

# Bachelor of Science in Chemical Engineering -- 131 Credits

JCHE-BSE (RG 7272)  
Effective August 2023

## Worlds of Knowledge (RQ 3788)

| Aesthetic and Creative Expression |        |              |    |                |
|-----------------------------------|--------|--------------|----|----------------|
| Subject                           | Number | Course Title | CR | Satisfied/Term |
|                                   |        |              | 3  |                |

| Global History & Culture |        |              |    |                |
|--------------------------|--------|--------------|----|----------------|
| Subject                  | Number | Course Title | CR | Satisfied/Term |
|                          |        |              | 3  |                |

| Societies & Civics |        |              |    |                |
|--------------------|--------|--------------|----|----------------|
| Subject            | Number | Course Title | CR | Satisfied/Term |
|                    |        |              | 3  |                |

Each student must take 1 course in each of the following Worlds of Knowledge.

Each student must take two additional "Follow-Up" courses from any of the following Worlds of Knowledge.

The minimum number of courses taken in the Worlds must be 5.  
(No electives may be taken from the World of Science & Nature)

| Follow-Up Courses |        |              |    |                |
|-------------------|--------|--------------|----|----------------|
| Subject           | Number | Course Title | CR | Satisfied/Term |
|                   |        |              |    |                |

## Freshman Year Curriculum (RG 7272)

| Freshman Year Curriculum - 1st Term (RQ 3415) |                          |           |                |  |
|---|--------------------------|-----------|----------------|--|
| Complete the following Courses                |                          | CR        | Satisfied/Term |  |
| Chem 0150                                     | General Chemistry 1 Engr | 3         |                |  |
| EngCmp 0005                                   | Composition 1            | 3         |                |  |
| Engr 0017                                     | Intro Engr Analysis      | 3         |                |  |
| Engr 0081                                     | Freshman Engr Sem 1      | 0         |                |  |
| Math 0221                                     | Analytic Geom & Calc 1   | 4         |                |  |
| Phys 0150                                     | Physics 1                | 4         |                |  |
| <b>Requirement Satisfied</b>                  |                          | <b>17</b> |                |  |

| Freshman Year Curriculum - 2nd Term (RQ 3416) |                         |           |                |  |
|---|-------------------------|-----------|----------------|--|
| Complete the following Courses                |                         | CR        | Satisfied/Term |  |
| Chem 0151                                     | General Chem 2 for Engr | 3         |                |  |
| Engr 0018                                     | Intro Engr Computing    | 3         |                |  |
| Engr 0082                                     | Freshman Engr Sem 2     | 0         |                |  |
| Math 0231                                     | Analytic Geom & Calc 2  | 4         |                |  |
| Phys 0152                                     | Physics 2               | 4         |                |  |
| <b>Requirement Satisfied</b>                  |                         | <b>14</b> |                |  |

## Sophomore Year Curriculum (RG 7272)

| Soph Year Curriculum - 3rd Term (RQ 3417) |                           |           |                |  |
|---|---------------------------|-----------|----------------|--|
| Complete the following Courses            |                           | CR        | Satisfied/Term |  |
| CHE 0103                                  | Chem Engr Foundations 1   | 3         |                |  |
| CHE 0104                                  | Chem Engr Foundations Lab | 1         |                |  |
| CHE 0220                                  | Chem Engr Thermodyn 1     | 3         |                |  |
| CHE 1085                                  | Dept Seminar              | 0         |                |  |
| Chem 0236                                 | Organic Chemistry 1 Eng   | 3         |                |  |
| Math 0241                                 | Analytic Geom & Calc 3    | 4         |                |  |
| <b>Requirement Satisfied</b>              |                           | <b>14</b> |                |  |

| Soph Year Curriculum - 4th Term (RQ 3418) |                           |           |                |  |
|---|---------------------------|-----------|----------------|--|
| Complete the following Courses            |                           | CR        | Satisfied/Term |  |
| CHE 0105                                  | Chem Engr Foundations 2   | 3         |                |  |
| CHE 0214                                  | Intro Chem Product Design | 3         |                |  |
| CHE 0221                                  | Chem Engr Thermodyn 2     | 3         |                |  |
| CHE 0222                                  | Chem Engr Thermodyn Lab   | 1         |                |  |
| CHE 1085                                  | Dept Seminar              | 0         |                |  |
| Chem 0237                                 | Organic Chemistry 2 Eng   | 3         |                |  |
| Chem 0238                                 | Organic Chem Lab Eng      | 1         |                |  |
| Math 1271                                 | Differential Equations    | 3         |                |  |
| <b>Requirement Satisfied</b>              |                           | <b>17</b> |                |  |

## Junior Year Curriculum (RG 7272)

| Junior Year Curriculum - 5th Term (RQ 3419) |                         |           |                |  |
|---|-------------------------|-----------|----------------|--|
| Complete the following Courses              |                         | CR        | Satisfied/Term |  |
| CHE 0302                                    | Transport Phenomena 1   | 3         |                |  |
| CHE 0315                                    | Product Design 2        | 3         |                |  |
| CHE 0402                                    | Reactive Processes 1    | 3         |                |  |
| CHE 0404                                    | Reactive Processes Lab  | 1         |                |  |
| CHE 1085                                    | Dept Seminar            | 0         |                |  |
| Chem 1341                                   | Physical Chemistry 1    | 3         |                |  |
| Engr 0020                                   | Prob & Stats for Engr 1 | 4         |                |  |
| <b>Requirement Satisfied</b>                |                         | <b>17</b> |                |  |

| Junior Year Curriculum - 6th Term (RQ 3420) |                         |          |                |  |
|---|-------------------------|----------|----------------|--|
| Complete the following Courses              |                         | CR       | Satisfied/Term |  |
| CHE 0303                                    | Transport Phenomena 2   | 3        |                |  |
| CHE 0304                                    | Transport Phenomena Lab | 1        |                |  |
| CHE 0405                                    | Reactive Processes 2    | 2        |                |  |
| CHE 1085                                    | Dept Seminar            | 0        |                |  |
| Commrc 0052                                 | Public Speaking         | 3        |                |  |
| <b>Requirement Satisfied</b>                |                         | <b>9</b> |                |  |

## Senior Year Curriculum (RG 7272)

| Senior Year Curriculum - 7th Term (RQ 3421) |                              |           |                |  |
|---|------------------------------|-----------|----------------|--|
| Complete the following Courses              |                              | CR        | Satisfied/Term |  |
| CHE 0503                                    | Syst Engr 1: Dyn & Modeling  | 5         |                |  |
| CHE 0504                                    | Syst Engr 1: Lab             | 1         |                |  |
| CHE 1085                                    | Dept Seminar                 | 0         |                |  |
| CHE 1114                                    | Systems Process Design 1     | 2         |                |  |
| Chem 1324                                   | Fundamentals of Biochemistry | 3         |                |  |
| <b>Requirement Satisfied</b>                |                              | <b>11</b> |                |  |

| Senior Year Curriculum - 8th Term (RQ 3422) |                         |          |                |  |
|---|-------------------------|----------|----------------|--|
| Complete the following Courses              |                         | CR       | Satisfied/Term |  |
| CHE 0603                                    | Chem Safety and Ethics  | 2        |                |  |
| CHE 1115                                    | System Process Design 2 | 2        |                |  |
| CHE 1085                                    | Dept Seminar            | 0        |                |  |
| <b>Requirement Satisfied</b>                |                         | <b>4</b> |                |  |

## Electives (RQ 7272)

| Engineering Electives (RQ 3779)       |                             |          |                |  |
|---------------------------------------|-----------------------------|----------|----------------|--|
| Complete one of the following Courses |                             | CR       | Satisfied/Term |  |
| CE 1105                               | Materials of Construction   | 3        |                |  |
| CE 1503                               | Intro to Environmental Eng  | 3        |                |  |
| CE 1610                               | Eng & Sustainable Develop   | 3        |                |  |
| CHE 1096                              | Special Projects            | 3        |                |  |
| EE 0031                               | Linear Circuits & Systems 1 | 3        |                |  |
| EE 0445                               | Prog & Intro to Data Struct | 3        |                |  |
| Engr 0022                             | Materials                   | 3        |                |  |
| Engr 0132                             | Statics                     | 3        |                |  |
| Engr 1103                             | Engineering Economics       | 3        |                |  |
| Engr 1115                             | Engineering Leadership      | 3        |                |  |
| ME 0024                               | Intro ME Design             | 3        |                |  |
| <b>Requirement Satisfied</b>          |                             | <b>3</b> |                |  |

| Advance Chemical/Petroleum Elective (RQ 3780) |                            |          |                |  |
|---|----------------------------|----------|----------------|--|
| Complete one of the following Courses         |                            | CR       | Satisfied/Term |  |
| CHE 0520                                      | Fuel and Energy Technology | 3        |                |  |
| CHE 0510                                      | Intro Comp Fluid Dynamics  | 3        |                |  |
| CHE 0515                                      | Catalysis                  | 3        |                |  |
| <b>Requirement Satisfied</b>                  |                            | <b>3</b> |                |  |

| Professional Electives (RQ 3781)      |                               |          |                |  |
|---------------------------------------|-------------------------------|----------|----------------|--|
| Complete one of the following Courses |                               | CR       | Satisfied/Term |  |
| Commrc 0083                           | Intercultural Communications  | 3        |                |  |
| Engwrt 0053                           | Intro to Professional Writing | 3        |                |  |
| Engwrt 1192                           | Technical Writing             | 3        |                |  |
| Math 1181                             | Linear Algebra                | 3        |                |  |
| Additional Engineering Elective       |                               | 3        |                |  |
| Additional Advanced Science Elective  |                               | 3        |                |  |
| Engineering Co-Op (with approval)     |                               | 3        |                |  |
| <b>Requirement Satisfied</b>          |                               | <b>3</b> |                |  |

| Advanced Science Elective / Lab (RQ 3782) |  |          |                |  |
|---|--|----------|----------------|--|
| Complete one of the following Courses     |  | CR       | Satisfied/Term |  |
| Any Chem or Physics Course                |  | 3        |                |  |
| Any Chem or Physics Lab                   |  | 1        |                |  |
| <b>Requirement Satisfied</b>              |  | <b>4</b> |                |  |

### IMPORTANT INFORMATION:

This sheet is an unofficial representation of the major requirements and the information is subject to change. It is not an official record of academic progress and should not be treated as such. Official degree information can only be obtained through the Division Office or the Office of the Registrar.

Reviewed 4/1/2026