

Student Name: \_\_\_\_\_

| Requirements for Major |               |   |                 |            |                 |              |
|------------------------|---------------|---|-----------------|------------|-----------------|--------------|
| Course Prefix          | Course Number | Major Requirements ( <i>Pre-Requisite</i> )       | Liberal Studies | Req. Hours | Semester Taught | Earned Hours |
| Math                   | 145           | Calculus 1  | X               | 4          | Fall            |              |
| Math                   | 245           | Calculus 2  |                 | 4          | Spring          |              |
| Math                   | 246           | Calculus 3  |                 | 4          | Fall            |              |
| Math                   | 310           | Differential Equations                            |                 | 3          | Even Spring     |              |
| Chem                   | 123           | General Chem 1                                    |                 | 4          | Fall            |              |
| Chem                   | 124           | General Chem 2                                    |                 | 4          | Spring          |              |
| Phys                   | 221           | General Physics 1                                 |                 | 5          | Fall            |              |
| Phys                   | 222           | General Physics 2                                 |                 | 5          | Spring          |              |
| Phys                   | 227           | Modern Physics                                    |                 | 3          | Fall            |              |
| Phys                   | 340           | Advanced Lab 1                                    |                 | 2          | Fall            |              |
| Phys                   | 440           | Advanced Lab 2                                    |                 | 2          | Fall            |              |
| Phys                   | 321           | Classical Mechanics                               |                 | 3          | Even Spring     |              |
| Phys                   | 260           | Circuit Analysis and Electronics Laboratory       |                 | 3          | Odd Spring      |              |
| Phys                   | 250           | Physics Seminar (3 courses at 1 credit hour each) |                 | 3          | Spring          |              |
| Phys                   | 486           | Physics Capstone I                                |                 | 1          | Fall            |              |
| Phys                   | 496           | Physics Capstone II                               |                 | 3          | Spring          |              |
| Phys                   | 165           | Data Science                                      |                 | 3          | Odd Fall        |              |
| Phys                   | 265           | Scientific Programming                            |                 | 3          | Even Spring     |              |
|                        |               | <b>Subtotal</b>                                   |                 | <b>59</b>  |                 |              |
|                        |               |   |                 |            |                 |              |
|                        |               |   |                 |            |                 |              |
|                        |               |   |                 |            |                 |              |

|                           |     |   |  |           |             |
|---------------------------|-----|---|--|-----------|-------------|
|                           |     | <b>Students must pick 6 credit hours of the following Physics electives</b>   |  |           |             |
| Phys                      | 323 | Optics  |  | 3         | Odd Fall    |
| Phys                      | 325 | Thermodynamics  |  | 3         | Even Fall   |
| Phys                      | 335 | Electromagnetic Theory  |  | 3         | Even Spring |
| Phys                      | 425 | Intro to Quantum Mechanics  |  | 3         | Odd Spring  |
| Phys                      | 485 | Special Topics (Repeatable with different sub topics)   |  | 3         | On Demand   |
|                           |     | Physics electives at 300-400 level  |  | 3-6       |             |
|                           |     | <b>Subtotal</b>   |  | <b>6</b>  |             |
|                           |     |   |  |           |             |
|                           |     | Students must take 15 hours of elective courses from a single related STEM Department (courses may not already be required in the Physics Core). At least 3 courses must be at the 300/400 level. See physics advisor for lists of suggest courses. |  | 15        |             |
|                           |     |   |  |           |             |
|                           |     |   |  |           |             |
| <b>Total Major Hours:</b> |     |   |  | <b>80</b> |             |

| DEGREE REQUIREMENTS         |  |  |                                |            |  |
|-----------------------------|--|--|--------------------------------|------------|--|
| <b>BACHELOR OF Science:</b> |  |  |                                |            |  |
|                             |  |  | <b>Total Hours in Major:</b>   | <b>80</b>  |  |
|                             |  |  | <b>Liberal Studies/Core:</b>   | <b>33</b>  |  |
|                             |  |  | <b>Suggested Courses:</b>      | <b>0</b>   |  |
|                             |  |  | <b>ELECTIVES:</b>              | <b>7</b>   |  |
|                             |  |  | <b>TOTAL GRADUATION HOURS:</b> | <b>120</b> |  |

**SUGGESTED SEQUENCE**  
**Major: Applied Physics Concentration**  
**Starting Even Year Fall Semester**

| FALL OF YEAR ONE -Even |                           |              | SPRING OF YEAR ONE -Odd |                           |    |
|------------------------|---------------------------|--------------|-------------------------|---------------------------|----|
| Prefix and Number      | Course Title              | Credit Hours |                         |                           |    |
| Math 145               | Calculus I                | 4            | Math 245                | Calculus 2                | 4  |
| Phys 221               | General Physics 1         | 5            | Phys 222                | General Physics 2         | 5  |
|                        |                           |              | Phys 250                | Physics Seminar           | 1  |
|                        |                           |              |                         | STEM Elective **          | 3  |
|                        | Electives/Liberal Studies | 6            |                         | Electives/Liberal Studies | 2  |
|                        |                           |              |                         |                           |    |
|                        | Total                     | 15           |                         | Total                     | 15 |

| FALL OF YEAR TWO - Odd |                     |              | SPRING OF YEAR TWO -Even |                           |    |
|------------------------|---------------------|--------------|--------------------------|---------------------------|----|
| Prefix and Number      | Course Title        | Credit Hours |                          |                           |    |
| Phys 227               | Modern Physics      | 3            | Math 310                 | Differential Equations    | 3  |
| Phys 340               | Advanced Lab I      | 2            | Phys 321                 | Classical Mechanics       | 3  |
| Math 246               | Calculus III        | 4            | Phys 250                 | Physics Seminar           | 1  |
| Chem 123               | General Chemistry I | 4            | Phys 265                 | Scientific Programming    | 3  |
| Phys 165               | Data Science        | 3            | Chem 124                 | General Chemistry II      | 4  |
|                        |                     |              |                          |                           |    |
|                        |                     |              |                          | Electives/Liberal Studies | 1  |
|                        | Total               | 16           |                          | Total                     | 15 |

**SUGGESTED SEQUENCE**  
**Major: Applied Physics Concentration**  
**Starting Even Year Fall**

| FALL OF YEAR THREE Even |                           |       | SPRING OF YEAR THREE –Odd |                           |       |
|-------------------------|---------------------------|-------|---------------------------|---------------------------|-------|
| Phys 325                | Thermodynamics*           | 3     | Phys 425                  | Quantum Mechanics*        | 3     |
| Phys 440                | Advanced Lab II           | 2     | Phys 250                  | Physics Seminar           | 1     |
|                         | STEM Elective **          | 3     | Phys 260                  | Electronics               | 3     |
|                         | Electives/Liberal Studies | 6-9   |                           | STEM Elective **          | 3     |
|                         |                           |       |                           | Electives/Liberal Studies | 5-8   |
|                         |                           |       |                           |                           |       |
|                         |                           | Total |                           |                           | Total |
|                         |                           | 14    |                           |                           | 15    |

| FALL OF YEAR FOUR – Odd |                           |       | SPRING OF YEAR FOUR – Even |                           |       |
|-------------------------|---------------------------|-------|----------------------------|---------------------------|-------|
| Phys 323                | Optics*                   | 3     | Phys 335                   | Electromagnetic Theory*   | 3     |
| Phys 486                | Physics Capstone I        | 1     | Phys 496                   | Physics Capstone II       | 3     |
|                         | STEM Elective **          | 3     |                            | STEM Elective **          | 3     |
|                         | Electives/Liberal Studies | 8-11  |                            |                           |       |
|                         |                           |       |                            | Electives/Liberal Studies | 6-9   |
|                         |                           |       |                            |                           |       |
|                         |                           | Total |                            |                           | Total |
|                         |                           | 15    |                            |                           | 15    |

**Total Hours = 120**

\* Select 6 credit hours of course from the marked courses, Phys 485 Special Topics, or other physics electives at the 300/400 level.

\*\* Select 15 credit hours from another STEM Field, with at least 3 courses at the 300/400 level.

**SUGGESTED SEQUENCE**  
**Major: Applied Physics Concentration**  
**Starting Odd Year Fall**

| FALL OF YEAR ONE - Odd |                           |              | SPRING OF YEAR ONE - Even |                           |       |
|------------------------|---------------------------|--------------|---------------------------|---------------------------|-------|
| Prefix and Number      | Course Title              | Credit Hours |                           |                           |       |
| Math 145               | Calculus I                | 4            | Math 245                  | Calculus 2                | 4     |
| Phys 221               | General Physics 1         | 5            | Phys 222                  | General Physics 2         | 5     |
| Phys 165               | Data Science              | 3            | Phys 250                  | Physics Seminar           | 1     |
|                        | Electives/Liberal Studies | 3            | Phys 265                  | Scientific Programming    | 3     |
|                        |                           |              |                           | Electives/Liberal Studies | 2     |
|                        |                           |              |                           |                           |       |
|                        |                           | Total        |                           |                           | Total |
|                        |                           | 15           |                           |                           | 15    |

| FALL OF YEAR TWO – Even |                           |              | SPRING OF YEAR TWO- Odd |                           |       |
|-------------------------|---------------------------|--------------|-------------------------|---------------------------|-------|
| Prefix and Number       | Course Title              | Credit Hours |                         |                           |       |
| Phys 227                | Modern Physics            | 3            | Phys 260                | Electronics               | 3     |
| Phys 340                | Advanced Lab I            | 2            | Phys 250                | Physics Seminar           | 1     |
| Math 246                | Calculus III              | 4            | Chem 124                | General Chemistry 2       | 4     |
| Chem 123                | General Chemistry 1       | 4            |                         | STEM Elective **          | 3     |
|                         |                           |              |                         | Electives/Liberal Studies | 4     |
|                         | Electives/Liberal Studies | 2            |                         |                           |       |
|                         |                           |              |                         |                           |       |
|                         |                           | Total        |                         |                           | Total |
|                         |                           | 15           |                         |                           | 15    |

**SUGGESTED SEQUENCE**  
**Major: Applied Physics Concentration**  
**Starting Odd Year Fall**

| FALL OF YEAR THREE – Odd |                           |      | SPRING OF YEAR THREE - Even |                           |     |
|--------------------------|---------------------------|------|-----------------------------|---------------------------|-----|
| Phys 440                 | Advanced Lab II           | 2    | Math 310                    | Differential Equations    | 3   |
| Phys 323                 | Optics *                  | 3    | Phys 321                    | Classical Mechanics       | 3   |
|                          | STEM Elective **          | 3    | Phys 335                    | Electromagnetic Theory*   | 3   |
|                          |                           |      |                             | STEM Elective **          | 3   |
|                          | Electives/Liberal Studies | 7-10 |                             |                           |     |
|                          |                           |      |                             | Electives/Liberal Studies | 3-6 |
|                          | Total                     | 15   |                             | Total                     | 15  |

| FALL OF YEAR FOUR – Even |                           |     | SPRING OF YEAR FOUR - Odd |                           |      |
|--------------------------|---------------------------|-----|---------------------------|---------------------------|------|
| Phys 325                 | Thermodynamics*           | 3   | Phys 250                  | Physics Seminar           | 1    |
| Phys 486                 | Physics Capstone I        | 1   | Phys 428                  | Physics Capstone II       | 3    |
|                          | STEM Elective **          | 3   | Phys 425                  | Quantum Mechanics*        | 3    |
|                          | STEM Elective **          | 3   |                           |                           |      |
|                          | Electives/Liberal Studies | 5-8 |                           | Electives/Liberal Studies | 8-11 |
|                          |                           |     |                           |                           |      |
|                          | Total                     | 15  |                           | Total                     | 15   |

**Total Hours = 120**

\* Select 6 credit hours of course from the marked courses, Phys 485 Special Topics, or other physics electives at the 300/400 level.

\*\* Select 15 credit hours from another STEM Field, with at least 3 courses at the 300/400 level.