

# PHYSICS 7-12 TEACHING SUBJECT ENDORSEMENT, BACHELOR OF SCIENCE IN EDUCATION

Offered by Department of Physics and Astronomy (<http://catalog.unk.edu/undergraduate/departments-programs/physics-astronomy/>)

| Code  | Title   | Credit Hours |
|---|---|--------------|
| <b>General Education</b>  |   |              |
| <i>Foundational Requirements (LOPERs 1-4)</i>                       |   | <b>14</b>    |
| Including:  |   |              |
| <b>LOPER 2: Writing Skills</b>                                      |   |              |
| ENG 101   | Introduction to Academic Writing                        |              |
| <b>LOPER 3: Oral Communication Skills</b>                           |   |              |
| SPCH 100  | Fundamentals of Speech Communication                    |              |
| <b>LOPER 4: Mathematics, Statistics, and Quantitative Reasoning</b> |   |              |
| MATH 115  | Calculus I with Analytic Geometry <sup>1</sup>          |              |
| <i>Broad Knowledge Requirements (LOPERs 5-8)</i>                    |   | <b>10</b>    |
| including   |   |              |
| <b>LOPER 7: Social Sciences</b>                                     |   |              |
| PSCI 110  | Introduction to American Politics                       |              |
| <b>LOPER 8: Natural Sciences</b>                                    |   |              |
| CHEM 160  | General Chemistry                                       |              |
| CHEM 160L   | General Chemistry Laboratory                            |              |
| <i>Dispositional Requirements (LOPERs 9-10)</i>                     |   | <b>6</b>     |
| including   |   |              |
| <b>LOPER 9: Civic Competency and Engagement</b>                     |   |              |
| PSCI 110  | Introduction to American Politics                       |              |
| <b>LOPER 10: Respect for Human Diversity</b>                        |   |              |
| TE 100  | Teaching in a Democratic Society                        |              |
| <i>Wellness (LOPER 11) Optional</i>                                 |   | <b>0</b>     |
| <b>Program Specified Requirements</b>                               |   | <b>3</b>     |
| ENG 102   | Special Topics in Academic Writing and Research         |              |
| <b>Professional Sequence</b>  |   |              |
| Complete all required courses <sup>2</sup>                          |   | <b>25-26</b> |
| Including:  |   |              |
| TE 319  | Management and Assessment in K-12/ Secondary Classrooms |              |
| TE 320  | Field Experience in Secondary Classroom                 |              |
| <b>Endorsement</b>  |   |              |
| Complete all required courses                                       |   | <b>48</b>    |
| <b>Unrestricted electives</b>                                       |   |              |
| Needed to reach 120 credit hour minimum                             |   | <b>13-14</b> |
| <b>Total Credit Hours</b>   |   | <b>120</b>   |

## Endorsement

| Code  | Title  | Credit Hours |
|---|--|--------------|
| <b>Physics Subject Endorsement Requirements</b> |  |              |
| PHYS 123  | Freshman Physics Seminar   | 3            |
| PHYS 201  | Earth Science  | 4            |
| PHYS 275 & 275L                                 | General Physics I (Calculus) and General Physics I (Calculus) Laboratory   | 5            |
| PHYS 276 & 276L                                 | General Physics II (Calculus) and General Physics II (Calculus) Laboratory | 5            |
| PHYS 301  | Advanced Physical Science  | 4            |
| PHYS 346  | Modern Physics I   | 4            |
| PHYS 471  | Methods in Secondary Science Teaching                                      | 3            |
| BIOL 105  | Biology I  | 4            |
| BIOL 106  | Biology II   | 4            |
| Select 12 credit hours of the following:        |  | <b>12</b>    |
| PHYS 300-PHYS 499                               |  |              |
| <b>Total Credit Hours</b>                       |  | <b>48</b>    |

<sup>1</sup> Students without sufficient preparation will also need to take the following courses, increasing the total credit hours needed:

- MATH 102
- MATH 103

<sup>2</sup> Students must apply for admission to all Teacher Education programs (<http://catalog.unk.edu/undergraduate/departments-programs/teacher-education/professional-sequence-education-degrees/>).

Students should see their academic advisor to include biology requirements in order to meet Nebraska Department of Education Physics 7-12 teaching endorsement requirements.

This document represents a sample 4-year plan for degree completion with this major. Actual course selection and sequence may vary and should be discussed individually with your academic advisor. Advisors can also help you plan other experiences to enrich your undergraduate education such as internships, education abroad, undergraduate research, learning communities, and service learning and community-based learning.

| Code                        | Title                             | Credit Hours |
|-----------------------------|-----------------------------------|--------------|
| <b>Semester 1</b>           |                                   |              |
| LOPER 1: First-year Seminar |                                   | 3            |
| PHYS 123                    | Freshman Physics Seminar          | 3            |
| MATH 115                    | Calculus I with Analytic Geometry | 5            |
| ENG 101                     | Introduction to Academic Writing  | 3            |
| PSCI 110                    | Introduction to American Politics | 3            |
| <b>Total Credit Hours</b>   |                                   | <b>17</b>    |

| Code                                  | Title  | Credit Hours | Code                      | Title   | Credit Hours        |
|---------------------------------------|--|--------------|---------------------------|---|---------------------|
| <b>Semester 2</b>                     |  |              | <b>Semester 7</b>         |   |                     |
| PHYS 275 & 275L                       | General Physics I (Calculus) and General Physics I (Calculus) Laboratory   | 5            | PHYS 300-499              |   | 4                   |
| ENG 102                               | Special Topics in Academic Writing and Research                            | 3            | PHYS 471                  | Methods in Secondary Science Teaching                   | 3                   |
| SPCH 100                              | Fundamentals of Speech Communication                                       | 3            | TE 319                    | Management and Assessment in K-12/ Secondary Classrooms | 2                   |
| TE 100                                | Teaching in a Democratic Society   | 3            | TE 320                    | Field Experience in Secondary Classroom                 | 2                   |
| <b>Total Credit Hours</b>             |  | <b>14</b>    | Unrestricted Elective     |   | 3                   |
| <b>Semester 3</b>                     |  |              | <b>Total Credit Hours</b> |   | <b>14</b>           |
| PHYS 276 & 276L                       | General Physics II (Calculus) and General Physics II (Calculus) Laboratory | 5            | <b>Code</b>               | <b>Title</b>  | <b>Credit Hours</b> |
| CHEM 160 & 160L                       | General Chemistry and General Chemistry Laboratory                         | 4            | <b>Semester 8</b>         |   |                     |
| BIOL 105                              | Biology I  | 4            | TE 400                    | Student Teaching  | 12                  |
| Unrestricted Elective                 |  | 3            | <b>Total Credit Hours</b> |   | <b>12</b>           |
| <b>Total Credit Hours</b>             |  | <b>16</b>    |                           |   |                     |
| <b>Semester 4</b>                     |  |              |                           |   |                     |
| PHYS 346                              | Modern Physics I   | 4            |                           |   |                     |
| PHYS 201                              | Earth Science  | 4            |                           |   |                     |
| TE 204                                | Growth & Development/Introduction to Exceptionalities                      | 4            |                           |   |                     |
| BIOL 106                              | Biology II   | 4            |                           |   |                     |
| <b>Total Credit Hours</b>             |  | <b>16</b>    |                           |   |                     |
| <b>Semester 5</b>                     |  |              |                           |   |                     |
| PHYS 300-499                          |  | 4            |                           |   |                     |
| TE 206                                | Instructional Technology and the Preservice Teacher                        | 3            |                           |   |                     |
| Unrestricted Elective                 |  | 3            |                           |   |                     |
| LOPER 5: Visual or Performing Arts    |  | 3            |                           |   |                     |
| LOPER 6: Humanities                   |  | 3            |                           |   |                     |
| <b>Total Credit Hours</b>             |  | <b>16</b>    |                           |   |                     |
| <b>Semester 6</b>                     |  |              |                           |   |                     |
| PHYS 300-499                          |  | 4            |                           |   |                     |
| PHYS 301                              | Advanced Physical Science  | 4            |                           |   |                     |
| TE 306                                | Reading and Inclusion in K-12 Classrooms                                   | 2            |                           |   |                     |
| LOPER 10: Respect for Human Diversity |  | 3            |                           |   |                     |
| Unrestricted Elective                 |  | 3            |                           |   |                     |
| <b>Total Credit Hours</b>             |  | <b>16</b>    |                           |   |                     |