

## Geological Engineering

| Northwest Missouri State University |                                    |  |                              | University of Missouri-Rolla    |                                    |       |    |
|-------------------------------------|------------------------------------|--|------------------------------|---------------------------------|------------------------------------|-------|----|
| Semester                            | NMSU #                             | Title  | Hours                        | UMR #                           | Title                              | Hours |    |
| First                               | MATH 120                           | Calculus I                                   | 4                            | MATH 014                        | Calculus w/Analytic Geometry I     | 4     |    |
|                                     | CHEM 114                           | General Chemistry I                          | 3                            | CHEM 001                        | General Chemistry                  | 4     |    |
|                                     | CHEM 115                           | General Chemistry I Lab                      | 1                            | CHEM 002                        | General Chemistry Lab              | 1     |    |
|                                     | CS 130                             | Using Computers*                             | 3                            | CS 072                          | Software Application on the PC*    | 3     |    |
|                                     | ENGL 111                           | Composition                                  | 3                            | ENG 020                         | Exposition and Argumentation       | 3     |    |
| Total Semester Hours                |                                    |  | 14                           | Total Semester Hours            |                                    |       | 15 |
| Second                              | MATH 121                           | Calculus II                                  | 4                            | MATH 015                        | Calculus w/Analytic Geometry II    | 4     |    |
|                                     | CHEM 116                           | General Chemistry II                         | 3                            | CHEM 003                        | General Chemistry                  | 3     |    |
|                                     | ENGL 112 or                        | Composition or                               | 3                            | ENG 060 or                      | Writing and Research or            | 3     |    |
|                                     | ENGL 315 or                        | Technical Writing or                         |                              | ENG 160 or                      | Technical Writing or               |       |    |
|                                     | SPCH 102                           | Fundamentals of Oral Communication           |                              | SPMS 085                        | Principles of Speech               |       |    |
|                                     | HIST 155 or                        | America - A Historical Survey or             | 3                            | HIST 175 or                     | U.S. History to 1877 or            | 3     |    |
|                                     | POLS 102                           | Intro to American Government and Politics    | 3                            | PS 090                          | American Government                | 3     |    |
| ECON 151 or                         | General Economics II or            | ECON 121 or                                  |                              | Principles of Microeconomics or |                                    |       |    |
| ECON 150                            | General Economics I                | ECON 122                                     | Principles of Macroeconomics | 3                               |                                    |       |    |
| Total Semester Hours                |                                    |  | 16                           | Total Semester Hours            |                                    |       | 16 |
| Third                               | MATH 321                           | Multivariate Calculus                        | 4                            | MATH 022                        | Calculus w/Analytic geometry III   | 4     |    |
|                                     | PHYS 120 and                       | Fundamentals of Classical Physics I (4) and  | 5                            | PHYS 023                        | Engineering Physics I              | 4     |    |
|                                     | PHYS 121                           | Lab (1)                                      |                              |                                 |                                    |       |    |
|                                     | PHYS 322                           | Statics                                      | 3                            | IDE 050                         | Engineering Mechanics - Statics    | 3     |    |
| CS 149                              | FORTRAN Programming                | 3  | CS 073                       | Basic Scientific Programming    | 2                                  |       |    |
| Total Semester Hours                |                                    |  | 15                           | CS 077                          | Basic Scientific Programming Lab   | 1     |    |
| Total Semester Hours                |                                    |  | 15                           | Total Semester Hours            |                                    |       | 14 |
| Fourth                              | MATH 361                           | Differential Equations                       | 3                            | MATH 204                        | Elementary Differential Equations  | 3     |    |
|                                     | PHYS 230 and                       | Fundamentals of Classical Physics II (4) and | 5                            | PHYS 024                        | Engineering Physics II             | 4     |    |
|                                     | PHYS 231                           | Lab (1)                                      |                              |                                 |                                    |       |    |
|                                     | GEOL 110 and                       | General Geology (3) and                      | 4                            | GE 050                          | Geology for Engineers              | 3     |    |
|                                     | GEOL 110L                          | Lab (1)                                      | 3                            |                                 | Humanities/Social Science Elective | 3     |    |
|                                     | Humanities/Social Science Elective |  |                              |                                 |                                    |       |    |
| Total Semester Hours                |                                    |  | 15                           | Total Semester Hours            |                                    |       | 13 |

This is a guide; with the consent of your advisor you may choose to vary the sequence or combination of some courses in a manner appropriate to individual course requirements and prerequisites.

A grade of "C" or better is required in calculus and physics.

\*Will not count toward degree; credit and grade will transfer.