

March 2007

Co-Operative Education Program in Chemical Engineering

Students who are interested in entering the co-op program should talk with one of the co-op advisors in the Chemical Engineering Department as well as to the engineering advisor in the Co-Op Office/Career Services in the Career Services Building. The student in conjunction with the ChE co-op advisor and an employer select one of the co-op schedules which shows when the student takes classes and works.

A co-op student alternates semesters in school and at work, usually 3-4 semesters, as shown in the two approved co-op schedules. Students begin co-oping in either the spring or summer of the sophomore/second year.

**Student must talk with Dr. Goldstein in the ChE Department
about a co-op option before accepting a co-op offer.**

Chemical Engineering Department
CO-OP Schedule OPTION 1

FIRST YEAR												
First Semester				Second Semester				Summer				
Chem	1035	General Chemistry	3	Chem	1036	General Chemistry	3	Free				
Chem	1045	General Chemistry Lab	1	Chem	1046	General Chemistry Lab	1					
ENGE	1024	Engineering Exploration	2	ENGE	1114	Engineering Design Track	2					
Engl	1105	Freshman English	3	Engl	1106	Freshman English	3					
Math	1114	Linear Algebra	2	Math	1224	Vector Geometry	2					
Math	1205	Calculus	3	Math	1206	Calculus	3					
Elective			3	Phys	2305	Foundations of Physics I	4					
			<u>17</u>				<u>18</u>					

Chemical Engineering Department
CO-OP Schedule OPTION 1

SECOND YEAR												
First Semester				Second Semester		Summer						
ChE	2114	Mass and Energy Balances	3	Co-Op 1		Chem	2535	Organic Chemistry I (or 2565)	3			
Chem	3615	Physical Chemistry	3			Chem	2545	Organic Chemistry I Lab	1			
Math	2224	Multivariable Calculus	3			Chem	2536	Organic Chemistry II (or 2566)	3			
Phys	2306	Foundations of Physics II	4			Chem	2546	Organic Chemistry II Lab	1			
Stat	4604	Statistical Methods	3			Math	2214	Intro. to Differential Equations	3			
			<u>16</u>			Math	4564	Operational Methods for Engrs.	3			
									<u>14</u>			

Chemical Engineering Department
CO-OP Schedule OPTION 1

THIRD YEAR

Junior 1

First Semester		Second Semester		Summer
Co-Op 2		ChE 2124 ChE Simulations 2 ChE 3114 Fluid Transport 3 ChE 3134 Separation Processes 3 ChE 2164 Thermodynamics 3 ChE 2004 ChE Sophomore Seminar 1 Engl 3764 Technical Writing 3 Electives 3 <hr style="width: 100%;"/> 18		Co-Op 3

Chemical Engineering Department
CO-OP Schedule OPTION 1

FOURTH YEAR

Junior 2

First Semester		Second Semester		Summer
Co-Op 4		ChE 3044 Heat Transfer 2 ChE 3015 Process Meas. & Ctls. 3 ChE 3144 Mass Transfer 3 ChE 3184 Chemical Reactor Analysis Design 3 ChE 4134 Chemical Process Modeling 2 Chem 3625 Physical Chemistry Lab 1 Electives 3 <hr style="width: 100%;"/> 17	ChE 4014 ChE Laboratory 5	<hr style="width: 100%;"/> 5

Chemical Engineering Department
CO-OP Schedule OPTION 1

FIFTH YEAR							
Senior 1				Senior 2			
First Semester				Second Semester			
ChE	4185	Process & Plant Design (WI)	4	ChE	4186	Process & Plant Design (WII)	4
ESM	2214	Statics & Mechanics of Matsl.	3	Electives			10
ChE	4104	Process Materials	3				
Electives		Electives	6				
			16				14

Elective Hours: 25 hours as specified below

16 hours **Core Curriculum** (choose from approved lists)
 6 hrs. Area 2/Ideas, Cultural Traditions, Values
 6 hrs. Area 3/Society and Human Behavior
 1 hr. Area 6/Creativity and Aesthetic Experience
 3 hrs. Area 7/Critical Issues in a Global Context
 3 hrs. **Chemistry Electives** (choose from approved list)
 6 hrs. **Free Electives**

PROPOSED AREAS OF CONCENTRATION where a student could use Electives. Lists of approved Courses are available in the Chemical Engineering Office.

1. No Concentration
2. Marketing and Chemical Distribution
3. Biochemical Engineering
4. Polymers
5. Environmental

Chemical Engineering Department
CO-OP Schedule OPTION 2

FIRST YEAR											
First Semester				Second Semester				Summer			
Chem	1035	General Chemistry	3	Chem	1036	General Chemistry	3	Free			
Chem	1045	General Chemistry Lab	1	Chem	1046	General Chemistry Lab	1				
ENGE	1024	Engineering Exploration	2	ENGE	1114	Engineering Design Track	2				
Engl	1105	Freshman English	3	Engl	1106	Freshman English	3				
Math	1114	Linear Algebra	2	Math	1224	Vector Geometry	2				
Math	1205	Calculus	3	Math	1206	Calculus	3				
Elective			3	Phys	2305	Foundations of Physics I	4				
<u>17</u>				<u>18</u>							

Chemical Engineering Department
CO-OP Schedule OPTION 2

SECOND YEAR											
First Semester				Second Semester				Summer			
Sophomore 1								Sophomore 2			
ChE	2114	Mass and Energy Balances	3	ChE	2124	ChE Simulations	2	Co-Op1			
Chem	2535	Organic Chemistry I (or 2565)	3	ChE	2164	ChE Thermodynamics	3				
Chem	2545	Organic Chemistry I Lab	1	Chem	2536	Organic Chemistry II (or 2566)	3				
Chem	3615	Physical Chemistry	3	Chem	2546	Organic Chemistry II (Lab)	1				
Math	2224	Multivariable Calculus	3	Chem	3625	Physical Chemistry Lab	1				
Phys	2306	Foundations of Physics II	4	ChE	2004	ChE Sophomore Seminar	1				
				Math	2214	Introduction to Diff. Eqs.	3				
				Elective			3				
<u>17</u>				<u>17</u>							

Chemical Engineering Department
CO-OP Schedule OPTION 2

THIRD YEAR

Junior 1

First Semester		Second Semester		Summer
Co-Op 2		ChE 3114 Fluid Transport 3 ChE 3134 Separation Processes 3 Engr 3764 Technical Writing 3 Stat 4604 Statistical Methods for Engrs. 3 Math 4564 Operational Methods 3 <hr/> 15		Co-Op 3

Chemical Engineering Department
CO-OP Schedule OPTION 2

FOURTH YEAR

Junior 2

First Semester		Second Semester		Summer
Co-Op 4	ChE 3015 Process Meas. & Ctls 3 ChE 3044 Heat Transfer 2 ChE 3144 Mass Transfer 3 ChE 3184 Chemical Reactor Analysis Design 3 ChE 4134 Chemical Process Modeling 2 Electives 3 <hr/> 16	ChE 4014 ChE Laboratory 5 <hr/> 5		

Chemical Engineering Department
CO-OP Schedule OPTION 2

FIFTH YEAR							
Senior 1				Senior 2			
First Semester				Second Semester			
ChE	4185	Process & Plant Design (WI)	4	ChE	4186	Process & Plant Design (WII)	4
ESM	2214	Statics & Mechanics of Matls.	3	Electives			10
ChE	4104	Process Materials	3				
Electives			6				
			16				14

Elective Hours: 25 hours as specified below

16 hours **Core Curriculum** (choose from approved lists)
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 3 hrs. **Chemistry Electives** (choose from approved list)
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