

Four-Year Plan for B.S. Degree in Physics

**Pure Physics Concentration**

Tennessee Tech University

Effective August 1, 2025

| <b>FIRST YEAR</b>               |                |           |                                         |                          |
|---------------------------------|----------------|-----------|-----------------------------------------|--------------------------|
| <b>FALL</b>                     | Total Cr. Hrs. | <b>15</b> | <b>SPRING</b>                           | Total Cr. Hrs. <b>15</b> |
| Course                          | Cr. Hrs.       |           | Course                                  | Cr. Hrs.                 |
| ENGL 1010 English Composition I | 3              |           | ENGL 1020 English Composition II        | 3                        |
| PHYS 1137 Frontiers of Physics  | 1              |           | MATH 1920 Calculus II                   | 4                        |
| MATH 1910 Calculus I            | 4              |           | PHYS 2110 Calc-based Physics I w/Lab    | 4                        |
| CHEM 1110 General Chemistry I   | 4              |           | CSC 1300 Intro Prob Solving & Comp Prog | 4                        |
| Humanities/Fine Arts            | 3              |           |                                         |                          |

| <b>SECOND YEAR</b>                    |                |           |                                          |                          |
|---------------------------------------|----------------|-----------|------------------------------------------|--------------------------|
| <b>FALL</b>                           | Total Cr. Hrs. | <b>15</b> | <b>SPRING</b>                            | Total Cr. Hrs. <b>14</b> |
| Course                                | Cr. Hrs.       |           | Course                                   | Cr. Hrs.                 |
| ENGL 2130 or ENGL 2235 or ENGL 2330   | 3              |           | MATH 2120 Differential Equations         | 3                        |
| MATH 2110 Calculus III                | 4              |           | PHYS 3020 Topics in Modern Physics       | 3                        |
| PHYS 2120 Calc-based Physics II w/Lab | 4              |           | PHYS 3021 Modern Physics Laboratory      | 1                        |
| CSC 1310 Data Structures & Algorithms | 4              |           | PHYS 3060 Math Techniques in Physics     | 4                        |
|                                       |                |           | PC 2500 Communicating in the Professions | 3                        |

| <b>THIRD YEAR</b>                      |                |           |                                       |                          |
|----------------------------------------|----------------|-----------|---------------------------------------|--------------------------|
| <b>FALL</b>                            | Total Cr. Hrs. | <b>15</b> | <b>SPRING</b>                         | Total Cr. Hrs. <b>15</b> |
| Course                                 | Cr. Hrs.       |           | Course                                | Cr. Hrs.                 |
| PHYS 3610 Classical Mechanics          | 3              |           | PHYS 3120 Statistical Thermal Physics | 3                        |
| PHYS 4610 Classical E & M I            | 3              |           | PHYS 3810 Quantum Mechanics I         | 3                        |
| MATH 3470 Intro to Probability & Stats | 3              |           | PHYS 4620 Classical E & M II          | 3                        |
| Humanities/Fine Arts                   | 3              |           | MATH 3810 Complex Variables           | 3                        |
| Elective                               | 3              |           | Social/Behavioral Sciences            | 3                        |

| <b>FOURTH YEAR</b>                    |                |           |                                 |                          |
|---------------------------------------|----------------|-----------|---------------------------------|--------------------------|
| <b>FALL</b>                           | Total Cr. Hrs. | <b>15</b> | <b>SPRING</b>                   | Total Cr. Hrs. <b>16</b> |
| Course                                | Cr. Hrs.       |           | Course                          | Cr. Hrs.                 |
| PHYS 3820 Quantum Mechanics II        | 3              |           | PHYS 4130 Computational Physics | 3                        |
| PHYS 4710 Ad. Experimental Physics    | 4              |           | PHYS 4760 Senior Thesis         | 3                        |
| PHYS 4750 Scientific Proposal Writing | 2              |           | HIST 2020 American History II   | 3                        |
| HIST 2010 American History I          | 3              |           | Elective                        | 7                        |
| Social/Behavioral Sciences            | 3              |           |                                 |                          |