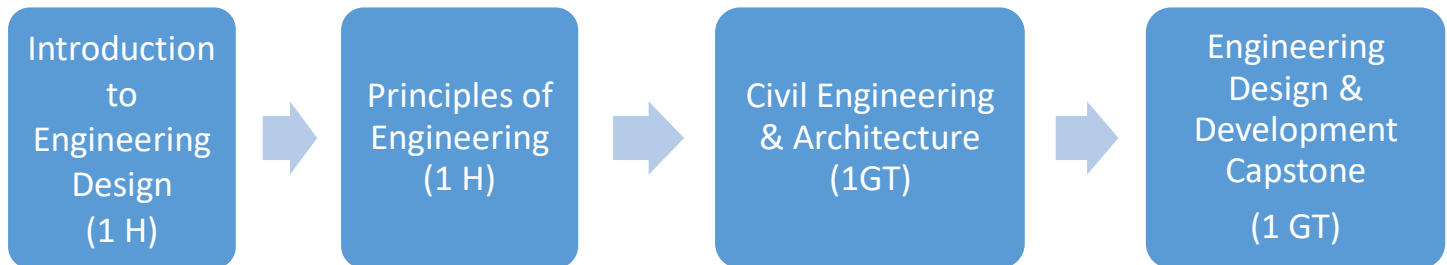


Education for a Lifetime

Project Lead the Way: Engineering



This CTE program of study is a sequence of courses which follows a proven hands-on, real-world problem-solving approach to learning. Throughout the program, students learn and apply the design process, acquire strong teamwork and communication proficiency and develop organizational, critical-thinking, and problem-solving skills. The program prepares students for further education

and careers in engineering and engineering technology. Students who complete the program successfully may earn articulated college credits with CCBC, UMBC, and other PLTW university partners.

Introduction to Engineering

Students dig deep into the engineering design process, applying math, science, and engineering standards to hands-on projects like designing a new toy or improving an existing product.

Principles of Engineering Prerequisite: Successful completion of Intro. To Eng.

Students explore a broad range of engineering topics, including mechanisms, strength of structure and materials, and automation, and then apply what they know to take on challenges like designing a self-powered car.

Civil Engineering and Architecture Prerequisite: Successful completion of Prin. Of Eng.

Students learn important aspects of building and site design and development. They apply math, science, and standard engineering practices to design both residential and commercial projects and document their work using 3-D architectural design software.

Engineering Design & Development Capstone

Students identify a real-world challenge and then research, design, and test a solution, ultimately presenting their unique solutions to a panel of engineers.

*Students are encouraged to join any of the following after-school clubs:

Vex Robotics

Women Society of Engineers

Electric Car Club



2023-2024 Articulation Agreement

between

Baltimore County Public Schools and Community College of Baltimore County

BCPS Program Title:

Project Lead the Way: Engineering

CCBC Program Titles:

Computer-Aided Design for Architecture and Engineering Certificate; Engineering Technology (Computer-Aided Design Concentration); Engineering Technology; Engineering Transfer

Program Location(s): Catonsville, Chesapeake, Dulaney, Dundalk, Owings Mills, Parkville, Perry Hall, Pikesville, and Woodlawn High Schools

BCPS Course #	BCPS Course Title	BCPS Credits Earned	CCBC Course #	CCBC Course Title	CCBC Credits Awarded
<i>Required</i>	<i>BCPS Courses</i>	<i>Below</i>	<i>CCBC</i>	<i>Courses Awarded</i>	<i>Below</i>
56.0200	Introduction to Engineering Design- PLTW	1	CADD 141	AutoCAD 3D	3
56.0210	Principles of Engineering- PLTW	1	CADD 202	CAD Building Information Modeling (BIM)-Revit	3
56.0250	Engineering Design and Development - PLTW	1	EGNT 101 <i>or</i> ENSC 101	Introduction to Engineering Technology <i>or</i> Introduction to Engineering Design	3 <i>or</i> 3
56.0230	Civil Engineering and Architecture- PLTW	1			

For more information about **Engineering Technology or Engineering Design**, contact: Taylor Kidd; tkidd@ccbcmd.edu

To receive articulated credit for **Computer-Aided Design and Drafting (CADD)** courses, students must complete a portfolio review with CCBC Computer-Aided Design faculty. To schedule a portfolio review, contact: Séun Joshua at sjoshua@ccbcmd.edu or 443.840.4611

This agreement is not a course by course alignment. BCPS students must successfully complete all required credits in the CTE career completer program of study with a cumulative technical Grade Point Average of a B or better and with a C grade or higher in each required course to receive articulated credit.