



## Physics Baccalaureate Completion Program

Students who complete an **AS degree** in Physics at Sinclair College may transfer into the Bachelor of Science (B.S.), the Bachelor of Arts (B.A.), or the Bachelor of Arts in Physics Education program at Wright State University based on the following conditions. Students should verify their satisfactory academic progress (SAP) requirements with the financial aid office before pursuing classes outside of their AS.

Students are encouraged to take the following additional courses while at Sinclair College:

MAT 2310 or MAT 2330

MAT 2320

### Admission Requirements to the Physics Program at Wright State

1. Cumulative GPA of 2.0
2. Completion of one course in chosen major with a grade of "C" or higher

This agreement will expire two years from date of signature.

 5/17/16

Dr. Thomas Sudkamp  
Provost  
Wright State University

Date

 5/31/16

Dr. David L. Collins  
Provost  
Sinclair College

Date

**Sinclair Community College**  
to  
**Wright State University – Physics**

| <b>Sinclair Course</b>   | <b>Credit Hours</b> | <b>Wright State Course/Requirement</b>    |
|--|---------------------|---|
| ENG 1101 English Composition I   | 3                   | ENG 1100                                  |
| ENG 1201 English Composition II  | 3                   | ENG 2100                                  |
| COM 2211 Effective Public Speaking   | 3                   | COM 1010 (Additional Core)                |
| COM 2225 Small Group Communication   | 3                   | COM 2410 (Elective)                       |
| Choose any two approved OTM Arts & Humanities                                      | 6                   | Arts and Humanities Core and History Core |
| Choose any two approved OTM Social & Behavioral Science from different disciplines | 6                   | Social Science Core                       |
| PHY 2201 General Physics I   | 5                   | PHY 2400/2400L                            |
| PHY 2202 General Physics II  | 5                   | PHY 2410/2410L                            |
| CHE 1211/1251 General Chemistry I  | 5                   | CHM 1210/1210L                            |
| MAT 2270 Calculus & Analytic Geometry I  | 5                   | MTH 2300 (Math Core)                      |
| MAT 2280 Calculus & Analytic Geometry II   | 5                   | MTH 2310 (Additional Core)                |
| PHY 1100/1110 Introduction to Physics  | 4                   | Elective                                  |
| PHY 1161 Scientific Thought & Method   | 3                   | Elective                                  |
| PHY 2210 Problem Solving in Physics with Matlab                                    | 2                   | Elective                                  |
| Multicultural Elective   | 3                   | Global Studies                            |
| SCC 1101 First Year Experience   | 1                   | Elective                                  |
| <b>TOTAL: 62</b>   |                     |   |

By completing the associate degree and the Ohio Transfer Module at Sinclair, students will have met the requirements for the Wright State Core. Students must complete at least two designated Integrated Writing courses in the major at Wright State.

The following additional coursework will be required to complete the B.S. in Physics at Wright State University.

| Course Number and Title                              | Credit Hours |
|--|--------------|
| PHY 1000 Undergraduate Physics Seminar I             | 1            |
| PHY 1010 Undergraduate Physics Seminar II            | 1            |
| PHY 2420 Introduction to Modern Physics              | 3            |
| PHY 3710 Analytical Mechanics                        | 3            |
| PHY 4500 Electricity and Magnetism I                 | 3            |
| PHY 4510 Electricity and Magnetism II                | 3            |
| PHY 3150 Physics Instrumentation                     | 3            |
| PHY 3220 Applied Optics                              | 3            |
| PHY 3500 Advanced Physics Laboratory I               | 2            |
| PHY 3510 Advanced Physics Laboratory II              | 2            |
| PHY 4600 Introduction to Quantum Mechanics I         | 3            |
| PHY 4610 Introduction to Quantum Mechanics II        | 3            |
| PHY 4830 Statistical Mechanics                       | 3            |
| PHY 4940 Senior Project                              | 6            |
| MTH 2320 Calculus III ( <i>Sinclair's MAT 2290</i> ) | 4            |
| MTH 2330 ( <i>Sinclair's MAT 2310</i> )              | 3            |
| or   |              |
| MTH 2350 ( <i>Sinclair's MAT 2330</i> )              | 4            |
| MTH 2530 ( <i>Sinclair's MAT 2320</i> )              | 4            |
| MTH 3320 Complex Variables                           | 3            |
| MTH 3330 Partial Differential Equations              | 3            |
| CHM 1220/CHM 1220L ( <i>Sinclair's CHE 1221</i> )    | 5            |
| Total  | 61-62        |

The following additional coursework will be required to complete the B.A. in Physics program at Wright State University.

| Course Number and Title  | Credit Hours |
|--|--------------|
| PHY 2420 Introduction to Modern Physics  | 3            |
| PHY 3710 Analytical Mechanics  | 3            |
| PHY 4500 Electricity and Magnetism I   | 3            |
| PHY 3150 Physics Instrumentation   | 3            |
| PHY 3220 Applied Optics  | 3            |
| PHY 3500 Advanced Physics Laboratory I   | 2            |
| Physic Elective  | 3            |
| MTH 2320 Calculus III ( <i>Sinclair's MAT 2290</i> )   | 4            |
| MTH 2330 ( <i>Sinclair's MAT 2310</i> )  | 3            |
| <b>or</b>  |              |
| MTH 2350 ( <i>Sinclair's MAT 2330</i> )  | 4            |
| MTH 2530 ( <i>Sinclair's MAT 2320</i> )  | 4            |
| CHM 1220/CHM 1220L ( <i>Sinclair's CHE 1221</i> )  | 5            |
| Electives<br>( <b>Note:</b> 18 total elective hours must be outside of the Colleges of Science & Mathematics and Engineering & Computer Science) | 23-24        |
| Total  | 60           |

The following additional coursework will be required to complete the B.A. in Physics Education program at Wright State University.

| Course Number and Title  | Credit Hours |
|--|--------------|
| PHY 2420 Introduction to Modern Physics  | 3            |
| PHY 3220 Applied Optics  | 3            |
| PHY 3710 Analytical Mechanics  | 3            |
| PHY 4500 Electricity and Magnetism I   | 3            |
| PHY 4460 Multiple Representations in Physical Science                                    | 3            |
| PHY 4470 Development of Ideas in Physical Science  | 3            |
| PHY 1060/1060L Astronomy with Lab  | 4            |
| PHY 3150 Physics Instrumentation   | 3            |
| PHY 3500 Advanced Physics Laboratory I   | 2            |
| MTH 2320 Calculus III ( <i>Sinclair's MAT 2290</i> )                                     | 4            |
| MTH 2330 ( <i>Sinclair's MAT 2310</i> )<br>or<br>MTH 2350 ( <i>Sinclair's MAT 2330</i> ) | 3            |
| MTH 2530 ( <i>Sinclair's MAT 2320</i> )  | 4            |
| CHM 3460 Concepts in Chemistry II for Middle Childhood Education                         | 4            |
| BIO 3450 Concepts of Biology I for Early and Middle Childhood Education                  | 3.5          |
| EES 3450 Concepts for Earth Science I for Early and Middle Childhood Education           | 3.5          |
| ED 2600 Introduction to Education ( <i>Sinclair's EDU 1100</i> )                         | 3            |
| ED 2650 Early Field Experience I: Introduction to the Education Profession               | 1            |
| ED 2700 Education Psychology ( <i>Sinclair's PSY 2242</i> )                              | 3            |
| ED 2750 Early Field Experience II Introduction to Education Psychology                   | 1            |
| EDS 2900 Individuals with Exceptionalities ( <i>Sinclair's EDU 1105</i> )                | 3            |
| Total  | 60-61        |