

**Integrated Business and Engineering Honors Program  
Curriculum for a Major in Chemical Engineering**

**Draft Revised August 2011 (Approved by Kemal Tuzla 8/9/11)**

**All IBE Students Should Follow the Common Freshman Year Curriculum**

**Sophomore Year, Fall Semester**

Credits	Course	Description	Semester	Prerequisites
4	Chem 31	Chem, Equil. Aque. Sys.	F,S	Chem 30, Math 21
3	ChE 31	Mat. & Ener. Bal.	F	Chem 30, Engr 097 (PC)
4	Math 23	Calculus III	F,S	Math 22
5	Physics 21,22	Introductory Physics II	F,S	Phys 11, Math 23 (PC)
1	IBE 150	IBE Sophomore Lab	F	IBE 010 or Permission
17	Semester total			
51	Cumulative credits			

\* Comm 160 recommended

**Sophomore Year, Spring Semester**

Credits	Course	Description	Semester	Prerequisites
4	ChE 210	ChE Thermo	S	ChE 31
3	ChE 44	Fluid Mech.	S	
4	Comm 160* or 130	Public Speaking for IBE	F,S	
3	Bios 41	Intro Biology	F,S	Chem 31, Math 21 (PC)
3	Math 231	Prob. & Statistics	F,S	Math 22
17	Semester total			
68	Cumulative credits			

**Junior Year, Fall Semester**

Credits	Course	Description	Semester	Prerequisites
3	ChE 151	Intro. Heat Transfer	F	ChE 44
3	ChE 201	Anal. Meth. In ChE	F	ChE 44, Math 23
3	Chem 110	Organic Chem	F	Chem 30
2	Chem 343	Phys. Chem Lab	F,S	ChE 210
3	Acct 151	Intro. Financial Acctng	F,S	Soph. standing, Eco 001
3	Mkt 111	Princ. Of Marketing	F,S	Eco 1, Sophomore Standing
1	IBE 250	IBE Junior Lab	F	IBE 150
18	Semester total			
86	Cumulative credits			

**Junior Year, Spring Semester**

Credits	Course	Description	Semester	Prerequisites
3	ChE 244	Mass Trans & Sep.	S	ChE 31,44
3	ChE 211	Reactor Design	S	ChE 210
3	Eco 146	App. Microeconomics	F,S	Eco 1, Math 231
3	Eco 029	Money & Banking	F,S	Eco 1
3	Acct 152	Intro. Managerial Acct.	F,S	Acct 151
3	IBE 380	IBE Capstone Design	S	IBE 050
18	Semester total			
104	Cumulative credits			

### Senior Year, Fall Semester

Credits	Course	Description	Semester	Prerequisites
2	ChE 202	ChE Lab I	F	ChE 151
3	Fin 125	Intro. to Finance	F,S	Eco 029, Acct 151, Math 231
3	BIS 111	Business Info. Sys.	F,S	Engr 097
3	IBE 385	IBE Capstone Design	F	IBE 380
3	HSS Elective			(Dual degree, see below)
4	Free Elective			
18	Semester total			
122	Cumulative credits			

### Senior Year, Spring Semester

Credits	Course	Description	Semester	Prerequisites
3	Mgmt 243	Mgmt of Organizations	F,S	Eco 1, Junior Standing
2	ChE 203	ChE Lab II	S	ChE 244, 210
3	Law 201	Legal Env. Of Business	F,S	Junior standing, Eco 1
3	HSS Elective			(Dual degree, see below)
4	Free Elective			
15	Semester total			
137	Cumulative credits			

(PC) = Previously or Concurrently (**Co**) = **Co-requisite; must be taken at the same time**

In addition to the curriculum above, IBE ChE majors must fulfill standard IBE requirements including

Language proficiency

Summer internship

Maintain a GPA of at least 3.25

### ChE Dual Degree Option

#### Courses required for the BSCHE degree not taken by IBE ChE Majors

Credits	Course	Description	Semester	Prerequisites
1	Chem 111	Organic Chem Lab I	F	Chem 110 (PC)
3	Chem 112	Organic Chem II	S	Chem 101
3	Chem 341	Mol. Struc., Bond.& Dyn.	F	Chem 31, Math 22, Phys 21
3	ChE 242	Intro. Proc. Control	F	ChE 201, 151, Engr 097
3	ChE 233	Process Design I	F	ChE 211, 242, 244
3	ChE 234	Process Design II	S	ChE 233
3	Math 205	Linear Methods	F,S	Math 23
3	ECE 83	Princ. Elec. Engin.	F,S	Math 22, Phys 21 (Co)
3	Chem 300 level elec. or ChE 380			
3	ChE 300 level elective			
3	Approved Engineering Elective			
31	Total Credits			

**To complete the BSCHE Dual degree program, students must**

1. Take the above **Courses required for the BSCHE degree not taken by IBE ChE Majors**
2. Complete at least 161 total credits (ChE degree requires 131 + 30 credits from the 30 credit rule)
3. Take at least 2 additional credits of Eco in their HSS electives (to fulfill the 8 credits in 1 dept. rule)