

**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	
<b>Subjects required by all programs (53 hrs.)</b>												
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	
<b>Related Program Subjects (ME) (7 hrs.)</b>												
Advanced Mathematics (See list in ME Dept)		3							3			
EECS 314, Circuit Analysis and Electronics		4								4		
<b>Related Technical Subjects and Advanced Chemistry (Chem E) (15 hrs.)</b>												
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>												
<b>Program Subjects (69 hrs.)</b>	<b>Term Offered</b>											
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 <NOT ME 336>												
ChemE 230, Material & Energy Balances +	F	4			4							
ChemE 330, Chem & Engin Thermodynamics +	W	4						4				
ChemE 341 Fluid Mechanics +	W	4				4						
ChemE 342, Mass and Heat Transfer +	F	4					4					
ChemE 343, Separation Processes +	F	4							4			
ChemE 344, Reaction Engr and Design +	F	4								4		
ChemE 360 ChemE Laboratory I <see ME 395>												
ChemE 460, ChE Laboratory II	F,W	4									4	
ChemE 466 Process Control and Dynamics I <see ME 360>												
ChemE 485, Chemical Engineering Process Econ. +	F,W	1								1		
<i>Elect 1 of the following 2 courses: (487 shown)</i>		5									5	
ChemE 487, Chem Proc Sim and Design	F,W											
ChemE 488,489, Chemical Product Design I and II	F (2), W (3)											
<b>B.S.E. (ChemE/ME) Total</b>		<b>144</b>	<b>16</b>	<b>17</b>	<b>16</b>	<b>17</b>	<b>17</b>	<b>15</b>	<b>15</b>	<b>17</b>	<b>14</b>	
(+) 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												
<b>July 2018</b>												

**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
<b>Subjects required by all programs (53 hrs.)</b>											
Mathematics 115+, 116+, 215+, 216 +		16	4	4	4	4					
Engineering 100+		4	4								
Engineering 101 +		4		4							
Chemistry 130 +		3	3								
Physics 140+, 141+; 240+, 241+		10	5	5							
Intellectual Breadth (COE start Fall 2011) or Humanities/Social Science (COE start prior to Fall 2011) (to include a micro or macro economics course)		16		4	4			4			4
<b>Advanced Mathematics (ME) (3 hrs.)</b>											
See list in ME Dept. Academic Services Office		3					3				
<b>Related Program Subjects (ME) (4 hrs.)</b>		<b>Term Offered</b>									
EECS 314, Circuit Analysis and Electronics	F,W	4								4	
<b>Advanced Chemistry (Chem E)</b>											
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			
<b>Program Subjects (62 hrs.)</b>											
ME 211, Intro. to Solid Mechanics +	F,W	4			4						
<del>ME 235, Thermodynamics &lt;see ChE 330&gt;</del>											
ME 240, Intro. to Dynamics & Vibrations +	F,W	4				4					
ME 250, Design & Manufacturing I +	F,W	4					4				
<del>ME 320, Fluids I &lt;see ChE 341&gt;</del>											
<del>ME 335, Heat transfer &lt;see ChE 342&gt;</del>											
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
<del>ME495, Laboratory II &lt;see ChE 460&gt;</del>											
ChemE 230, Material & Energy Balances +	F	4			4						
ChemE 330, Chem & Engin Thermodynamics +	W	4						4			
ChemE 341 Fluid Mechanics +	W	4				4					
ChemE 342, Mass and Heat Transfer +	F	4					4				
ChemE 343, Separation Processes +	F	4							4		
ChemE 344, Reaction Engr and Design +	W	4								4	
<del>ChemE 360 ChemE Laboratory I &lt;see ME 395&gt;</del>											
ChemE 460, ChE Laboratory II	F,W	4								4	
<del>ChemE 466 Process Control and Dynamics I &lt;see ME 360&gt;</del>											
ChemE 485, Chemical Engineering Process Econ. +	F,W	5									5
ChemE 487, Chem Proc. Sim. and Design II	F,W	4						4			
<b>Related Technical Subjects (Chem E)</b>											
Bio/life science elective *		3 or 4									3 or 4
<del>Materials Elective (MSE 250 or 220) &lt;see ME 382&gt;</del>											
At least one class from the following list	F,W										
ME311, ME420, ME440, ME461, ME481 <NOT ME 336>											
<b>B.S.E. (ChemE/ME) Total</b>		<b>144-145</b>	16	17	16	17	16	17	12	16	16 or 17
(+ ) Must earn a C- or better in this class											
(*) See ChE department for list of courses that satisfy the Biology/Life Science elective requirement.											
(**) Either Physics 390 or Materials Science 242 can be taken to fulfill the Chemistry 261 requirement											
<b>May 2015</b>											

## 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	
<b>Subjects required by all programs (53 hrs.)</b>												
Mathematics 115+, 116+, 215+, 216 +		16	4	4	4	4						
Engineering 100+		4	4									
Engineering 101 +		4	4									
Chemistry 130 +		3	3									
Physics 140+, 141+; 240+, 241+		10	5	5								
Intellectual Breadth (COE start Fall 2011) or Humanities/Social Science (COE start prior to Fall 2011) (to include a micro or macro economics course)		16		4	4			4			4	
<b>Advanced Mathematics (ME) (3 hrs.)</b>												
See list in ME Dept. Academic Services Office		3					3					
<b>Related Program Subjects (ME) (4 hrs.)</b>		<b>Term Offered</b>										
EECS 314, Circuit Analysis and Electronics		F,W	4							4		
<b>Advanced Chemistry (Chem E)</b>												
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				
<b>Program Subjects (62 hrs.)</b>												
ME 211, Intro. to Solid Mechanics +		F,W	4		4							
<del>ME 235, Thermodynamics &lt;see ChE 330&gt;</del>												
ME 240, Intro. to Dynamics & Vibrations +		F,W	4			4						
ME 250, Design & Manufacturing I +		F,W	4				4					
<del>ME 320, Fluids I &lt;see ChE 341&gt;</del>												
<del>ME 335, Heat transfer &lt;see ChE 342&gt;</del>												
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	
<del>ME495, Laboratory II &lt;see ChE 460&gt;</del>												
ChemE 230, Material & Energy Balances +		F	4		4							
ChemE 330, Chem & Engin Thermodynamics +		W	4					4				
ChemE 341 Fluid Mechanics +		W	4			4						
ChemE 342, Mass and Heat Transfer +		F	4				4					
ChemE 343, Separation Processes +		F	4						4			
ChemE 344, Reaction Engr and Design +		W	4							4		
<del>ChemE 360 ChemE Laboratory I &lt;see ME 395&gt;</del>												
ChemE 460, ChE Laboratory II		F,W	4							4		
<del>ChemE 466 Process Control and Dynamics I &lt;see ME 360&gt;</del>												
ChemE 485, Chemical Engineering Process Econ. + (Required of Fall 2010 or later ChE students only)		W	5								5	
ChemE 487, Chem Proc. Sim. and Design II		F,W	4					4				
<b>Related Technical Subjects (Chem E)</b>												
Bio/life science elective *		3 or 4									3 or 4	
<del>Materials Elective (MSE 250 or 220) &lt;see ME 382&gt;</del>												
At least one class from the following list		F,W	<b>144-145</b>	16	17	16	17	16	17	12	16	16 or 17
ME311, ME420, ME440, ME461, ME481 <NOT ME 336>												

### B.S.E. (ChemE/ME) Total

(+) Must earn a C- or better in this class

(\*) See ChE department for list of courses that satisfy the Biology/Life Science elective requirement.

taken to fulfill the Chemistry 261 requirement

**July 2013**

## 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	
<b>Subjects required by all programs (53 hrs.)</b>												
Mathematics 115+, 116+, 215+, 216 +		16	4	4	4	4						
Engineering 100+		4	4									
Engineering 101 +		4		4								
Chemistry 130 +		3	3									
Physics 140+, 141+; 240+, 241+		10	5	5								
Intellectual Breadth (COE start Fall 2011) or Humanities/Social Science (COE start prior to Fall 2011) (to include a micro or macro economics course)		16		4	4			4			4	
<b>Advanced Mathematics (ME) (3 hrs.)</b>												
See list in ME Dept. Academic Services Office		3					3					
<b>Related Program Subjects (ME) (4 hrs.)</b>		<b>Term Offered</b>										
EECS 314, Circuit Analysis and Electronics		F,W	4							4		
<b>Advanced Chemistry (Chem E)</b>												
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				
<b>Program Subjects (62 hrs.)</b>												
ME 211, Intro. to Solid Mechanics +		F,W	4		4							
<del>ME 235, Thermodynamics &lt;see ChE 330&gt;</del>												
ME 240, Intro. to Dynamics & Vibrations +		F,W	4			4						
ME 250, Design & Manufacturing I +		F,W	4				4					
<del>ME 320, Fluids I &lt;see ChE 341&gt;</del>												
<del>ME 335, Heat transfer &lt;see ChE 342&gt;</del>												
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	
<del>ME495, Laboratory II &lt;see ChE 460&gt;</del>												
ChemE 230, Material & Energy Balances +		F	4		4							
ChemE 330, Chem & Engin Thermodynamics +		W	4					4				
ChemE 341 Fluid Mechanics +		W	4			4						
ChemE 342, Mass and Heat Transfer +		F	4				4					
ChemE 343, Separation Processes +		F	4						4			
ChemE 344, Reaction Engr and Design +		W	4							4		
<del>ChemE 360 ChemE Laboratory I &lt;see ME 395&gt;</del>												
ChemE 460, ChE Laboratory II		F,W	4							4		
<del>ChemE 466 Process Control and Dynamics I &lt;see ME 360&gt;</del>												
ChemE 485, Chemical Engineering Process Econ. + (Required of Fall 2010 or later ChE 230 Students only)		W	1							1		
ChemE 487, Chem Proc. Sim. and Design II		F,W	5								5	
<b>Related Technical Subjects (Chem E)</b>												
Bio/life science elective *		4						4				
<b>Materials Elective (MSE 250 or 220) &lt;see ME 382&gt;</b>												
At least one class from the following list		F,W	3 or 4								3 or 4	
ME311, ME420, ME440, ME461, ME481 <NOT ME 336>												
<b>B.S.E. (ChemE/ME) Total</b>		<b>144-145</b>	16	17	16	17	16	17	12	17	16 or 17	
(+) must earn a C- or better in this class (*) see ChE department for list of courses that satisfy the Biology/Life Science elective requirement.												
<b>August 2011</b>												

**BSE CHEMICAL ENGINEERING / BSE MECHANICAL ENGINEERING**  
**Dual Degree Program**  
**Fall 2009 or earlier ChE 230 students**

Per ME dept. rules, need 3.0 cum/core GPA to pursue this program	Semester	F1	W1	F2	W2	F3	W3	F4	W4	F5	
<b>Subjects required by all programs (53 hrs.)</b>											
Mathematics 115+, 116+, 215+, 216 +	16	4	4	4	4						
Engineering 100+	4	4									
Engineering 101 +	4		4								
Chemistry 130 +	3	3									
Physics 140+, 141+; 240+, 241+	10	5	5								
Intellectual Breadth (COE start Fall 2011) or Humanities/Social Science (COE start prior to Fall 2011)	16		4	4			4			4	
(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)											
<b>Advanced Mathematics (ME) (3 hrs.)</b>											
See list in ASO	3					3					
<b>Related Program Subjects (ME) (4 hrs.)</b>											
EECS 314, Circuit Analysis and Electronics	F,W	4							4		
<b>Advanced Chemistry (Chem E)</b>											
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				
<b>Program Subjects (62 hrs.)</b>											
	<b>Term Offered</b>										
ME 211, Intro. to Solid Mechanics +	F,W	4		4							
<del>ME 235, Thermodynamics &lt;see ChE 330&gt;</del>											
ME 240, Intro. to Dynamics & Vibrations +	F,W	4			4						
ME 250, Design & Manufacturing I +	F,W	4				4					
<del>ME 320, Fluids I &lt;see ChE 341&gt;</del>											
<del>ME 335, Heat transfer &lt;see ChE 342&gt;</del>											
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	
<del>ME 495, Laboratory II &lt;see ChE 460&gt;</del>											
ChemE 230, Material & Energy Balances +	F	4		4							
ChemE 330, Chem & 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 Engr and Design +	W	4							4		
<del>ChemE 360 ChemE Laboratory I &lt;see ME 395&gt;</del>											
ChemE 460, ChE Laboratory II	F,W	4							4		
<del>ChemE 466 Process Control and Dynamics I &lt;see ME 360&gt;</del>											
ChemE 487, Chem Proc. Sim. and Design II	F,W	5								5	
<b>Related Technical Subjects (Chem E)</b>											
Bio/life science elective *		4					4				
<del>Materials Elective (MSE 250 or 220) &lt;see ME 382&gt;</del>											
At least one class from the following list	F,W	3 or 4								3 or 4	
ME311, ME420, ME440, ME461, ME481 <NOT ME 336>											
<b>B.S.E. (ChemE/ME) Total</b>		<b>143-144</b>	16	17	16	17	16	17	12	16	16 or 17
(+ ) must earn a C- or better in this class											
(*) see ChE department for list of courses that satisfy the Biology/Life Science elective requirement.											
<b>September 2010</b>											