## PHYSICS MAJOR, FOUNDATION CLASSES

## Requirements

For a major in physics, all students complete the following courses, regardless of which track they select:

| Code                 | Title   | Credits |
|----------------------|---|---------|
| CHEM 1171            | General Chemistry I   | 4       |
| & 1171L              | and General Chemistry I Lab                                   |         |
| CHEM 1172            | General Chemistry II  | 4       |
| & 1172L              | and General Chemistry II Lab                                  |         |
| MATH 1141            | Calculus I for Chemistry, Engineering, and<br>Physics Majors  | 4       |
| MATH 1142            | Calculus II for Chemistry, Engineering, and<br>Physics Majors | 4       |
| MATH 2243            | Calculus III for Chemistry, Engineering, and Physics Majors   | 4       |
| MATH 2251            | Ordinary Differential Equations                               | 3       |
| PHYS 1171            | General Physics I   | 4       |
| & 1171L              | and General Physics I Lab                                     |         |
| PHYS 1172            | General Physics II  | 4       |
| & 1172L              | and General Physics II Lab                                    |         |
| PHYS 2226            | Classical Mechanics   | 3       |
| PHYS 2285            | Modern Physics  | 3       |
| PHYS 2285L           | Modern Experimental Methods Lab                               | 2       |
| PHYS 3215            | Computational Physics   | 3       |
| PHYS 3241            | Thermal and Statistical Physics                               | 3       |
| PHYS 3271            | Electricity and Magnetism                                     | 3       |
| PHYS 4998            | Theoretical/Experimental Capstone                             | 4       |
| & PHYS 4999          | and Theoretical/Experimental Capstone                         |         |
| Physics Elective     |   | 3       |
| <b>Total Credits</b> |   | 55      |

While not normally taken by physics majors, MATH 1171, MATH 1172, and MATH 2273 will also satisfy their corresponding MATH 1141, MATH 1142, and MATH 2243 calculus requirements.

Any Physics class at the 2000 level or higher and not otherwise required by the major may be used to satisfy the Physics Elective requirement(s).

## Plan of Study

The final plan of study depends on the Track you select. The following introductory classes, however, are the same for all tracks.

| Course          | Title  | Credits |
|-----------------|--|---------|
| First Year      |  |         |
| Fall            |  |         |
| MATH 1141       | Calculus I for Chemistry, Engineering, and<br>Physics Majors | 4       |
| PHYS 1171       | General Physics I  | 3       |
| PHYS 1171L      | General Physics I Lab  | 1       |
| Core Curriculum |  | 6       |

| PHYS 3215       | Computational Physics  | 3  |
|-----------------|--|----|
| PHYS 2285L      | Modern Experimental Methods Lab                                | 2  |
| PHYS 2226       | Classical Mechanics  | 3  |
| MATH 2251       | Ordinary Differential Equations                                | 3  |
| Spring          |  |    |
|                 | Credits  | 16 |
| Free Elective   |  | 3  |
| Core Curriculum |  | 6  |
| PHYS 2285       | Modern Physics   | 3  |
| MATH 2243       | Calculus III for Chemistry, Engineering, and<br>Physics Majors | 4  |
| Fall            |  |    |
| Second Year     |  |    |
|                 | Credits  | 17 |
| Free Elective   |  | 3  |
| Core Curriculum |  | 6  |
| PHYS 1172L      | General Physics II Lab   | 1  |
| PHYS 1172       | General Physics II   | 3  |
| MATH 1142       | Calculus II for Chemistry, Engineering, and<br>Physics Majors  | 4  |
| Spring          | oreuts   | "  |
|                 | Credits  | 17 |