

# Cybersecurity Career Pathways Concentration Implementation Model

August 2017

## Career Pathways<sup>1</sup> Coherent Sequence (Concentration<sup>2</sup>) of State-Approved Courses

**T**here are eight new high school cybersecurity courses available, beginning fall 2017. During high school, a student who has an interest in cybersecurity will have the flexibility to take two or more pathway courses in a concentration.

The chart illustrates 4 cybersecurity career pathways. **Students must take at least two or more pathway courses in a concentration sequence** along with the appropriate academic courses to meet graduation requirements and to become a CTE program completer<sup>3</sup>. Beginning in 2013-2014, first time ninth grade students (graduating class of 2017) are required to earn a Board-approved industry credential to graduate with a Standard Diploma.

Year 1 Course* (Grade 9, 10, or 11)	Year 2 Course (Grade 10, 11, or 12)	Year 3 Course (Grade 10, 11, or 12)	Year 4 Course (Grade 12)
<i>Programming &amp; Software Development Pathway<sup>1</sup></i> <b>Cybersecurity Fundamentals</b> (Course Code 6302)	<b>Cybersecurity Software Operations</b> (Course Code 6304)	<b>Cybersecurity Software Operations, Advanced</b> (Course Code 6306)	<i>To be developed</i>
<i>Health &amp; Medical Sciences Pathway<sup>1</sup></i> <b>Cybersecurity Fundamentals</b> (Course Code 6302)	<b>Health Informatics</b> (Course Code 8338)	<i>To be developed</i>	<i>To be developed</i>
<i>STEM/Pre-Engineering Technology Pathway<sup>1</sup></i> <b>Cybersecurity Fundamentals</b> (Course Code 6302)	<b>Cybersecurity in Manufacturing</b> (Course Code 8499)	<i>To be developed</i>	<i>To be developed</i>
<i>Network Systems Pathway<sup>1</sup></i> <b>Cybersecurity Fundamentals</b> (Course Code 6302)	<b>Cybersecurity Systems Technology</b> (Course Code 8628)	<b>Cybersecurity Systems Technology, Advanced</b> (Course Code 8629)	<b>Cybersecurity Network Systems</b> (Course Code 8630)

\*The Cybersecurity Fundamentals course (Year 1) serves as the "core" for all Year 2 courses in the coherent sequence.

<sup>1</sup>**Career Pathway** — A career pathway represents a common set of skills and knowledge, both academic and technical, necessary to pursue a full range of career opportunities ranging from entry level to management, including technical and professional careers.

<sup>2</sup>**Concentration** — A "concentration" is a coherent sequence of state-approved courses in which the student earns the equivalent of two 36-week courses and related stackable industry-recognized credentials.

<sup>3</sup>**CTE completer** — A "CTE completer" is a student who has met the requirements for a "concentration" of courses and all requirements for high school graduation or an approved alternative education program.

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## 8 NEW Cybersecurity Courses

## Teacher Endorsement Code

### 1) Cybersecurity Fundamentals

2004 – Computer Science  
3010 – Computer Science Specialist  
6900 – Business & Information Technology  
7200 – Technology Education  
8000 – Agricultural Education  
8100 – Marketing Education  
8200 – Family & Consumer Sciences  
8425 – Electronics Technology  
8490 – Computer Systems Technology  
8620 – Health & Medical Sciences  
9010 – Computer Technology

### 2) Cybersecurity Software Operations

6900 – Business & Information Technology

### 3) Cybersecurity Software Operations, Advanced

6630 – Networking  
2004 – Computer Science  
3010 – Computer Science Specialist

### 4) Cybersecurity Systems Technology

2004 – Computer Science

### 5) Cybersecurity Systems Technology, Advanced

3010 – Computer Science Specialist

### 6) Cybersecurity Network Systems

8425 – Electronics Technology  
8485 – Computer Repair Technology  
8490 – Computer Systems Technology  
9010 – Computer Technology  
6900 – Business & Information Technology  
6630 – Networking

### 7) Cybersecurity in Manufacturing

7200 – Technology Education

### 8) Health Informatics

8620 – Health & Medical Sciences  
6900 – Business & Information Technology

**\*Cybersecurity in the Food & Agriculture Industry** 8000 – Agricultural Education

**\*Cybersecurity in Family & Work Life** 8200 – Family & Consumer Sciences

**\*Cybersecurity in Digital Marketing** 8100 – Marketing Education

*\*New courses available fall 2018*