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| <b>Freshman Year</b>                                      | <b>F</b> | <b>S</b>    |
|---|----------|-------------|
| Chem 112*, 112L, General Chemistry I and Lab . . . . .    | 4        |             |
| Chem 114*, General Chemistry II . . . . .                 |          | 3           |
| Engl 101*, Composition I . . . . .                        | 3        |             |
| GE 101, Introduction to Engineering . . . . .             |          | 1           |
| GE 121, Engineering Design Graphics I . . . . .           | 1        |             |
| GE 122, Engineering Design Graphics II . . . . .          |          | 1           |
| Math 123*, Calculus I . . . . .                           | 4        |             |
| Math 125, Calculus II. . . . .                            |          | 4           |
| Phys 211, 211L, University Physics I and Lab . . . . .    |          | 4           |
| SpCm 101*, Fundamentals of Speech . . . . .               |          | 3           |
| SGR Goal 3 (Social Science) * (Catalog p xx)(G) . . . . . | <u>3</u> | <u>    </u> |
|   | 15       | 16          |

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| <b>Sophomore Year</b>  | <b>F</b> | <b>S</b>    |
|--|----------|-------------|
| EE 220, 220L, Circuits I and Lab . . . . .                             | 4        |             |
| EM 214, Statics . . . . .  |          | 3           |
| GE 225, Survey of machine Tools Applications . . . . .                 |          | 1           |
| Math 225, Calculus III . . . . .                                       | 4        |             |
| Math 321, Differential Equations . . . . .                             |          | 3           |
| Phys 213, 213L, University Physics II and Lab . . . . .                | 4        |             |
| CSc 150, CSc 213, or CSc 218, (a programming language) . . . . .       |          | 3           |
| ME 240, Fundamentals of Mechanical Design . . . . .                    |          | 3           |
| SGR Goal 3, (Social Science) * (Catalog p xx) . . . . .                | 3        |             |
| SGR Goal 4, (Humanities and Fine Arts)* (Catalog p xx-xx)(G) . . . . . |          | 3           |
| SGR Goal 4, (Humanities and Fine Arts)* (Catalog p xx-xx) . . . . .    | <u>3</u> | <u>    </u> |
|  | 18       | 16          |

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| <b>Junior Year</b>                                       | <b>F</b>        | <b>S</b> |
|--|-----------------|----------|
| EE 221, 221L, Circuits II and Lab . . . . .              | 4               |          |
| EM 331, Fluid Mechanics . . . . .                        |                 | 3        |
| Engl 201*, Composition II, <b>or</b>                     |                 |          |
| Engl 277, Tech. Writing in Engineering . . . . .         |                 | 3        |
| Math 331, Advanced Engineering Mathematics <b>or</b>     |                 |          |
| Math 327, Calculus of Several Variables . . . . .        |                 | 3        |
| Phys 316, Meas. Theory and Exp. Design (AW) . . . . .    | 2               |          |
| Phys 318, Advanced Lab I . . . . .                       |                 | 1        |
| Phys 331, Introduction to Modern Physics . . . . .       | 3               |          |
| Phys 341, Thermodynamics . . . . .                       | 2               |          |
| Phys 343, Statistical Physics . . . . .                  | 2               |          |
| Phys 451, Classical Mechanics. . . . .                   |                 | 4        |
| IGR Goal 1**, (Land & Nat Res.) (Catalog p xx) . . . . . | 3               |          |
| IGR Goal 3**, (Soc. Resp.) (Catalog p xx) . . . . .      | <u>        </u> | <u>3</u> |
|  | 16              | 17       |

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| <b>Senior Year</b>                               | <b>F</b> | <b>S</b> |
|--|----------|----------|
| Phys 361, Optics . . . . .                       | 3        |          |
| Phys 418, Advanced Lab II. . . . .               |          | 1        |
| Phys 421, Electromagnetism . . . . .             | 4        |          |
| Phys 435, Intro. to Nuclear Engineering or       |          |          |
| Phys 439, Solid State Physics . . . . .          |          | 3        |
| Phys 464, Senior Design I (or ME 478) . . . . .  | 1        |          |
| Phys 465, Senior Design II (or ME 479) . . . . . |          | 2        |
| Phys 471, Quantum Mechanics . . . . .            |          | 4        |
| Phys 490, Seminar . . . . .                      |          | 1        |
| IGR Goal 2**, Wellness, (Catalog p xx) . . . . . |          | 2        |
| ◇Technical Electives . . . . .                   | <u>6</u> | <u>3</u> |
|  | 14       | 16       |

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- \* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits. See the Catalog, pages xx-xx for details. Courses that are part of these credits are indicated by an asterisk (\*). Check especially the six credits for each of goals 3 and 4 which require courses from two different disciplines. The *Engineering Physics -- Mechanical Engineering Emphasis* major has received an exemption from this requirement in that the second English course may be delayed until the junior year. It is recommended that *Econ202, Macroeconomics* (3cr) be one of the elective Social Sciences courses.
- \*\* South Dakota State University has an 8-9 credit Institutional Graduation Requirement (IGRs). See the Catalog, pages xx-xx for details. These requirements are indicated by a double asterisk (\*\*).
- (G) The BOR General Education requirements (SGRs) include an International/Global Diversity requirement. See the Catalog, page x for details.
- (AW) The BOR General Education requirements (SGRs) include an Advanced Writing requirement. See the Catalog, page x for details.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and fine arts must be taken prior to taking this exam.

- ◇ Technical electives will be selected with the assistance of the student's advisor from courses offered by the Electrical Engineering, Physics, Computer Science, Chemistry, Biology, and Mathematics Departments. Technical electives must be carefully chosen so as to meet the minimum EAC/ABET "Engineering Topics" component. A complete list of departmental approved technical electives is available in the Physics Department office. Any departures from this list must be approved by the Head of the Physics Department.

Name \_\_\_\_\_  
Date \_\_\_\_\_

41 credits in physics

|                                  |   |       |
|----------------------------------|---|-------|
| Physics 211, 211L .....          | 4 | _____ |
| Physics 213, 213L .....          | 4 | _____ |
| Physics 316 .....                | 2 | _____ |
| Physics 318 .....                | 1 | _____ |
| Physics 331 .....                | 3 | _____ |
| Physics 341 .....                | 2 | _____ |
| Physics 343 .....                | 2 | _____ |
| Physics 361 .....                | 3 | _____ |
| Physics 418 .....                | 1 | _____ |
| Physics 421 .....                | 4 | _____ |
| Physics 435 or Physics 439 ..... | 3 | _____ |
| Physics 451 .....                | 4 | _____ |
| Physics 464 or ME 478 .....      | 1 | _____ |
| Physics 465 or ME 479 .....      | 2 | _____ |
| Physics 471 .....                | 4 | _____ |
| Physics 490 .....                | 1 | _____ |

18 credits in mathematics

|                            |   |       |
|----------------------------|---|-------|
| Math 123 .....             | 4 | _____ |
| Math 125 .....             | 4 | _____ |
| Math 225 .....             | 4 | _____ |
| Math 321 .....             | 3 | _____ |
| Math 327 or Math 331 ..... | 3 | _____ |

8 credits in electrical engineering

|                    |   |       |
|--------------------|---|-------|
| EE 220, 220L ..... | 4 | _____ |
| EE 221, 221L ..... | 4 | _____ |

3 credits in mechanical engineering

|              |   |       |
|--------------|---|-------|
| ME 240 ..... | 3 | _____ |
|--------------|---|-------|

13 credits in miscellaneous engineering courses

|                                       |   |       |
|---------------------------------------|---|-------|
| GE 101 .....                          | 1 | _____ |
| GE 121 .....                          | 1 | _____ |
| GE 122 .....                          | 1 | _____ |
| GE 225 .....                          | 1 | _____ |
| CSc 150, or CSc 213, or CSc 218 ..... | 3 | _____ |
| EM 214 .....                          | 3 | _____ |
| EM 331 .....                          | 3 | _____ |

7 credits in chemistry

|                      |   |       |
|----------------------|---|-------|
| Chem 112, 112L ..... | 4 | _____ |
| Chem 114 .....       | 3 | _____ |

9 additional credits of technical electives ◇

Mechanical Engineering, Physics,  
 Math, Electrical Engineering,  
 Chemistry, or Computer Science  
 numbered 300 or greater  
 or other science/technical credits by  
 approval of physics department head

21 additional credits of BOR (SGR) requirements

|  |   |                           |
|--|---|---------------------------|
| SGR Goal 1, Engl 101*, Composition I .....                       | 3 | _____                     |
| SGR Goal 1, Engl 201*, Composition II (or Engl 277) .....        | 3 | _____                     |
| SGR Goal 2, SpCm 101,101A*, Fund. of Speech and Lab .            | 3 | _____                     |
| SGR Goal 3, Social Science* (Catalog p xx - 2 disciplines) ..... | 3 | _____                     |
| SGR Goal 3, Social Science* (Catalog p xx-xx) (G) .....          | 3 | _____                     |
| SGR Goal 4, Humanities & Fine Arts* (Catalog p xx) .....         | 3 | _____                     |
| SGR Goal 4, Hum. & Fine Arts* (Catalog p xx-xx)(G) .....         | 3 | _____                     |
| SGR Goal 5, Mathematics * (Catalog p xx) (3) .....               | 0 | <u>above</u> Math 123     |
| SGR Goal 6, Natural Science * (Catalog p xx) (6) .....           | 0 | <u>above</u> Chem 112,114 |

8 credits of SDSU (IGR) requirements

|   |   |       |
|---|---|-------|
| IGR Goal 1, Land & Nat Res. (catalog p xx) .....        | 3 | _____ |
| IGR Goal 2**, Wellness (Catalog p xx) .....             | 2 | _____ |
| IGR Goal 3**, Soc Resp. / Cultural (Catalog p xx) ..... | 3 | _____ |

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