

Course Title	Content Area	Grade Level	Credit (if applicable)
PLTW Cybersecurity	CTE	10, 11, 12	1.0 BPS 3.0 University New Haven
Course Description			
<p>PLTW Cybersecurity is a full-year course implemented in 10th grade or above. The design of the course exposes high school students to the ever-growing and far-reaching field of cybersecurity. Students accomplish this through problem-based learning, where students role-play and train as cybersecurity experts.</p> <p>PLTW Cybersecurity strongly connects to the National Cybersecurity Workforce Framework (also known as the NICE Framework or NCWF). Created by the National Institute of Standards and Technology (NIST), this framework identifies standards developed by numerous academic, industry, and government organizations. The framework objectives address topics that span K-12 education and guide learning progressions. The also incorporate many of the big ideas outlined by the College Board and addressed in AP CSP. In addition, the course integrates Computer Science Teachers Association (CSTA) standards.</p> <p>PLTW Cybersecurity gives students a broad exposure to the many aspects of digital and information security, while encouraging socially responsible choices and ethical behavior. It inspires algorithmic thinking, computational thinking, and especially, “outside-the-box” thinking. Students explore the many educational and career paths available to cybersecurity experts, as well as other careers that comprise the field of information security. The course contains the following units of study.</p>			
Connection to the <i>BPS Vision of the Graduate</i>		PLTW Standards Aligned to BPS Vision of the Graduate	
Collaboration	<p><b>COL.A Collaborate when processing information to gain insight and knowledge</b>            COL.A.1 Collaboration is an important part of solving data-driven problems.            COL.A.2 Collaboration facilitates solving computational problems by applying multiple perspectives, experiences, and skill sets.            COL.A.3 Communication between participants working on data-driven problems gives rise to enhanced insights and knowledge.            COL.A.4 Collaboration in developing hypotheses and questions, and in testing hypotheses and answering questions, about data helps participants gain insight and knowledge.            COL.A.5 Collaborating face-to-face and using online collaborative tools can facilitate processing information to gain insight and knowledge.            COL.A.6 Investigating large data sets collaboratively can lead to insight and knowledge not obtained when working alone.</p> <p><b>COL.B Collaborate effectively as part of a team.</b>            COL.B.1 A collaboratively created computational artifact reflects effort by more than one person.            COL.B.2 Effective collaborative teams consider the use of online collaborative tools.            COL.B.3 Effective collaborative teams practice interpersonal communication, consensus building, conflict resolution, and negotiation.            COL.B.4 Effective collaboration strategies enhance performance.            COL.B.5 Collaboration facilitates the application of multiple perspectives (including sociocultural perspectives) and diverse talents and skills in developing computational artifacts.            COL.B.6 A collaboratively created computational artifact can reflect personal expressions of ideas.</p> <p><b>COL.C Apply project management strategies effectively as part of a team.</b>            COL.C.1 Select and use computational tools that enable collaboration.            COL.C.2 Work with a group to establish team norms.            COL.C.3 Establish clear responsibilities and split workloads equitably.</p>		
Communications and Technology Literacy	<p><b>COM.A Communicate ideas, processes, and products to optimize audience perception and understanding.</b> COM.A.1 Tailor and communicate information to diverse audiences.            COM.A.2 Recognize and use the diverse skill sets of team members when solving problems.</p> <p><b>ERM.D Evaluate online and print sources for appropriateness and credibility.</b></p>		