

S.T.E.A.M. Academy

Science, Technology, Engineering, Art and Math

We have partnered with Camden County College to create a pathway for students to focus their high school experience towards a number of possible programs. Successful students could leave high school with up to a semester's worth of college credits through Dual Credit programs and the College Now option*. A list of dual credit programs and their college equivalent are listed below. For more information on dual credit, check with your counselor.

High School Course	Department	CCC Course #	CCC Course Title	Credits	Grade Required	AP/Score	Highland	Triton	Creek
AP Statistics	Math	MTH 111	Elements of Statistics I	3	A, B or C	Not Required	X		X
Probability & Statistics	Math	MTH 111	Elements of Statistics I	3	A or B	Not Required	X	X	X
AP Calculus AB	Math			3	A, B or C	Not Required		X	
AP Biology	Science	BIO 111	Biology I-Science	4	A or B	YES 3+	X	X	X
AP Chemistry	Science	CHM 111	Chemistry I- Science	4	A or B	Not Required	X	X	X
AP Environmental Science	Science	BIO 106	Living in the Environment	4	A or B	YES 3+	X	X	X
AP Physics 1	Science	PHY 101	Physics I	4	A, B or C	Not Required	X	X	X
AP Physics 2 **	Science	PHY 102	Physics II	4	A, B or C	Not Required			
Forensic Science	Science	CHM 145	Intro to Forensic Science	4	A or B	Not Required	X	X	X
AP Government & Politics	Social Studies	POL 103	American Government	3	A or B	Not Required	X		X
AP Psychology	Social Studies	PSY 101	Basic Psychology	3	A, B or C	Not Required	X	X	X
AP U.S. History II	Social Studies	HIS 122	US History II	3	A, B or C	Not Required	X	X	X
CAD I & Architectural Des.	Technology	CAD 101	Computer Aided Engineering Graphics	4	A or B	Not Required		X	X
Robotics **	Technology	EET 101	Electrical & Electronic Principles	4	A or B	Not Required			
French III Honors	World Lang	FRE 101	Elementary French I	3	A or B	Not Required	X	X	X
French IV Honors	World Lang	FRE 102	Elementary French II	3	A or B	Not Required	X	X	X
Italian III Honors	World Lang	ITA 101	Elementary Italian I	3	A or B	Not Required	X	X	X
Italian IV Honors	World Lang	ITA 102	Elementary Italian II	3	A or B	Not Required	X	X	X
Spanish III Honors	World Lang	SPA 101	Elementary Spanish I	3	A or B	Not Required	X	X	X
Spanish IV Honors	World Lang	SPA 102	Elementary Spanish II	3	A or B	Not Required	X	X	X

** New course... No dual credit yet

The S.T.E.A.M. Preparatory Academy at Black Horse Pike Regional is a rigorous two-year interdisciplinary program designed to provide a strong educational foundation for academically gifted students planning to pursue careers in *Science, Technology, Engineering, Arts or Mathematics*. Students enrolled in this program should be prepared for exceptionally challenging coursework and a variety of educational opportunities.

The Purpose: To develop high school pathways that will prepare and direct students for college and focus class and coursework selections on a given career. The pathway will include courses for students to earn college credit to ready them for their ultimate career goal. We want to pilot a program to help get the word out and inform students about REAL opportunities and put them on a track to get them there. We want to develop roadmaps for counselors and students.

The Need: Students need direction and real opportunities that are realistic to their abilities and dreams. They need education on the career opportunities that are out there that they do not yet know about... beyond the specifics and typical. Patient care/healthcare options are available as well as Applied Associates degrees in Horticulture or Forensics.

* College Now requires a qualifying score on the College Placement Test (Accuplacer... <https://www.accuplacer.org>)

Interested students begin the process during course selection for their freshmen year of high school by taking Innovative Engineering. Students should be on track to take advanced math and science classes throughout their high school careers. Juniors can enter the Academy by filling out an application and submitting it to their counselor. Courses for Junior and Senior year are listed below with blanks for electives and/or other academic courses.

Possible Junior Year Courses

- AP Lang & Comp
- Pre-Calc Honors
- AP Calculus AB
- AP Statistics
- AP Chem
- AP Env. Science
- AP Physics I
- AP Biology
- AP US History
- AP US History II
- PE/Health 11

Junior / Senior Requirement...

Capstone Project

Possible Senior Year Courses

- AP Lit & Comp.
- AP Math (Calc AB, Statistics)
- AP Science (ES, Phys, Chem, Biology)
- Early Release for extended learning at CCC...
Students can take up to four college courses

Students will be required to complete and present a Capstone Project during their senior year. An advisor will work closely with the students during the end of their junior year to help prepare for the project. During the first semester of their senior year, they will take a S.T.E.A.M. Capstone Independent Research course to finalize the project. The project will then be presented at Camden County College. **The Capstone project is a culminating experience calling upon students to utilize a vast amount of skills and knowledge learned throughout high school. The projects will ask students to research a chosen topic, create their own experiment, analyze their own results of this experiment, and disseminate the results of the project. This experience must show inter-disciplinary connections as related to a career including emphasis on Science, Technology, Engineering, Art, and Math.**

Possible Career Paths/Programs: (Examples)

Biotechnology/Forensic Science. Associate in Applied Science

- Biological Technicians work with scientists studying living organisms. Many assist scientists who conduct medical research helping to find a cure for cancer or AIDS, for example. Biological technicians, also analyze organic substances such as blood, food and drugs, and some examine evidence in a forensic science laboratory.
- In High School...
 - AP Biology (Dual Credit with CCC with a 3 or higher on the AP exam)
 - AP Chemistry (Dual Credit with CCC with a C or higher)
 - AP Calculus
 - Elements of Statistics (Dual Credit with CCC with a C or Higher)
 - Forensic Science (Dual Credit with CCC)

CADD. Associate in Applied Science

- This career oriented major in college includes instruction on the use of a number of the most popular industry-standard graphics and drafting software applications. Employment opportunities include CADD operator, CADD technician, Computer drafts person and Design drafter.
- In High School...
 - AP English Language and Composition
 - CADD I & Architectural Design (Dual Credit with CCC)
 - AP Calculus
 - AP Physics I (Dual Credit with CCC)

Steam Academy possibilities

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STEAM	Courses	Careers	Possible College Credits
S <i>Science</i>	<i>Anatomy & Physiology</i> <i>A.P. Biology (Dual Credit)</i> <i>A.P. Chemistry (Dual Credit)</i> <i>A.P. Physics I (Dual Credit)</i> <i>Forensic Science (Dual Credit)</i> <i>A.P. Environmental (Dual Credit)</i>	<i>Surgical Technology</i> <i>Biomedical Labs</i> <i>Pharmaceutical Industry</i> <i>Clinical, Hospital and reference laboratories</i>	<i>Up to 20 college credits using only the dual credit options</i>
T <i>Technology</i>	<i>Printing Technology (College NOW)*</i> <i>Internet tools and techniques (College NOW)*</i> <i>Digital Photography</i> <i>Digital Video Production</i> <i>Multimedia Applications</i> <i>Practical Computer Applications</i>	<i>Computer Animation</i> <i>Computer Graphics</i> <i>Electronic publishing</i> <i>Computer Programmer</i> <i>Database administrator</i>	<i>College Now* option can lead to up to 9 credits taking 3 courses at CCC.</i>
E <i>Engineering</i>	<i>Technical Drawing (College Now)*</i> <i>Pre-Engineering Engineering</i> <i>CADD I & Architectural Design (Dual Credit TR&HH)</i> <i>Robotics</i>	<i>CADD Operator</i> <i>CADD technician</i> <i>Computer Draftsperson</i> <i>Engineer's assistant</i>	<i>Up to 8 College credits using Dual Credit and College Now (at CCC)*</i>
A <i>Art</i>	<i>Photography I (College Now)*</i> <i>Voice and Diction (College NOW)*</i> <i>Art & Design</i> <i>Art II</i> <i>A.P. 2D Art & Design</i> <i>Computer Graphics</i> <i>Digital Photography</i>	<i>Artist</i> <i>Work in Art Galleries</i> <i>Assist Art Faculty at Art Camps</i> <i>Photojournalist</i>	<i>Up to 9 College credits using Dual Credit and College Now (at CCC)*</i>
M <i>Math</i>	<i>A.P. Statistics (Dual Credit)</i> <i>Algebraic Concepts (College NOW)*</i> <i>Pre-Calculus/Calculus</i> <i>A.P. Calculus</i>	<i>Pharmaceutical Industry</i> <i>Lab Technician</i> <i>Accounting</i> <i>Laser, optical, video manufacturing</i> <i>Medical Offices</i>	<i>Up to 7 College Credits using Dual Credit and College Now (at CCC)*</i>

* College Now requires a qualifying score on the College Placement Test (Accuplacer ... <https://www.accuplacer.org>)