemistry 399, Undergraduate research in chemistry <see ChE 460>												
Chemistry 402, Intermediate Inorganic Chemistry	(F only)	3						3				
Chemistry 447, Physical Methods of Analysis	(W only)	3							3			
Chemistry 461, Physical Chemistry I	(F only)	3				3						
Chemistry 462, Computational Chemistry Laboratory	(F only)	1				1						
Chemistry 463, Physical Chemistry II	(W only)	3							3			
Chemistry 482, Synthesis	(F only)	3								3		
Chemistry 483, Physical and Instrumental Chemistry	(W only)	3									3	
Chemistry 495, Professional Development in the Chemical Sciences <see ChE 487>												
Chemical Engin. Program Subjects (33 hrs.)												
ChemE 230, Material & Energy Balances +	Term Offered											
ChemE 230, Material & Energy Balances +	(F only)	4		4								
ChemE 330, Chemical and Engin Thermodynamics +	W	4			4							
ChemE 341, Fluid Mechanics +	W	4			4							
ChemE 342, Heat and Mass Transfer +	F	4				4						
ChemE 343, Separation Processes +	F	4				4						
ChemE 344, Reaction Eng and Design +	W	4							4			
ChemE 360, ChemE Laboratory I <see Chem 462 and 482>												
ChemE 460, ChE Laboratory II	F,W	4								4		
ChemE 466, Process Control and Dynamics I	F	3								3		
ChemE 485, Chemical Engineering Process Econ. +	F, W	1							1			
<i>Elect 1 of the following (ChE 487 shown here)</i>		5									5	
ChemE 487, Chem Proc. Sim. and Design	F, W											
ChemE 488, 489 Chemical Product Design I & II	F (2) & W(3)											
Related Technical Subjects												
Biology 172 or 174	Term Offered											
Biology 172 or 174	F,W	4					4					
Materials Elective (MSE 250 or MSE 220)+	F,W	4					4					
Engineering Elective	F,W	3						3				
B.S.E. (ChemE/Chem) Total		152	17	14	16	13	16	16	15	15	14	16
(+) must earn a C- or better in this class												
(*) An Honors Chemistry degree can be earned by meeting the requirements of the Chemistry Honors Program												
(**) Make sure to satisfy the LS&A distribution requirements, and natural science requirement can not be satisfied by CHEM or COE Courses.												
(***) (Submit writing sample and petition to Sweetland Writing Center to waive lower level writing requirement.) ULWR cannot be waived.												
(****) Either Physics 390 or Materials Science 242 can be taken to fulfill the Chemistry 261 requirement												
July 2018												