

Department of Chemical Engineering
 Chemical Engineering Degree Worksheet
 2013-2014 Curriculum

Freshman Year					
Course	Name	Hrs	Grade	Semester	Notes
1 st Semester					
ChNE 101	Intro ChE & Nuclr Engr I	1			
Math 162	Calculus I	4			
Chem 121	General	3			
Chem 123L	General Chem I Lab	1			
2 nd Semester					
CS 151L	Comp Prog Fundamentals	3			
Math 163	Calculus II	4			
Chem 122	General	3			
Chem 124L	General Chem II Lab	1			
Phyc 160	General	3			

Sophomore Year					
Course	Name	Hrs	Grade	Semester	Notes
1 st Semester					
ChNE 251	Chem Process Calc I	3			
Math 264	Calculus III	4			
Chem 301	Organic I	3			
Chem 303L	Organic Lab I	1			
Phyc 161	General	3			
2 nd Semester					
ChNE 302	ChE Thermodynamics	4			
Math 316	App Ord Diff Eq	3			
ChNE 253	Chem Proc Calc II	3			

Junior Year					
Course	Name	Hrs	Grade	Semester	Notes
1 st Semester					
ChNE 311	Trans Phenomena	4			
ChNE 317	ChNE Analysis	3			
ChNE 318L	Chem Enr Lab I	1			
ChNE 361	Biomolecular Engineering	3			
2 nd Semester					
ChNE 312	Unit Operations	3			

ChNE 321	Mass Transfer	3			
ChNE 319L	Chem Enr Lab II	1			
ChNE 371	Intro Materials Engr	3			
Senior Year					
Course	Name	Hrs	Grade	Semester	Notes
1 st Semester					
ChNE 418L	Chem Engr Lab III	1			
ChNE 451	Senior Seminar	1			
ChNE 461	ChE Reactor Engineering	3			
ChNE 493L	ChE Design	3			
2 nd Semester					
ChNE 419L	Chem Engr Lab IV	2			
ChNE 454	Proc Dyn & Control	3			
ChNE 494L	Adv ChE Design	3			
UNM Core Curriculum					
Requirement	Course	Hrs	Grade	Semester	Notes
Core Writing and Speaking	Engl 219	3			Required
Core Writing and Speaking	Engl 101	3			Required
Core Writing and Speaking	Engl 102	3			Required
Social and Behavioral Sciences	Econ 105	3			Required
Social and Behavioral Sciences		3			
SOE Approved SBS Electives Include:					
<ul style="list-style-type: none"> American Studies 182, 185; Anthropology 101, 130; CRP 181, Economics 105, 106; ENGR-F 200; Geography 102; Linguistics 101; Political Science 110, 200, 220, 240; Psychology 105; Sociology 101 					
Core Humanities		3			
Core Humanities		3			
SOE Approved Humanities Electives Include:					
<ul style="list-style-type: none"> American Studies 186; Classics 107, 204, 205; Comparative Literature 222, 224; English 150, 292, 293; Modern Languages 101; History 101L, 102L, 161, 162; Philosophy 101, 201, 202; Religious Studies 107, 263, 264; Honors 100, 200 level 					
Core Second Language		3			
SOE Approved Second Language Requirements:					
<ul style="list-style-type: none"> Any lower division non-English course in Linguistics, Spanish, Portuguese, or Foreign Languages & Literatures 					
Core Fine Arts Elective		3			
SOE Approved FA Electives:					
<ul style="list-style-type: none"> Arch 121; Art History 101, 201, 202; Dance 105; Fine Arts 284, Media Arts 210; Music 139, 142; Theatre 122; 3 credit studio in Art, Music, Theatre, Dance, Media Arts. NOTE: Three 1 credit studio courses DO NOT satisfy the requirement. 					

Concentration Specific Coursework

Basic Engineering; Choose 1 of:				
Course	Hrs	Grade	Semester	Notes
ChNE 213	3			
CE 202	3			
CE/ME 304	3			
ECE 203	3			

Concentration: Traditional Chemical Process Engineering					
Requirement	Course	Hrs	Grade	Semester	Notes
Basic Sci Elective	Phyc 262	3			
9 hrs of:					
Advanced Chemistry	Chem 302				
Advanced Chemistry	Chem 311				
Advanced Chemistry	Chem 312				
6 hrs of:					
Engineering Tech Elective		3			
Technical Elective		3			

Concentration: Bioengineering					
Requirement	Course	Hrs	Grade	Semester	Notes
Basic Sci Elective	Biol 201	4			
9 hrs of:					
Advanced Chemistry	Chem 302				
Advanced Chemistry	Chem 312				
Advanced Chemistry	Advanced Biology, such as: BIOL 202, 237, 238, 239L, BIOC 423 or CHEM 421.				
6 hrs of:					
Engineering Tech Elective		3			
Technical Elective		3			

Concentration: Materials Processing					
Requirement	Course	Hrs	Grade	Semester	Notes
Basic Sci Elective	Phyc 262 or Biol 201	3			
9 hrs of:					

Advanced Chemistry	Chem 311				
Advanced Chemistry	Chem 312				
Advanced Chemistry	Chem 431 or ChNE 475				
6 hrs of:					
Technical Elective		3			
Engineering Tech Elective		3			

Concentration: Semiconductor Manufacturing					
Requirement	Course	Hrs	Grade	Semester	Notes
Basic Sci Elective	Phyc 262	3			
9 hrs of:					
Advanced Chemistry	Chem 311				
Advanced Chemistry	Chem 312				
Advanced Chemistry	Chem 431				
6 hrs of:					
Technical Elective	ECE 371	4			
Tehcnial Elective		3			

Concentration: Environmental Management					
Requirement	Course	Hrs	Grade	Semester	Notes
Basic Sci Elective	Bio 201	4			
9 hrs of:					
Advanced Chemistry	Chem 302				
Advanced Chemistry	Chem 312				
Advanced Chemistry	Chem 423 or Advanced Biology (such as: Biol 202, 237, 238, 239L, Chem 421)				
6 hrs of:					
Technical Elective		3			
Engineering Tech Elective		3			