

**MATH, SCIENCE AND TECHNOLOGY DEPARTMENT  
ASSOCIATE OF ARTS IN PRE-ENGINEERING**

|  | Cr. | Where Taken | Date | Grade |
|--|-----|-------------|------|-------|
| <b>1. Core Requirements: (18 Credits)</b>                |     |             |      |       |
| Engl 103 Freshman English I                              | 3   |             |      |       |
| Engl 113 Freshman English II                             | 3   |             |      |       |
| SpCm 103 Speech Communications                           | 3   |             |      |       |
| Math 163 Trigonometry                                    | 3   |             |      |       |
| Social Science Elective                                  | 3   |             |      |       |
| Humanities Elective                                      | 3   |             |      |       |
| <b>2. Lakota Studies Requirements: (9 Credits)</b>       |     |             |      |       |
| Lak 103 Lakota Language I                                | 3   |             |      |       |
| LSoc 103 Lakota Culture or LHist 203, LHist 213          | 3   |             |      |       |
| Lakota Elective  | 3   |             |      |       |
| <b>3. Math and Science Requirements: (44 Credits)</b>    |     |             |      |       |
| Math 194 Calculus I                                      | 4   |             |      |       |
| Math 214 Calculus II                                     | 4   |             |      |       |
| Math 224 Calculus III                                    | 4   |             |      |       |
| Phys 214 Physics I                                       | 4   |             |      |       |
| Phys 223 Physics II                                      | 3   |             |      |       |
| Phys 221 Physics II Lab                                  | 1   |             |      |       |
| Chem 233 General Chemistry I                             | 3   |             |      |       |
| Chem 231 General Chemistry Lab I                         | 1   |             |      |       |
| Chem 243 General Chemistry II                            | 3   |             |      |       |
| Chem 241 General Chemistry Lab II                        | 1   |             |      |       |
| Engr 101/111 Introduction to Engineering I & II          | 2   |             |      |       |
| Engr 233 Engineering Graphics&Computer Aided Drawing     | 3   |             |      |       |
| Engr 243 Statics   | 3   |             |      |       |
| Engr 254 Mechanics of Materials                          | 4   |             |      |       |
| Engr 213 Elementary Surveying                            | 3   |             |      |       |
| Engr 211 Elementary Surveying Laboratory                 | 1   |             |      |       |
| <b>4a. Civil Engineering Electives (6 credits)</b>       |     |             |      |       |
| Engr 202 Construction Materials                          | 2   |             |      |       |
| Engr 201 Construction Materials Laboratory               | 1   |             |      |       |
| Engr 223 Principals of Environmental Science             | 3   |             |      |       |
| <b>Total Credits for Civil Engineering Degree – 77</b>   |     |             |      |       |
| <b>4a. Geological Engineering Electives (10 credits)</b> |     |             |      |       |
| Engr 143 Geology for Engineers                           | 3   |             |      |       |
| Engr 141 Geology for Engineers Laboratory                | 1   |             |      |       |
| GIS 213 Introduction to GIS                              | 3   |             |      |       |
| GIS 313 Applications of GIS                              | 3   |             |      |       |
| <b>Total Credits for Pre-Engineering Degree –81</b>      |     |             |      |       |

**2017-2018 Catalog**