## 2019 Skills-to-Course Matrix

### Computer Information Systems

**[High School Name]**  
**Portland Community College**  
**[Date]**

### Information & Communications Technology Cluster

Instructions: 1) Enter the Program of Study name above. 2) Enter your high school name. 3) Enter the community college name. 4) Enter the date. 5) Click on the cell for Course 1 Name, Course 2 Name, etc., and replace with your POS course names—secondary and first year of post-secondary. 6) Enter school course numbers. 7) Enter NCES code for the course (secondary only). 8) Enter number of credits awarded. 9) Identify those courses that trigger the TSA for this POS. 10) Finally, check those standards that are taught with intent and purpose and are assessed in each course. Note: The optional Focus Area tabs below are included for those POSs that have a very specific industry focus or use another set of industry validated standards.

<table>
<thead>
<tr>
<th>Cluster Knowledge and Skills (CTE standards)</th>
<th>CS 120</th>
<th>CS 121</th>
<th>CS 122</th>
<th>CS 129</th>
<th>CS 139</th>
<th>CS 225</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[NCES Code]</td>
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<tr>
<td>[TSA--Y or N?]</td>
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<tr>
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<td>[# of Credits]</td>
</tr>
<tr>
<td>IT 01 IT01</td>
<td>Demonstrate effective professional communication skills and practices that enable positive customer relationships.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>IT 02 IT02</td>
<td>Use product or service design processes and guidelines to produce a quality information technology (IT) product or service.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>IT 03 IT03</td>
<td>Demonstrate the use of cross-functional teams in achieving IT project goals.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT 04 IT04</td>
<td>Demonstrate positive cyber citizenship by applying industry accepted ethical practices and behaviors.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>IT 05 IT05</td>
<td>Explain the implications of IT on business development.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>IT 06 IT06</td>
<td>Describe trends in emerging and evolving computer technologies and their influence on IT practices.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>IT 07 IT07</td>
<td>Perform standard computer backup and restore procedures to protect IT information.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>IT 08 IT08</td>
<td>Recognize and analyze potential IT security threats to develop and maintain security requirements.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>IT 09 IT09</td>
<td>Describe quality assurance practices and methods employed in producing and providing quality IT products and services.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>IT 10 IT10</td>
<td>Describe the use of forensic techniques to prevent and solve information technology crimes and security breaches.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>IT 11 IT11</td>
<td>Demonstrate knowledge of the hardware components associated with information systems.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>IT 12 IT12</td>
<td>Compare key functions and applications of software and determine maintenance strategies for computer systems.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
# Skills-to-Course Matrix

## [CTE Program of Study Name]

### [High School Name]

### [Community College Name]

### [Date]

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### Information Support Services Focus Area

- **CTT**: Code Number
- **KS** Statement
- **[TSA–Y or N?]**
- **[TSA–Y or N?]**
- **[TSA–Y or N?]**
- **[TSA–Y or N?]**
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- **[TSA–Y or N?]**
- **[TSA–Y or N?]**

#### Focus Area Knowledge and Skills (CTE standards)

<table>
<thead>
<tr>
<th>Course Name</th>
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</thead>
<tbody>
<tr>
<td>Computer Concepts I</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer Concepts II</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information Technology I</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Operating Systems I: Microsoft</td>
<td></td>
<td></td>
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<tr>
<td>Data Communication Concepts I</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>End User Support</td>
<td></td>
<td></td>
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<td></td>
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## 2019

**Skills-to-Course Matrix**

[CTE Program of Study Name]

[High School Name]

[Community College Name]

[Date]

#### Network Systems Focus Area

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<tbody>
<tr>
<td>IT-NET 1</td>
<td>ITNW001</td>
<td>Analyze customer or organizational network system needs and requirements.</td>
</tr>
<tr>
<td>IT-NET 2</td>
<td>ITNW002</td>
<td>Analyze wired and wireless network systems to determine if they meet specifications (e.g., IEEE, power, security).</td>
</tr>
<tr>
<td>IT-NET 3</td>
<td>ITNW003</td>
<td>Design a network system using technologies, tools and standards.</td>
</tr>
<tr>
<td>IT-NET 4</td>
<td>ITNW004</td>
<td>Perform network system installation and configuration.</td>
</tr>
<tr>
<td>IT-NET 5</td>
<td>ITNW005</td>
<td>Perform network administration—monitoring and support to maintain a network system.</td>
</tr>
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![Table Image](image-url)
### Skills-to-Course Matrix

**[CTE Program of Study Name]**  
**[High School Name]**  
**[Community College Name]**  
**[Date]**

#### Programming & Software Development Focus Area

- **Focus Area Knowledge and Skills (CTE standards)**

| IT-PROG 1 | ITPG01 | An analyze customer software needs and requirements. | X | X |
| IT-PROG 2 | ITPG02 | Demonstrate the use of industry standard strategies and project planning to meet customer specifications. | X | |
| IT-PROG 3 | ITPG03 | Analyze system and software requirements to ensure maximum operating efficiency. | X | X |
| IT-PROG 4 | ITPG04 | Demonstrate the effective use of software development tools to develop software applications. | X | X |
| IT-PROG 5 | ITPG05 | Apply an appropriate software development process to design a software application. | X | X |
| IT-PROG 6 | ITPG06 | Program a computer application using the appropriate programming language. | X | X |
| IT-PROG 7 | ITPG07 | Demonstrate software testing procedures to ensure quality products. | X | X |
| IT-PROG 8 | ITPG08 | Perform quality assurance tasks as part of the software development cycle. | X | |
| IT-PROG 9 | ITPG09 | Perform software maintenance and customer support functions. | X | X |
| IT-PROG 10 | ITPG10 | Design, create and maintain a database. | X | X |

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### Skills-to-Course Matrix

**[CTE Program of Study Name]**  
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**[Community College Name]**  
**[Date]**

**Web & Digital Communications**  
**Focus Area**

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### Focus Area Knowledge and Skills:

- **IT-WD 1**  
  ICXH01  
  **Code Number:**  
  **KT Statement:**  
  Analyze customer requirements to design and develop a Web or digital communication product.

- **IT-WD 2**  
  ICXH02  
  **Code Number:**  
  **KT Statement:**  
  Apply the design and development process to produce user-focused Web and digital communications solutions.

- **IT-WD 3**  
  ICXH03  
  **Code Number:**  
  **KT Statement:**  
  Write product specifications that define the scope of work aligned to customer requirements.

- **IT-WD 4**  
  ICXH04  
  **Code Number:**  
  **KT Statement:**  
  Demonstrate the effective use of tools for digital communication production, development and project management.

- **IT-WD 5**  
  ICXH05  
  **Code Number:**  
  **KT Statement:**  
  Develop, administer and maintain Web applications.

- **IT-WD 6**  
  ICXH06  
  **Code Number:**  
  **KT Statement:**  
  Design, create and publish a digital communication product based on customer needs.

- **IT-WD 7**  
  ICXH07  
  **Code Number:**  
  **KT Statement:**  
  Evaluate the functionality of a digital communication product using industry accepted techniques and metrics.

- **IT-WD 8**  
  ICXH08  
  **Code Number:**  
  **KT Statement:**  
  Implement quality assurance processes to deliver quality digital communication products and services.

- **IT-WD 9**  
  ICXH09  
  **Code Number:**  
  **KT Statement:**  
  Perform maintenance and customer support functions for digital communication products.

- **IT-WD 10**  
  ICXH10  
  **Code Number:**  
  **KT Statement:**  
  Comply with intellectual property laws, copyright laws and ethical standards when creating Web/digital communications.