

# SECONDARY EDUCATION - PHYSICS (AAT)

**Award:** Associate of Arts in Teaching

**No. of credits required:** 61

**For more information:** : Contact Brigid Cook, 443-412-2084, bcook@harford.edu; or Admissions, 443-412-2109.

## Program Description

The A.A.T. degree program prepares students for transfer into a four-year college or university education program which results in certification to teach physics at grades 7 through 12. High school preparation should include four units of English, three units of math of which two should be algebra, and three units of science.

Students must obtain a passing score on Praxis CORE or an alternative measurement of basic skills as set forth by COMAR and MSDE in order to earn an A.A.T. degree. Students should plan to take Praxis CORE, which includes core English and math competencies, near completion of 45 credit hours. Information can be obtained from Laura Hutton (lhutton@harford.edu). Passing scores on Praxis, SAT, GRE, or ACT may be substituted in place of Praxis CORE, but may not be accepted by all transfer institutions.

## Program Goals

Upon completion of the Teacher Education A.A.T. degree programs, students will be able to

1. Demonstrate professional teaching behavior including effective communication.
2. Discuss the development of education/curriculum and select instructional techniques appropriate for a variety of students.
3. Describe influences on growth and development, as well as theories of learning.
4. Make decisions in accordance with legal and ethical standards.
5. Summarize past and present practices pertaining to education.

## Transfer Information

This program requires the successful completion of Praxis CORE and at least a 2.75 GPA. Because the program courses are chosen to fulfill predetermined outcomes, the entire program will transfer to any four-year state or private college in Maryland; however, students are not guaranteed admission to any four-year institution and must apply to and meet the criteria required by that particular institution. Additionally, courses in the program will transfer to private and public colleges nationwide.

Past graduates of this program have transferred to four-year state colleges and universities in Maryland and to private and public colleges nationwide. To facilitate transfer, students should consult with an academic advisor early in their studies at HCC and before selecting elective courses.

## Employment Information

According to the United States Department of Labor, Bureau of Labor Statistics, the number of secondary teachers needed between 2019 and 2029 is expected to grow 4%. According to the U.S. Department of

Education, during the 2020-21 school year there is a critical shortage of physics teachers in 13 states.

## Degree Requirements

### Recommended Course Sequence

First Semester		Credits
CHEM 111	General Chemistry I (GL) <sup>1</sup>	4
EDUC 100	Professionalism and Ethics in Teaching	3
ENG 101	English Composition (GE)	3
MATH 203	Calculus I (GM) <sup>2</sup>	4
Physical Education Elective		1
<b>Credits</b>		<b>15</b>
Second Semester		
CHEM 112	General Chemistry II A (GL)	4
EDUC 101	Introduction to Education: Early Childhood through Secondary <sup>3, 4</sup>	3
MATH 204	Calculus II (GM)	4
PHYS 203	General Physics: Mechanics and Particle Dynamics (GS)	3
<b>Credits</b>		<b>14</b>
Third Semester		
MATH 208	Elementary Differential Equations	3
PHYS 204	General Physics II: Heat, Electricity and Magnetism (GL) <sup>2</sup>	4
PSY 101	General Psychology (GB)	3
Arts/Humanities Elective (GAH) ( <a href="https://catalog.harford.edu/general-education/#arts-humanities">https://catalog.harford.edu/general-education/#arts-humanities</a> ) <sup>5</sup>		3
Behavioral/Social Science Elective (GB) ( <a href="https://catalog.harford.edu/general-education/#behavioral-social-science">https://catalog.harford.edu/general-education/#behavioral-social-science</a> ) <sup>5, 6</sup>		3
<b>Credits</b>		<b>16</b>
Fourth Semester		
EDUC 217	Introduction to Special Education <sup>3, 4, 7</sup>	3
PHYS 205	General Physics III: Waves, Optics and Modern Physics	4
PSY 207	Educational Psychology	3
PSY 216	Adolescent Psychology	3
Arts/Humanities Elective (GAH) ( <a href="https://catalog.harford.edu/general-education/#arts-humanities">https://catalog.harford.edu/general-education/#arts-humanities</a> ) <sup>5</sup>		3
<b>Credits</b>		<b>16</b>
<b>Total Credits</b>		<b>61</b>

<sup>1</sup> Students who did not successfully complete two credits of high school algebra or one of the HCC mathematics prerequisite courses for CHEM 111 General Chemistry I (GL), should request a transcript analysis from the STEM division to determine readiness to take CHEM 111 General Chemistry I (GL).

<sup>2</sup> Students that do not meet the prerequisite for MATH 203 Calculus I (GM) will take the STEM Divisional Math Assessment then plan to take summer coursework to prepare for MATH 203 Calculus I (GM).

<sup>3</sup> Students are required to participate in a thirty-hour field placement experience in addition to time spent in EDUC 101 Introduction to Education: Early Childhood through Secondary and EDUC 217 Introduction to Special Education. Field placement experiences take

place sometime during regular school hours, generally between 8:00 a.m. and 3:30 p.m.

<sup>4</sup> A criminal background check and fingerprinting, at the student's expense, may be required for courses including a field placement.

<sup>5</sup> Select in accordance with transfer institution requirements.

<sup>6</sup> HIST 104 History of the United States II (GB) (GAH) is recommended.

<sup>7</sup> The EDUC 217 Introduction to Special Education course required by Harford Community College is a necessary requirement of the College's A.A.T. degree, but is not sufficient to meet all special education or inclusion course requirements for four-year teacher education programs. Students may be required to take additional special education or inclusion courses as a part of the requirements for a baccalaureate degree and teacher education certification at four-year institutions.

## General Education Degree Requirements

Note: The following codes identify courses which satisfy the General Education Degree Requirements:

Behavioral/Social Science (GB)

English Composition (GE)

Arts/Humanities (GAH)

Interdisciplinary and Emerging Issues (GI)

Biological/Physical Laboratory Science (GL)

Mathematics (GM)

Biological/Physical Science (GS)