Cybersecurity Career Pathways
Concentration Implementation Model

August 2017

Career Pathways
Coherent Sequence (Concentration) of State-Approved Courses

There 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. 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.

<table>
<thead>
<tr>
<th>Year 1 Course*</th>
<th>Year 2 Course</th>
<th>Year 3 Course</th>
<th>Year 4 Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Grade 9, 10, or 11)</td>
<td>(Grade 10, 11, or 12)</td>
<td>(Grade 10, 11, or 12)</td>
<td>(Grade 12)</td>
</tr>
</tbody>
</table>

- **Programming & Software Development Pathway**
  - Cybersecurity Fundamentals (Course Code 6302)
  - Cybersecurity Software Operations, Advanced (Course Code 6306)

- **Health & Medical Sciences Pathway**
  - Cybersecurity Fundamentals (Course Code 6302)
  - Health Informatics (Course Code 8338)

- **STEM/Pre-Engineering Technology Pathway**
  - Cybersecurity Fundamentals (Course Code 6302)
  - Cybersecurity in Manufacturing (Course Code 8499)

- **Network Systems Pathway**
  - Cybersecurity Fundamentals (Course Code 6302)
  - Cybersecurity Systems Technology, Advanced (Course Code 8629)

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

1 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.

2 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.

3 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.
# Cybersecurity Career Pathways

## Concentration Implementation Model

<table>
<thead>
<tr>
<th>8 NEW Cybersecurity Courses</th>
<th>Teacher Endorsement Code</th>
</tr>
</thead>
</table>
| **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  
3010 – Computer Science Specialist  
8425 – Electronics Technology  
8485 – Computer Repair Technology  
8490 – Computer Systems Technology  
9010 – Computer Technology  
6900 – Business & Information Technology  
6630 – Networking |
| **5) Cybersecurity Systems Technology, Advanced** | |
| **6) Cybersecurity Network Systems** | |
| **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*