



**California State Polytechnic University, Pomona
Degree Curriculum Sheet**

Plan (Major) **CHEMICAL ENGINEERING**

Catalog Year **2009-2010**

Name _____

Evaluator _____

Subplan/Option _____

Minimum Units Required **198**

Student ID _____

GWT Satisfied _____ Yes _____ No _____

Required Core Courses		
Course		Units
<i>Students in this major are expected to maintain a GPA of at least 2.00 in all core courses.</i>		
Introduction to Chemical Engineering/Lab	CHE 131/141L	2/1
Chemical Engineering Analysis/Lab	CHE 132/142L	2/1
Chemical Engineering Data Analysis and Design of Experiments Laboratory	CHE 143L	1
Stoichiometry I/Lab	CHE 201/211L	3/1
Stoichiometry II/Lab	CHE 202/212L	3/1
CHE Thermodynamics I	CHE 302	4
CHE Thermodynamics II	CHE 303	4
Kinetics and Reactor Design	CHE 304	4
Transport Phenomenon I	CHE 311	4
Transport Phenomenon II	CHE 312	3
Transport Lab I	CHE 322L	1
Transport Lab II	CHE 333L	1
Mass Transport	CHE 313	3
Unit Operations I/Lab	CHE 425/435L	4/1
Process Control	CHE 426	2
Process Controls Lab	CHE 436L	1
Chem Processes Synthesis & Design I/Lab	CHE 441/451L	4/1
Chem Processes Synthesis & Design II/Lab	CHE 442/452L	3/1
Chem Processes Synthesis & Design III/Lab	CHE 443/453L	3/1
Undergraduate Project	CHE 463	2
Total Units		62

Required Support Courses		
Course		Units
General Chemistry/Lab (B1, B3)	CHM 121/121L	3/1
General Chemistry/Lab	CHM 122/122L	3/1
General Chemistry	CHM 123	3
Organic Chemistry/Lab	CHM 314/317L	3/1
Organic Chemistry	CHM 315	3
Organic Chemistry	CHM 316	3
Elements of Electrical Engineering/Lab	ECE 231/231L	3/1
Project Design Principles & App. (B5)	EGR 481/482	2/2
Analytic Geometry/Calculus I (B4)	MAT 114	4
Analytic Geometry/Calculus II	MAT 115	4
Analytic Geometry/Calculus III	MAT 116	4
Calculus of Several Variables I	MAT 214	3
Calculus of Several Variable II	MAT 215	3
Differential Equations	MAT 216	4
or Elem. Linear Algebra and Diff. Equations	MAT 224	(4)
Vector Statics	ME 214	3
Material Science and Engineering	MTE 207	3
Materials Lab	MTE 317L	1
Corrosion and Materials Degradation/Lab	MTE 401/401L	3/1
General Physics/Lab (B1, B3)	PHY 131/131L	3/1
General Physics/Lab	PHY 132/132L	3/1
General Physics/Lab	PHY 133/133L	3/1
Ethical Considerations in Technology and Applied Science (C4)	EGR 402	4
Select 4 units from any of the following list:		
Elements of Biochemistry/Lab	CHM 321/321L	3/1
Biochemistry/Lab	CHM 327/327L	(3/1)
Physical Chemistry	CHM 311	(3)
Physical Chemistry	CHM 312	(3)
Physical Chemistry	CHM 313	(3)
Physical Chemistry Lab	CHM 352L	(2)
Physical Chemistry Lab	CHM 353L	(2)
Total Units		82

Elective Support Courses	
Course	Units
Upper Division MTE/CHE Elective	3
Total Units	3

General Education Requirements		IGE (G.E. Alternative)
Area	Units	
Area A Communication & Critical Thinking	12	IGE 120 4 IGE 121 4 IGE 122 4 IGE 220 4
1 Oral Communication		
2 Written Communication		
3 Critical Thinking		
Area B Mathematics & Natural Sciences	16	IGE 221 4 IGE 222 4 IGE 223 4 IGE 224 4
<i>Select at least one lab course from sub-area 1 or 2.</i>		
1 Physical Science		
2 Biological Science		
3 Laboratory Activity		Area A2 4
4 Math/Quantitative Reasoning		Area A3 4
5 Science & Technology Synthesis		Area B 16
Area C Humanities	16	Area C1, C2 or C3 4 Area C4 4 Area D4 4
1 Visual and Performing Arts		
2 Philosophy and Civilization		
3 Literature and Foreign Language		
4 Humanities Synthesis		
Area D Social Sciences	20	See University Catalog for information on how IGE meets G.E. requirements.
1 U.S. History, Constitution, American Ideals		
2 History, Economics and Political Science		
3 Sociology, Anthropology, Ethnic & Gender Studies		
4 Social Science Synthesis		
Area E Lifelong Understanding & Self Development	4	
Total Units	68	

American Institutions	
Courses that satisfy this requirement may also satisfy G.E. Area D1	8

American Cultural Perspectives Requirement	
Refer to catalog for list of courses that satisfy this requirement. Course may also satisfy major, minor, GE, or unrestricted elective requirements.	4

The following required support courses should be taken to satisfy the indicated GE Requirements to achieve the minimum units to degree listed at the top of this sheet.

Course	GE Area
General Chemistry/Lab	CHM 121/L B1, B3
and General Physics/Lab	PHY 131/131L B1, B3
Analytic Geometry/Calculus I	MAT 114 B4
Project Design Principles & Applications	EGR 481/482 B5
Ethical Considerations in Tech. & Applied Science	EGR 402 C4

The remaining GE requirements may be satisfied by any course approved for that area.

No more than 105 community college quarter units or 36 extension credit quarter units may be applied toward a Bachelor's degree. A minimum 2.0 cumulative GPA is required in core (including option) courses, Cal Poly Pomona courses, and overall work completed in order to receive a degree in this major.

Chemical Engineering Department
Chemical Engineering Major
Curriculum Year: 2009-2010

*Your department has developed this road plan, taking into account prerequisites and schedule restrictions.
 You should pay attention to these concerns when deviating from this plan.*

Year 1	Fall	Units	Winter	Units	Spring	Units	Comment
	CHE 131/141L Major Core	3	CHE 132/142L Major Core	3	CHE 143L Major Core	1	<i>Students in this major are expected to maintain a GPA of at least 2.00 in all core courses. MAT 114, CHM 121L, and PHY 131L satisfy both major and general education requirements</i>
	CHM 121/L Major Support and GE Area B2	4	CHM 122/122L Major Support	4	MAT 116 Major Support	4	
	GE Area E	4	MAT 115 Major Support	4	CHM 123 Major Support	3	
	MAT 114 GE Area B4	4	GE Area Any approved course in area A1, B1, or E	4	PHY 131L Major support and GE Area B1	1	
	ENG 104 GE Area A2	4			PHY 131 Major support and GE area B3	3	
					GE Area Any approved course in area A1, B1, B4, or E	4	
	Total Units	19	Total Units	15	Total Units	16	
	Total Units for Year					50	

Year 2	Fall	Units	Winter	Units	Spring	Units	Comment
	CHE 201/211L Major Core	4	CHE 202/212L Major Core	4	CHE 322L Major Core	1	<i>One course must be completed in each of the GE areas A1, B1, B4 and E.</i>
	ME 214 Major Support	3	MTE 207 Major Support	3	ECE 231/231L Major Support	4	
	MAT 216 or 224 Major Support	4	PHY 133/133L Major Support	4	CHM 316 Major Support	3	
	PHY 132/132L Major Support	4	MAT 214 Major Support	3	MAT 215 Major Support	3	
	CHM 314/317L Major Support	4	CHM 315 Major Support	3	MTE 317L Major Support	1	
					GE Area Any approved course in area A1, B1, B4, or E	4	
	Total Units	19	Total Units	17	Total Units	16	
	Total Units for Year					52	

Year 3	Fall	Units	Winter	Units	Spring	Units	Comment	
	CHE 302 Major Core	4	CHE 303 Major Core	4	CHE 304 Major Core	4	Four units from any of the following list: CHM 327/L, CHM 321/L, CHM 311, CHM 312, CHM 313, CHM 352L, CHM 353L	
	CHE 311 Major Core	4	CHE 312 Major Core	3	CHE 313 Major Core	3		
	CHM 327/L or a list (see comment) Major Support	4	CHE 333L Major Core	1	GE Area A3	4		
	GE Area D2	4	MTE/CHE Elective Major Support	3	GE Area B2	3		
	Take the Graduation Writing Test		GE Area D3	4				
	Total Units	16	Total Units	15	Total Units	14		
								Total Units for Year

Year 4	Fall	Units	Winter	Units	Spring	Units	Comment
	CHE 425/435L Major Core	5	CHE 442/452L Major Core	4	CHE 463 Major Core	2	Departmental approval required for all GE Synthesis courses(B5,C4 and D4)
	CHE 441/451L Major Core	5	EGR 482 Major Support/ Area B5	2	CHE 443/453L Major Core	4	
			PLS 201 GE Area (D1a)	4			All GE Area A courses and all lower division GE courses in a GE area must be completed before taking the GE Synthesis course in that area.
	EGR 481 Major Support/ Area B5	2	GE Area D4	4	GE Area C3	4	
	MTE 401/L Major Support	4	CHE 436L Major Core	1	GE Area C4 Any approved course in area A2-3, B3, C1-3, D2-3, or E	4	
			CHE 426 Major Core	2	HST 202 GE Area (D1b)	4	
	Request a graduation check				File an application to graduate		
	Total Units	16	Total Units	17	Total Units	18	
						Total Units for Year	51

Total Units on Plan	198
Major Core Units	62
Major Support Units	82
General Education Units	68
Unrestricted Elective Units	0

**CALIFORNIA STATE POLYTECHNIC UNIVERSITY, POMONA
CHEMICAL ENGINEERING**

NAME: _____

CPID: _____

CURRICULUM FLOWSHEET, 2009-2010

FRESHMAN				SOPHOMORE				JUNIOR				SENIOR			
FALL	WINTER	SPRING		FALL	WINTER	SPRING		FALL	WINTER	SPRING		FALL	WINTER	SPRING	
units	units	units		units	units	units		units	units	units		units	units	units	
[1] CHE131/141L 3 [Preq: MAT105,ENG96]	[6] CHE132/142L 3 [Preq: MAT105,ENG96]	[10] CHE 143L 1 [Preq: 6]		[15] CHE201/211L 4 [Preq: 8,7]	[20] CHE202/212L 4 [Preq: 15]	[25] CHE 322L 1 [Preq: 20]		[31] CHE 302 4 [Preq:17,24]	[35] CHE 303 4 [Preq: 15,31]	[39] CHE 304 4 [Preq: 20,35]		[49] CHE 425/435L 5 [Preq: 38]	[53] CHE 426 2 [Preq: 38]		
				[16] ME 214 3 [Preq: 11]	[21] MTE 207 3 [Preq: 7,11,13]	[26] MTE 317L 1 [Preq:21]		[32] CHE 311 4 [Preq: 16,20,24]	[36] CHE 312 3 [Preq:31,32]	[38] CHE313 3 [Preq: 35,36]		[45] CHE441/ 451L 5 [Preq: 39,38]	[50] CHE442/ 452L 4 [Preq: 45]	[55] CHE443/453L 4 [Preq:50]	
[43] AREA E 4		[11] PHY131/131L 4 [Preq: 4] (B1,B3)		[17] PHY132/132L 4 [Preq: 8,11]	[22] PHY133/133L 4 [Preq:8, 11]	[27] ECE231/251L 4 [Preq: 13,11]			[40] CHE 333L 1 [Preq: 25,31,32]			[46] EGR 481 (Area B5) 2 [Preq:GWT & senior]	[51] EGR 482 (Area B5) 2 [Preq:46]	[56] CHE 463 2 [Preq:51]	
[3] CHM121/121L 4 (Area B1,B3)	[7] CHM122/122L 4 [Preq: 3]	[12] CHM 123 3 [Preq: 7]		[18] CHM314/317L 4 [Preq: 12]	[23] CHM 315 3 [Preq: 18]	[28] CHM 316 3 [Preq: 23]		[33] CHM 327/L or a list* 4 [Preq: 18,28]	[37] MTE/Che Elective 3 [Preq:21,26orinstr]			[47] MTE 401/L 4 [Preq: 21,26]		[42] Area C3 4	
[4] MAT 114 4 (Area B4)	[8] MAT 115 4 [Preq: 4]	[13] MAT 116 4 [Preq: 8]		[19] MAT 216 or 224 4 [Preq: 13]	[24] MAT 214 3 [Preq: 13]	[29] MAT 215 3 [Preq: 24]							[54] CHE436L 1 [Coreq: 53]		
						[30] AREA A1 4							[52] AREA D4 4	[57] EGR402 4 (Area C4)	
IGE 120 (4)	IGE 121 (4)	IGE 122 (4)						IGE 220 (4)	IGE 221 (4)	IGE 222 (4)		IGE 223 (4)	IGE 224 (4)		
[5] ENG 104 4 (Area A2)	[9] AREA C1 4	[14] AREA C2 4						[34] Area D2 4	[42] Area D3 4	[2] AREA B2 3			[48] PLS 201 4 (Area D1a)	[53] HST 202 4 (Area D1b)	
UNITS 19	15	16		19	17	16		16	15	14		16	17	18	

GWT Test available at the completion of 90 units, mandatory at 120 units

Revised:11/5/2008

TOTAL
198

Refer to the University Catalog for complete prerequisite and corequisite requirements.

* 4 units from any of the following list: CHM 327/L, CHM 321/L, CHM 311, CHM 312, CHM 313, CHM 352L, CHM 353L