

**CHEMICAL ENGINEERING**

Louisiana Tech University

Curriculum as of 2019

Name \_\_\_\_\_

Date \_\_\_\_\_

CWID \_\_\_\_\_

Email \_\_\_\_\_@latech.edu

| COURSE   | PREREQUISITE  | SCH        | QTR | GRADE                    |
|--|---|------------|-----|--------------------------|
| CMEN 202   | ENGR 122 <sup>o</sup> , MATH 241                        | 3          |     | R*                       |
| 213  | CMEN 202 <sup>o</sup> , MATH 243                        | 3          |     | R*                       |
| 301  | Sophomore Standing                                      | 1          |     | R*                       |
| 302  | CMEN 202, 213   | 3          |     | R*                       |
| 304  | CMEN 313, MATH 245, MATH GPA>2.0                        | 3          |     | R*                       |
| 313  | CMEN 202, 213, ENGR 222, MATH 245                       | 3          |     | R*                       |
| 332  | CMEN 202, ENGR 222                                      | 3          |     | R*                       |
| 354  | CMEN 313 <sup>o</sup>                                   | 2          |     | R*                       |
| 402  | CMEN 202, Senior Standing                               | 3          |     | R*                       |
| 407  | CMEN 202, Senior Standing                               | 3          |     | R*                       |
| 413  | CMEN 202, 213 <sup>o</sup> , ENGR 222                   | 3          |     | R*                       |
| 425  | CMEN 202, MATH 245 <sup>o</sup>                         | 3          |     | R*                       |
| 431  | ENGR 220, 221, CMEN 213, 313, 332, 413                  | 3          |     | R*                       |
| 432  | CMEN 431  | 2          |     | R*                       |
| 434  | CMEN 432  | 2          |     | R*                       |
| 453  | CMEN 313, 354, 413                                      | 2          |     | R*                       |
| BISC 130   |   | 3          |     |                          |
| CHEM 101   | CHEM 100  | 2          |     | *                        |
| 102  | CHEM 101  | 2          |     | *                        |
| 103  | CHEM 100, 101 <sup>o</sup>                              | 1          |     | *                        |
| 104  | CHEM 103  | 1          |     | *                        |
| 250  | CHEM 102  | 2          |     | *                        |
| 251  | CHEM 250, CHEM 253 <sup>o</sup>                         | 2          |     | *                        |
| 252  | CHEM 251  | 2          |     | *                        |
| 253  | CHEM 102, 251 <sup>o</sup>                              | 1          |     | *                        |
| COMM 101   |   | 3          |     | <input type="checkbox"/> |
| ENGL 101   |   | 3          |     |                          |
| 102  | ENGL 101  | 3          |     |                          |
| 303  | ENGL 102  | 3          |     |                          |
| ENGR 120   | MATH 240 <sup>o</sup> , CHEM 100 <sup>o</sup>           | 2          |     | *                        |
| 121  | ENGR 120, MATH 241 <sup>o</sup> , CHEM 101 <sup>o</sup> | 2          |     | *                        |
| 122  | ENGR 121, MATH 242 <sup>o</sup>                         | 2          |     | *                        |
| 220  | ENGR 122, MATH 242, PHYS 201                            | 3          |     |                          |
| 221  | ENGR 122, MATH 242, PHYS 201                            | 3          |     |                          |
| 222  | ENGR 122, MATH 242                                      | 3          |     | R*                       |
| 425  |   | 1          |     | *                        |
| HIST   |   | 3          |     |                          |
| MATH 241   | MATH 240  | 3          |     | *                        |
| 242  | MATH 241  | 3          |     | *                        |
| 243  | MATH 242  | 3          |     | *                        |
| 244  | MATH 243  | 3          |     | *                        |
| 245  | MATH 244  | 3          |     | *                        |
| PHYS 201   | MATH 241  | 3          |     | *                        |
| <b>ELECTIVES</b>   |   |            |     |                          |
| Art (ART 290, KINE 280, MUGN 290, or THTR 290)           |   | 3          |     |                          |
| ENGL 363(or COMM 378)Prerequisite for ENGL 363: ENGL 303 |   | 3          |     |                          |
| Directed Elective  |   | 3          |     | R*                       |
| Directed Elective  |   | 3          |     | R*                       |
| Directed Elective  |   | 3          |     | R*                       |
| Social Science   |   | 3          |     |                          |
| Social Science   |   | 3          |     |                          |
| <b>TOTAL SEMESTER HOURS</b>                              |   | <b>128</b> |     |                          |

| SUBSTITUTIONS |     |       |
|---------------|-----|-------|
| COURSE        | SCH | GRADE |
| 1             |     |       |
| 2             |     |       |
| 3             |     |       |
| 4             |     |       |
| 5             |     |       |
| 6             |     |       |
| 7             |     |       |
| 8             |     |       |
| 9             |     |       |
| 10            |     |       |

| ADDITIONAL COURSES |     |       |
|--------------------|-----|-------|
| COURSE             | SCH | GRADE |
| 1                  |     |       |
| 2                  |     |       |
| 3                  |     |       |
| 4                  |     |       |
| 5                  |     |       |

| GPA                |       |
|--------------------|-------|
| Rubric GPA         | _____ |
| MATH GPA (241-245) | _____ |

| NOTES   |
|---|
| * requires grade of "C" or higher   |
| <sup>o</sup> credit or registration in  |
| R course in rubric  |
| <input type="checkbox"/> must be completed within first year of enrollment  |
| 1 Directed electives must be selected in consultation with advisor.   |
| 2 Petitions must be filed for substitutions.  |
| 3 A student must have a minimum 2.0 GPA on all hours pursued in courses designated: CMEN, ENGR 222, and Directed Electives. |

| ADDITIONAL COMMENTS |
|---------------------|
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|                     |

Advisor: \_\_\_\_\_

# CHEMICAL ENGINEERING

Louisiana Tech University

| FRESHMAN YEAR                            |    |   |    |  |    |
|--|----|---|----|--|----|
| Fall Quarter                             | Hr | Winter Quarter                            | Hr | Spring Quarter                             | Hr |
| ENGR 120 * Engineering Problem Solving I | 2  | ENGR 121 * Engineering Problem Solving II | 2  | ENGR 122 * Engineering Problem Solving III | 2  |
| MATH 240 * Precalculus                   | 3  | MATH 241 * Calculus I                     | 3  | MATH 242 * Calculus II                     | 3  |
| CHEM 100 * General Chemistry             | 2  | CHEM 101 * General Chemistry              | 2  | CHEM 102 * General Chemistry               | 2  |
| COMM 101 □ Principles of Comm Studies    | 3  | CHEM 103 * General Chemistry Lab          | 1  | CHEM 104 * General Chemistry Lab           | 1  |
| FYE 100 First Year Experience            | 1  | ENGL 101 Freshman Composition I           | 3  | ENGL 102 Freshman Composition II           | 3  |
|  | 11 |   | 11 |  | 11 |

| SOPHOMORE YEAR                        |    |                                  |    |  |    |
|---------------------------------------|----|----------------------------------|----|--|----|
| Fall Quarter                          | Hr | Winter Quarter                   | Hr | Spring Quarter                               | Hr |
| CMEN 202 * Chemical Engr Calculations | 3  | CHEM 251 * Organic Chemistry     | 2  | <b>CMEN 213</b> * Unit Operations - Design I | 3  |
| <b>CMEN 301</b> * CMEN Seminar        | 1  | CHEM 253 * Organic Chemistry Lab | 1  | CHEM 252 * Organic Chemistry                 | 2  |
| CHEM 250 * Organic Chemistry          | 2  | ENGR 222 * Thermodynamics        | 3  | ENGR 221 Electrical Engineering & Circuits I | 3  |
| MATH 243 * Calculus III               | 3  | ENGL 303 Technical Writing       | 3  | MATH 245 * Differential Equations            | 3  |
| PHYS 201 * Physics for Engr & Sci I   | 3  | MATH 244 * Calculus IV           | 3  |  |    |
|                                       | 12 |                                  | 12 |  | 11 |

| JUNIOR YEAR                                  |    |   |    |   |    |
|--|----|---|----|---|----|
| Fall Quarter                                 | Hr | Winter Quarter                            | Hr | Spring Quarter                                    | Hr |
| <b>CMEN 413</b> * Unit Operations-Design III | 3  | CMEN 313 * Unit Operations-Design II      | 3  | <b>CMEN 302</b> * Process Safety in Chemical Ind. | 3  |
| <b>CMEN 425</b> * Numerical Methods for CMEN | 3  | <b>CMEN 332</b> * CMEN Thermodynamics II  | 3  | <b>CMEN 304</b> * Transport Phenomena             | 3  |
| Directed Elective◇                           | 3  | <b>CMEN 354</b> * Junior Lab              | 2  | BISC 130 Biological Principles                    | 3  |
| Social Science**                             | 3  | ENGR 220 Statics & Mechanics of Materials | 3  | ENGL 363 Science & Technical Presentations        | 3  |
|  | 12 |   | 11 | (May take Comm 378 instead)                       | 12 |

| SENIOR YEAR                                       |    |  |    |   |    |
|---|----|--|----|---|----|
| Fall Quarter                                      | Hr | Winter Quarter                                   | Hr | Spring Quarter                              | Hr |
| <b>CMEN 402</b> * Chemical Reaction Engineering   | 3  | <b>CMEN 407</b> * Instrum & Auto Process Control | 3  | <b>CMEN 434</b> * Chemical Plant Design III | 2  |
| <b>CMEN 431</b> * Chemical Plant Design I         | 3  | <b>CMEN 432</b> * Chemical Plant Design II       | 2  | Directed Elective ◇                         | 3  |
| <b>CMEN 453</b> * Senior Chemical Engineering Lab | 2  | Directed Elective ◇                              | 3  | Fine Arts Appreciation                      | 3  |
| ENGR 425 * Engr Ethics and Professionalism        | 1  | History Elective                                 | 3  | Social Science**                            | 3  |
|   | 9  |  | 11 |   | 11 |

Neither MATH 240 nor CHEM 100 count towards the chemical engineering degree.

\* Requires grade of "C" or higher.

□ Must be completed within first year of enrollment.

Courses in **bold** are *typically* offered only once per year.

\*\*Social Science electives can be selected from Anthropology, Criminal Justice, Economics, Geography, International Studies, Political Science, Psychology, and Sociology.

†Humanities Electives can be selected from Classical Studies, Communications, Foreign Languages, History, Literature, Philosophy, Religious Studies, Interdisciplinary.

◇Directed Electives are selected by student in consultation with academic advisor.