

## 128 HR Curriculum: BS in Chemical Engineering (ChE)

(students beginning at TTU during Fall 2006 or later)

### FALL

### SPRING

#### 1st Year

ENGR 1210	Intro to Eng.	1	ENGR 1120	Programming <sup>1</sup>	2
MATH 1910	Calculus I	4	MATH 1920	Calculus 2	4
CHEM 1110	Gen Chem I	4	CHEM 1120	Gen Chem 2	4
ENGL 1010	Writing I	3	ENGL 1020	Writing 2	3
Hum/Fine Arts	GE Elective	3	Hum/Fine Arts	GE Elective	3
CHE 1010	Intro to ChE	1			
<b>Total Credit Hours</b>		<b>16</b>			<b>16</b>

#### 2nd Year

MATH 2110	Calc 3	4	MATH 2120	Diff Eqs	3
PHYS 2110	Physics I	3	PHYS 2120	Physics 2	3
PHYS 2111	Physics 1 Lab	1	PHYS 2121	Physics 2 Lab	1
CHE 2011	CBE Process Analysis	4	CHE 3730	ChE Operations	3
CHE 2510	Computer Apps in ChE	1	ENGL 2130, 2230 or 2330	Hum/Fine Arts (Lit)	3
Soc/Beh. Sc.	GE Elective	3	SPCH 2410 or PC 2500	Speech	3
<b>Total Credit Hours</b>		<b>16</b>			<b>16</b>

#### 3rd Year<sup>2</sup>

CHEM 3010	Org. Chem 1	4	CHEM 3020	Org. Chem 2	4
CHE 3010	Thermo I	3	CHE 3020	Thermo II	3
CHE 3111	Momentum/Energy Transport	4	CHE 3121	Separations	4
CEE 2100 or ECE 3810 or BIOL 3200		3	XXX xxxx	Tech. Elective <sup>3</sup>	3
			Soc/Beh. Sc.	GE Elective	3
<b>Total Credit Hours</b>		<b>14</b>			<b>17</b>

#### 4th Year

CHEM 3510	Physical Chem 1	4	CHEM 3520	Physical Chem 2	4
CHE 4131	Mass Transport Operations	4	CHE 4240	ChE Capstone Lab	1
CHE 4210	Kinetics	4	CHE 4420	Design II	3
CHE 4410	Design I	3	CHE 4540	Process Dyn. & Contr.	3
CHE 4910	ChE Seminar	1	CHE 4xxx	ChE Tech. Elec. <sup>4</sup>	3
			CHE 4xxx	ChE Tech. Elec. <sup>4</sup>	3
<b>Total Credit Hours</b>		<b>16</b>			<b>17</b>

#### NOTES:

1. ENGR 1120 can be any programming language offering.
2. Students must apply to the ChE Fast-Track MS program by the end of their second junior term.
3. Three hours of Technical Elective can be from any of the following courses
  - a. Any College of Engineering course at the 3000 or 4000 level.
  - b. Any BIOL/CHEM/MATH/PHYS at the 3000 or 4000 level
  - c. CEE 2100
  - d. Any course with the prior approval of the ChE Undergraduate Program Coordinator
  - e. Note that CEE 2100, BIOL 3200 and ECE 3810 can not count both as a Technical Elective and as part of the CEE 2100/ECE 3810/BIOL 3200 option.
4. Three hours of ChE Technical Elective must come from one of the following courses  
 ChE 4950 – MEMS    ChE 4661 – Transport in Biochemical & Biological Processes    ChE 4990 – Intro to Research

#### General Education Core Electives

*At least one literature course, selected from those marked with an asterisk (\*) must be included.*

Humanities and/or Fine Arts ( 9 hours)			Social/Behavioral Sciences (6 hours)		
ART 1030	Art Appreciation	3	ANTH (SOC) 1100	Introduction to Anthropology	3
ENGL 2130*	American Literature	3	ECON 2010	Principles of Microeconomics	3
ENGL 2230*	British Literature (combines 2210-2220)	3	ECON 2020	Principles of Macroeconomics	3
ENGL 2330*	World Literature	3	GEOG 1120	Human Geography	3
FREN 2510	French Culture and Civilization	3	POLS 2210	American Government	3
GERM 2520	German Culture and Civilization	3	PSY 2010	General Psychology	3
HIST 1010	Survey of European Civilization I	3	SOC 1010	Introduction to Sociology	3
HIST 1020	Survey of European Civilization II	3			
HIST 1110	World Civilization I	3			
HIST 1120	World Civilization II	3			
MUS 1030	Music Appreciation	3			
MUAR 2500	Arts and Ideas	3			
PHIL 1030	Introduction to Philosophy	3			
SPAN 2510	Spanish Culture and Civilization	3			
SPAN 2550	Latin American Culture and Civilization	3			
THEA 1030	Introduction to Theater	3			