

BSE CHEMICAL ENGINEERING/BSE MECHANICAL ENGINEERING
Dual Degree Program

Per ME dept. rules, need 3.0 cum/core GPA to pursue this program		Semester	F1	W1	F2	W2	F3	W3	F4	W4	F5
Subjects required by all programs (53 hrs.)											
Mathematics 115+, 116+, 215+, 216 +		16	4	4	4	4					
Engineering 100+		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 course in micro or macro economics)		16		4	4		4			4	
Related Program Subjects (ME) (7 hrs.)											
Advanced Mathematics (See list in ME Dept)		3							3		
EECS 314, Circuit Analysis and Electronics		4								4	
Related Technical Subjects and Advanced Chemistry (ChE) (15 hrs.)											
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
Biology 172 or 174		4						4			
Materials Elective (MSE 250 or 220) <see ME 382>											
Program Subjects (69 hrs.)	Term Offered										
ME 211, Intro. to Solid Mechanics +	F,W	4			4						
ME 235, Thermodynamics <see ChE 330>											
ME 240, Intro. to Dynamics & Vibrations +	F,W	4				4					
ME 250, Design & Manufacturing I +	F,W	4					4				
ME 320, Fluids I <see ChE 341>											
ME 335, Heat transfer <see ChE 342>											
ME 350, Design & Manufacturing II +	F,W	4								4	
ME 360, Model, Analysis & Control Dyn Systems +	F,W	4							4		
ME 382, Mechanical Behavior of Materials +	F,W	4						4			
ME 395, Laboratory I	F,W	4							4		
ME 450, Design & Manufacturing III	F,W	4									4
ME495, Laboratory II <see ChE 460>											
At least one class from the following list:	F,W	3						3			
ME311, ME420, ME440, ME461, ME481											
ChE 230, Material & Energy Balances +	F	4			4						
ChE 330, Chem & Engin Thermodynamics +	W	4						4			
ChE 341 Fluid Mechanics +	W	4				4					
ChE 342, Mass and Heat Transfer +	F	4					4				
ChE 343, Separation Processes +	F	4							4		
ChE 344, Reaction Engr and Design +	F	4								4	
ChE 360 ChemE Laboratory I <see ME 395>											
ChE 460, ChE Laboratory II	F,W	4									4
ChE 466 Process Control and Dynamics I <see ME 360>											
ChE 485, Chemical Engineering Process Econ. +	W	1								1	
<i>Elect 1 of the following 2 courses: (487 shown)</i>		5									5
ChE 487, Chem Proc Sim and Design	F,W										
ChE 488,489, Chemical Product Design I and II	F (2), W (3)										
B.S.E. (ChE/ME) Total		144	16	17	16	17	17	15	15	17	14

(+) Must earn at least a C- on these courses, or a C for technical Subjects Required Of All Program and ME core courses per ME rules

(*) Either Physics 390 or Materials Science 242 or Chemistry 370 can be taken to fulfill the Chemistry 261 requirement

June 2025