

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 | | | |