

**MONTGOMERY COUNTY PUBLIC SCHOOLS
GUIDE TO HIGH SCHOOL SCIENCE COURSES IN MCPS**

Laboratory Science Courses are required for both the Standard Diploma and the Advanced Studies Diploma. Specific requirements are as follows:

Standard Diploma: Students must earn 3 credits in Laboratory Sciences that includes course selection from at least 2 different science disciplines.

Advanced Studies Diploma: Students must earn 4 credits in Laboratory Sciences that includes course selections from at least 3 different science disciplines.

Science Disciplines:

Earth Sciences

Biology

Chemistry

Physics

Students must pass ONE science end-of-course SOL test to earn a verified credit in science, as required for both diploma types.

COURSE NAME	MCPS COURSE	WHEN TO TAKE	NOTES
Earth Science	42100	This is the science course taken by all 8th grade students in MCPS	<ul style="list-style-type: none"> Students will earn a high school credit for passing this course. All students will take the end-of-course SOL test for Earth Science at the completion of this course.
Biology or Biology Honors	43100 4310H	This is the science course taken by MCPS students in 9th grade or 10th grade *	All students will take the end-of-course SOL test for Biology at the completion of this course to meet federal requirements.
<ul style="list-style-type: none"> All students must choose a 3rd Science in 11th Grade (Required for both diploma types) Students pursuing an Advanced Studies Diploma must choose a 4th Science in 12th Grade (Required for Advanced Studies Diploma Only) Students must meet course prerequisites for all courses listed below (See MCPS HS Program of Studies) 			
* Environmental Science	42700	This course may be taken in 9th grade prior to taking Biology or as an elective science in any grade. It may be used to satisfy the course selection requirement for an Earth Sciences or Biology discipline.	
Astronomy	42600	These courses are "Earth Science II" courses	
Meteorology	42200		
Oceanography	42500		
AP Environmental Science	4270A	<ul style="list-style-type: none"> Covers all topics from the AP Environmental Science course Students will be prepared for the AP exam 	
Anatomy/Physiology	43300	These courses are "Biology II" courses	
Bioethics	43202		
Botany/Zoology	43200		
Ecology	43400		
AP Biology	4370A	<ul style="list-style-type: none"> Covers all topics from the AP Biology course Students will be prepared for the AP exam 	
DE Biology	DE4700	<ul style="list-style-type: none"> Aligned with NRCC's General Biology I & II Students will receive 8 college credits from NRCC for BIO 101 & 102 	
DE Biotechnology	DE43201	<ul style="list-style-type: none"> Aligned with NRCC's Biotechnology Concepts Students will receive 3 college credits from NRCC for BIO 253 	
DE Human Anatomy / Physiology	DE4330	<ul style="list-style-type: none"> Aligned with NRCC's Human Anatomy & Physiology I & II Students will receive 8 college credits from NRCC for BIO 141 & 142 	

Chemistry I or Chemistry I H	44100 4410H	
AP Chemistry	4470A	<ul style="list-style-type: none"> Covers all topics from the AP Chemistry course Students will be prepared for the AP exam
DE/AP Chemistry	DE4470A	<ul style="list-style-type: none"> Aligned with NRCC's General Chemistry I & II Covers all topics from the AP Chemistry course Students will receive 8 college credits from NRCC for CHM 111 & 112 and be prepared for the AP exam
Physics I	45100	
Principles of Technology I and Principles of Technology II / Applied Physics	98110 98120	Students who complete both of these courses in the sequence will satisfy 1 lab science credit (Physics discipline) and 1 CTE elective credit. (98110 and 98120 are also a CTE completer sequence.)
AP Physics	4571A	<ul style="list-style-type: none"> Covers all topics from the AP Physics course Students will be prepared for the AP exam
DE/AP Physics	DE4571A	<ul style="list-style-type: none"> Aligned with NRCC's General College Physics I & II Covers all topics from the AP Physics course Students will receive 8 college credits from NRCC for PHY 20 & 202 and be prepared for the AP exam
External Opportunities	4703V DE4701V DE4702V	<p>See the MCPS High School Program of Studies for information reading the following courses:</p> <ul style="list-style-type: none"> Virginia Space Coast Scholars (VSCS) VIRTUAL Virginia Aerospace Science & Technology Scholars Program (VASTS) VIRTUAL Virginia Earth System Science Scholars Program (VESSS) VIRTUAL

A computer science course credit earned by students may be considered a science course credit.