PHYSICS AREA OF CONCENTRATION, SCIENCE AS

Total Credits: 60
Catalog Edition: 2023-2024

Program Description
The physics area of concentration is a transfer program that provides the first two years of courses necessary for a four-year baccalaureate degree in physics.

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

- Identify, formulate, and solve basic physics problems.
- Integrate natural sciences to build solid foundation in physics applications using appropriate mathematical skills.
- Use appropriate and varied computer application software in physics.
- Design, perform, collect, and analyze data for simple physics experiments using the scientific method.

Program Advisors
Germantown and Takoma Park/Silver Spring
- Dr. Alla Webb, 240-567-7934, Alla.Webb@montgomerycollege.edu

Rockville
- Dr. Nawal Benmouna, 240-567-5230, Nawal.Benmouna@montgomerycollege.edu

For more information, please visit https://www.montgomerycollege.edu/academics/programs/science/physics-as-degree.html

To view the Advising Worksheet, please visit https://www.montgomerycollege.edu/_documents/counseling-and-advising/advising-worksheets/current-catalog/412c.pdf
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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)
CMSC 140 - Introduction to Programming 3 semester hours

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

Program Elective, 3 semester hours †

**Second Semester**

English Foundation*3 semester hours (ENGF)*

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

MATH 182 - Calculus II 4 semester hours

Program Elective, 3 semester hours †

**Third Semester**

PHYS 262 - General Physics II: Electricity and Magnetism 4 semester hours (NSLD)

MATH 280 - Multivariable Calculus 4 semester hours
MATH 282 - Differential Equations 3 semester hours

Arts Distribution 3 semester hours (ARTD)

Program Elective, 3 semester hours †

**Fourth Semester**

PHYS 263 - General Physics III: Waves, Optics, and Modern Physics 4 semester hours (NSLD)

MATH 284 - Linear Algebra 4 semester hours

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

Humanities Distribution 3 semester hours (HUMD)

* ENGL 101/ENGL 101A, if needed for ENGL 102/ENGL 103, or elective. English course placement is determined by Accuplacer English/Reading Test, AP/IB, or transfer credits.

** Behavioral and Social Science Distribution (BSSD) courses must come from different disciplines.

† Program electives from the following disciplines: BIOL, CHEM, CMSC, DATA, ENES, ENEE, GEOL, depending on your transfer institution.

Total Credit Hours: 60
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
Some require a Bachelor’s degree.
Sciences Manager, Scientist, Postsecondary Science Teachers, Nuclear physicist, Astronomer, Patent Agent, Meteorologist.

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

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