

## SECONDARY EDUCATION--PHYSICS AAT: 603

Total Credits: 65

Catalog Edition: 2020-2021

### Program Description

This curriculum prepares students to transfer to a secondary education physics program at a four-year college or university in the state of Maryland. The AAT articulates with all Maryland transfer programs in secondary physics education. The program enables students to fulfill their General Education requirements, participate in fieldwork experiences, and complete a core of professional education coursework appropriate for the first two years of teacher preparation. To earn the AAT students must either achieve a minimum of a 3.0 cumulative GPA or achieve a 2.75 - 2.99 cumulative GPA along with presenting acceptable scores on one of the following state-approved basic skills tests: SAT, ACT, Praxis I PPST, or Praxis Core academic skills tests.

Participation in field experiences with Montgomery County Public Schools (MCPS) is an important component of all teacher education transfer programs at Montgomery College. Completion of fingerprinting for state and federal level background checks (or documentation of recent prior completion) is mandatory for enrollment in any course requiring experiences in MCPS. Further information on background checks may be found on the School of Education website at <https://www.montgomerycollege.edu/academics/abeess/school-of-education/index.html>.

### Program Outcomes

Upon completion of this program a student will be able to:

- Identify major historical events in education and analyze the impact of those events with current educational trends.
- Identify the psychological, cognitive, emotional, and physical characteristics of typically developing children and adolescents, with specific consideration to disabilities and cultural and linguistic diversity.
- Analyze and critique current scientifically-based research and culturally responsive instructional practices for the purpose of understanding the educational needs of students and families.

- Identify the current and inclusive philosophies for differentiating instruction to analyze, improve, and facilitate instruction for diverse learners.
- Demonstrate and utilize technology as a teaching/reinforcement tool.
- Develop excellent written, verbal, critical thinking, and problem solving skills, which will allow him or her to effectively make connections between prior knowledge/experience and new learning.
- Demonstrate proficiency in the application of physics to include mechanics, electricity, wave theory, and modern physics.

### Program Advisors

#### Germantown

- Prof. Sonja Fisher, 240-567-6012,  
[Sonja.Fisher@montgomerycollege.edu](mailto:Sonja.Fisher@montgomerycollege.edu)

#### Rockville

- Dr. Glenda Hernandez Tittle, 240-567-1317,  
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- Prof. Deb Poese, 240-567-7269,  
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#### Takoma Park/Silver Spring

- Dr. Glenda Hernandez Tittle, 240-567-1317,  
[Glenda.HernandezTittle@montgomerycollege.edu](mailto:Glenda.HernandezTittle@montgomerycollege.edu)
- Prof. Brandon Wallace, 240-567-5919,  
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For more information, please visit <https://www.montgomerycollege.edu/education>

To view the Advising Worksheet, please visit <https://www.montgomerycollege.edu/documents/counseling-and-advising/advising-worksheets/current-catalog/603.pdf>

2020-2021

# Program Advising Guide

An Academic Reference Tool for Students

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## Suggested Course Sequence

A suggested course sequence for full-time students follows. All students should review this advising guide and consult an advisor.

### First Semester

ENGL 101 - Introduction to College Writing *3 semester hours* \*

MATH 181 - Calculus I *4 semester hours* (MATF)

BIOL 150 - Principles of Biology I *4 semester hours*

OR

CHEM 131 - Principles of Chemistry I *4 semester hours*

EDUC 101 - Foundations of Education *3 semester hours*

EDUC 102 - Field Experience in Education *1 semester hour*

### Third Semester

HIST 200 - History of the United States, a Survey Course: from Colonial Times to 1865 *3 semester hours* (HUMD)

ISTD 173 - Integrated Arts *3 semester hours* (ARTD)

MATH 280 - Multivariable Calculus *4 semester hours*

PHYS 262 - General Physics II: Electricity and Magnetism *4 semester hours*

PSYC 216 - Adolescent Psychology *3 semester hours*

### Second Semester

ENGL 102 - Critical Reading, Writing, and Research *3 semester hours* (ENGF)

EDUC 201 - Introduction to Special Education *3 semester hours*

EDUC 202 - Field Experience in Special Education *1 semester hour*

MATH 182 - Calculus II *4 semester hours*

PHYS 161 - General Physics I: Mechanics and Heat *3 semester hours* (NSND)

PSYC 102 - General Psychology *3 semester hours* (BSSD)  
\*\*

### Fourth Semester

COMM 108 - Foundations of Human Communication *3 semester hours* (GEIR)

PHYS 263 - General Physics III: Waves, Optics, and Modern Physics *4 semester hours*

PSYC 227 - Educational Psychology *3 semester hours*

Arts Distribution (*ARTD*) or Humanities Distribution (*HUMD*) *3 semester hours* (*GEIR*) \*\*\*

Behavioral and Social Sciences Distribution *3 semester hours* (*BSSD*) \*\*

## Total Credit Hours: 65

\* ENGL 101/ENGL 101A, if needed for ENGL 102, or elective.

\*\* Behavioral and Social Science Distribution (BSSD) courses must come from a different discipline than PSYC.

\*\*\*One of these courses must meet the global/multicultural course requirement.

## Transfer Opportunities

Montgomery College has partnerships with multiple four-year institutions and the tools to help you transfer. To learn more, please visit <https://www.montgomerycollege.edu/transfer> or <http://artsys.usmd.edu>.

## Get Involved at MC!

Employers and Transfer Institutions are looking for experience outside the classroom.

MC Student Clubs and Organizations: <https://www.montgomerycollege.edu/life-at-mc/student-life/>

## Related Careers

Most require a Bachelor's degree.

High School Physics Teacher, Data Analyst, Applications Engineer, Aerospace and Defense, Physicist, Engineer, Science and Telecommunications.

## Career Services

Montgomery College offers a range of services to students and alumni to support the career planning process. To learn more, please visit <https://www.montgomerycollege.edu/career>

## Career Coach

A valuable online search tool that will give you the opportunity to explore hundreds of potential careers or job possibilities in Maryland and the Washington D.C. metropolitan area. Get started today on your road to a new future and give it a try. For more information, please visit <https://montgomerycollege.emsicc.com>

## Notes: