

# Accelerated B.S. in Applied Physics/M.D.

---

(115 credits)

**First Year**

| <b>1st Semester</b> |  | <b>Term Credits</b> |
|---------------------|--|---------------------|
| R120 101            | General Biology                                    | 4                   |
| CHEM 125            | General Chemistry I                                | 3                   |
| HUM 101             | English Composition: Writing, Speaking, Thinking I | 3                   |
| MATH 111            | Calculus I   | 4                   |
| PHYS 111            | Physics I  | 3                   |
| PHYS 111A           | Physics I Laboratory                               | 1                   |
| FRSH SEM            | Freshman Seminar                                   | 0                   |
| <b>Term Credits</b> |  | <b>18</b>           |

**2nd Semester**

|   |                              |           |
|---|------------------------------|-----------|
| CHEM 124                                  | General Chemistry Laboratory | 1         |
| CHEM 126                                  | General Chemistry II         | 3         |
| MATH 112                                  | Calculus II                  | 4         |
| PHYS 121                                  | Physics II                   | 3         |
| PHYS 121A                                 | Physics II Laboratory        | 1         |
| R120 102                                  | General Biology              | 4         |
| Social Science (lower-level) GUR Elective |                              | 3         |
| <b>Term Credits</b>                       |                              | <b>19</b> |

**Summer**

|                     |  |          |
|---------------------|--|----------|
| CS 113<br>or CS 115 | Introduction to Computer Science<br>or Intro. to CS I in C++ | 3        |
| MATH 211            | Calculus III A   | 3        |
| <b>Term Credits</b> |  | <b>6</b> |

**Second Year****1st Semester**

|   |                        |           |
|---|------------------------|-----------|
| English Composition and Cultural History (lower-level):GUR Elective |                        | 3         |
| R120 201  | Foundations Of Biology | 3         |
| PHYS 234  | Physics III            | 3         |
| PHYS 231A   | Physics III Laboratory | 1         |
| CHEM 243  | Organic Chemistry I    | 3         |
| English Composition and Cultural History (lower-level):GUR Elective |                        | 3         |
| Physical Education:GUR Elective                                     |                        | 1         |
| <b>Term Credits</b>   |                        | <b>17</b> |

**2nd Semester**

|   |   |           |
|---|---|-----------|
| MATH 328                                  | Mathematical Methods for Scientists and Engineers | 3         |
| MATH 222                                  | Differential Equations                            | 4         |
| Social Science (lower-level):GUR Elective |   | 3         |
| CHEM 244                                  | Organic Chemistry II                              | 3         |
| MATH 225                                  | Survey of Probability and Statistics              | 1         |
| PHYS 335                                  | Introductory Thermodynamics                       | 3         |
| <b>Term Credits</b>                       |   | <b>17</b> |

**Summer**

|   |  |          |
|---|--|----------|
| Humanities and Social Sciences (upper-level):GUR Elective |  | 3        |
| Management:GUR Elective                                   |  | 3        |
| <b>Term Credits</b>                                       |  | <b>6</b> |

**Third Year****1st Semester**

|  |   |            |
|--|---|------------|
| Physical Education:GUR Elective  |   | 1          |
| PHYS 430   | Classical Mechanics I                           | 3          |
| PHYS 432   | Electromagnetism I                              | 3          |
| OPSE 301   | Introduction to Optical Science and Engineering | 3          |
| PHYS 350   | Biophysics I                                    | 3          |
| PHYS 442   | Introduction to Quantum Mechanics               | 3          |
| <b>Term Credits</b>  |   | <b>16</b>  |
| <b>2nd Semester</b>  |   |            |
| Humanities and Social Sciences (upper-level):GUR Elective                  |   | 3          |
| PHYS 451   | Biophysics II                                   | 3          |
| OPSE 410   | Biophotonics                                    | 3          |
| Capstone Semina Humanities and Social Sciences (upper-level)r:GUR Elective |   | 3          |
| PHYS 433   | Electromagnetism II                             | 3          |
| <b>Term Credits</b>  |   | <b>15</b>  |
| <b>Total Credits</b>   |   | <b>114</b> |

Refer to the **General University Requirements** for further information on GUR electives

## Co-op

Co-op courses bearing degree credit replace a technical elective or another course approved by the faculty advisor in the students major department. In applied physics, both PHYS 311 Co-op Work Experience I and PHYS 411 Co-op Work Experience II are taken for degree Credit with permission.