Skills-to-Course Matrix

Computer Science
Tualatin High School
PCC
Nov-19

CCTC* Code Number

IT02

IT03

IT07

IT 01

IT 02

IT 03

IT 04

IT 06

IT 07

IT 08

IT 9

IT 05 IT05

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 fociusare using those skill sets for multiple options in a Progam of Study or if you want to use another set of industry validated standards

Cluster Knowledge and Skills (CTE standards)

quality information technology (IT) product or service.

Explain the implications of IT on business development.

IT11 Demonstrate knowledge of the hardware components associated with

IT 12 IT12 Compare key functions and applications of software and determine

enable positive customer relationships.

influence on IT practices.

KS Statement

Demonstrate effective professional communication skills and practices that

Use product or service design processes and guidelines to produce a

Demonstrate the use of cross-functional teams in achieving IT project

Demonstrate positive cyber citizenry by applying industry accepted ethical practices and behaviors.

Describe trends in emerging and evolving computer technologies and their

Perform standard computer backup and restore procedures to protect IT

Describe quality assurance practices and methods employed in producing

Describe the use of computer forensics to prevent and solve information

Recognize and analyze potential IT security threats to develop and maintain security requirements.

| cs 160. Exploring C | Omputer Science | sign Computer Science | Gane Design | Introduction to Engl | neering | T 2: Network Admir | T 3. Windows Operation | g Systems | ry I 5: Server Adminis | tration Robotics | Unnamed Aircian | & Aerial Photo 1 |
|---------------------|-----------------|-----------------------|-------------|----------------------|---------|--------------------|------------------------|-----------|---------------------------|------------------|-----------------|------------------|
| 101561 | 21107 | 10156.1 & 10156.2 | 10205 | 21016 | 10251.1 | 10101 | 10111 | 10108 | 10102 | 21009 | 210531 | 210532 |
| 10156 | 21107 | 10154 | 10205 | 21016 | 10251 | 10101 | 10111 | 10108 | 10102 | 21009 | 21053 | 21053 |
| 0.5 | 0.5 | 1 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| N | N | N | N | N | Υ | Υ | Υ | Υ | Υ | N | N | N |
| Υ | | Y | Y | | Y | Υ | Υ | Y | Y | | Y | Y |
| Υ | | Y | Y | | Y | Y | Y | Y | Y | | | |
| Y | | Y | Y | | Y | Υ | Y | Y | Y | | | |
| Y | | Y | Υ | | Y | Y | Y | Y | Υ | | | |
| Υ | | | | | Y | Y | Y | | Y | | | |
| Υ | | Y | Υ | | Υ | Υ | Υ | Υ | Υ | | | |
| Υ | | | | | Υ | Υ | Υ | Υ | Υ | | | |
| | | | | | | | | | | | | |

Υ

Υ

Υ

Υ



Tualatin High School PCC Nov-19

CCTC* Code Number

ITSS01

ITSS02

ITSS03

ITSS04

ITSS05

ITSS06

ITSS08

IFPC09

IT-SUP 01

IT-SUP 02

IT-SUP 03

IT-SUP 04

IT-SUP 05

IT-SUP 06

IT-SUP 07

IT-SUP 08

IT-SUP 09

IT-SUP 10

Information Support Services Focus Area

<u>Instructions</u>: 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 fociusare using those skill sets for multiple options in a Progam of Study or if you want to use another set of industry

Cluster Knowledge and Skills (CTE standards)

maintain an information system.

performance of an information system.

Provide technology support to maintain service.

maintenance of upgrades, patches and service packs.

Apply appropriate troubleshooting techniques in resolving

computer hardware, software and configuration problems.

Demonstrate the use of networking concepts to develop a

Evaluate the effectiveness of an information system.

KS Statement

Manage operating systems and software applications, including

Perform installation, configuration and maintenance of operating

Employ system installation and maintenance skills to set-up and

Employ system administration and control skills to monitor the

Employ technical writing and documentation skills in support of

Apply quality assurance processes to maximize information

| CS 160: Exploring CC | Computer Aided Des | Gomputer Science | Game Design | Introduction to Engine | zering | IT 2: Network Admin | If 3: Network Security | TA. Server Adminish | ration Opera | king Systems | SUnnan | Junan | Aerial Photo A Aerial Photo 2 |
|----------------------|--------------------|-------------------|-------------|------------------------|---------|---------------------|------------------------|---------------------|--------------|--------------|--------|--------|-------------------------------|
| 101561 | 21107 | 10156.1 & 10156.2 | 10205 | 21016 | 10251.1 | 10101 | 10111 | 10108 | 10102 | 21003 | 210331 | 210332 | |
| 10156 | 21107 | 10154 | 10205 | 21016 | 10251 | 10101 | 10111 | 10108 | 10102 | 21009 | 21053 | 21053 | |
| 0.5 | 0.5 | 1 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | |
| N | N | N | N | N | Y | Υ | Υ | Υ | Υ | N | N | N | |
| Υ | | Y | Υ | | Υ | Υ | Y | Υ | Υ | | Υ | Υ | |
| | | | | | Y | Y | Υ | Y | Υ | | | | |
| Y | | | | | Y | Υ | Y | Y | Y | | Υ | Υ | |
| | | | | | Y | | Υ | Y | | | | | |
| | | | | | Υ | Υ | Υ | Υ | Υ | | | | |
| | | | | | Υ | Υ | Υ | Υ | Υ | | | | |
| | | | | | Υ | Υ | Y | Y | Υ | | | | |
| | | | | | Y | Υ | Υ | Y | Y | | | | |
| | | | - | | Y | Y | Y | Y | Υ | | | | |
| | | | | | Y | Υ | Y | Y | Υ | | | | |
| | | | | | | | | | | | | | |



Tualatin High School PCC Nov-19

CCTC* Code Number

IT- NET 1

IT-NET 2

IT-NET 3

IT-NET 4

IT-NET 5

ITNW01

ITNW02

ITNW03

ITNW04

ITNW05

Network Systems Focus Area

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 fociusare using those skill sets for multiple options in a Progam of Study or if you want to use another set of industry

Cluster Knowledge and Skills (CTE standards)

specifications (e.g., IEEE, power, security).

network system.

Perform network system installation and configuration.

KS Statement

Analyze wired and wireless network systems to determine if they meet

Perform network administration, monitoring and support to maintain a

Design a network system using technologies, tools and standards.

Analyze customer or organizational network system needs and

| on | | science | | | | | | | | | stems | | | onoto onot |
|--------------|---|---------------------|------------------------|-------------|------------------------|--------------------|--------------------|------------------------|--|--------------|---------|-------------|-----------|------------|
| e of | CS 180: Exploring Computer Aided Design Computer Science 1 Computer Science 1 | | | | Engine | setin ^d | ninistr | ation | Junnanned Aircraft & Aerial Photo A Aerial Photo | | | | | |
| d or ' | CS 160: EXPLORIT | Computer Aided Desi | d' Computer science | Game Design | Introduction to Engine | TA. Technician | T 2. Network Admin | IT 3: Network Security | TA. Server Administr | ation Goerat | Robotif | us Unnan | ned Airch | ed Airc. |
| | 101561 | 21107 | 10156.1 & 10156.2 | 10205 | 21016 | 10251.1 | 10101 | 10111 | 10108 | 10102 | 21009 | 210531 | 210532 | |
| | 10156 | 21107 | 10154 | 10205 | 21016 | 10251 | 10101 | 10111 | 10108 | 10102 | 21009 | 21053 | 21053 | |
| | 0.5 | 0.5 | 1 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | |
| | N | N | N | N | N | Υ | Y | Y | Υ | Υ | N | N | N | |
| Υ | | | | | | Y | Υ | Υ | Y | Y | | | | |
| et | | | | | | Υ | Υ | Υ | Υ | Υ | | | | |
| | | | | | | Υ | Υ | Υ | Υ | Υ | | | | |
| | | | | | | Υ | Υ | Υ | Υ | Υ | | | | |
| 1 | | | | | | Y | Υ | Υ | Υ | Υ | | | | |
| | | | | | | | | | | | | | | |
| <u> </u> | | | | | | | | | | | | | | |
| - | | | | | | | | | | | | | | |
| | | | | | | | | | | | 1 | | | |
| | | | | | | | | | | | 1 | | | |
| | | | | | | | | | | |] | | | |



Computer Science

Tualatin High School PCC Nov-19

CCTC* Code Number

ITPG03

ITPG04

ITPG05

ITPG06

ITPG07

ITPG08

ITPG09

IT-PRG 1

IT-PRG 2

IT-PRG

03

IT-PRG 4

IT-PRG

05 IT-PRG

06 IT-PRG

IT-PRG

IT-PRG

Programming & Software Develoment Focus Area

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 fociusare using those skill sets for multiple options in a Progam of Study or if you want to use another set of industry validated standards.

Cluster Knowledge and Skills (CTE standards)

ITPG01 Analyze customer software needs and requirements.

ITPG10 Design, create and maintain a database.

KS Statement

Demonstrate the use of industry standard strategies and project planning to meet

Demonstrate the effective use of software development tools to develop software

Program a computer application using the appropriate programming language.

Perform quality assurance tasks as part of the software development cycle.

Analyze system and software requirements to ensure maximum operating

Apply an appropriate software development process to design a software

Demonstrate software testing procedures to ensure quality products.

Perform software maintenance and customer support functions.

| 3) ;, ne | | Computer Aided Desi | Joh Computer Science | Gane Design | Introduction to Engin | geeing . Technician | T 2: Welmork Admin | T3. Network Security | Th. Server Administ | ration Operations Operation | Robotic | SUnnan | Junani | the Arctaft & Aerial Photo 2 |
|----------------|--------|---------------------|-------------------------|-------------|-----------------------|---------------------|--------------------|----------------------|---------------------|-----------------------------|---------|--------|--------|------------------------------|
| | 101561 | 21107 | 10156.1 & 10156.2 | 10205 | 21016 | 10251.1 | 10101 | 10111 | 10108 | 10102 | 21009 | 210531 | 210532 | 1 |
| | 10156 | 21107 | 10154 | 10205 | 21016 | 10251 | 10101 | 10111 | 10108 | 10102 | 21009 | 21053 | 21053 | 1 |
| | 0.5 | 0.5 | 1 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 1 |
| | N | N | N | N | N | Υ | Υ | Υ | Υ | Υ | N | N | N | 1 |
| | | | Υ | | | Υ | Υ | Υ | Υ | Υ | | | | 1 |
| et | | | | | | Υ | Υ | Υ | Υ | Υ | | | | |
| | | | | | | Υ | Υ | Υ | Υ | Υ | | | | |
| е | | | | | | Υ | Υ | Υ | Υ | Υ | | | | |
| | | | Υ | | | | | | | | | | | |
| | Υ | | Υ | Υ | | | | | | | | | | |
| | | | T | Υ | | | | | | | | | | |
| | | | T | Υ | | | | | | | | | | |
| | | | Υ | Υ | | | | | | | | | | |
| | | | Υ | Υ | | Υ | Υ | Υ | Υ | Υ | | | | |



PCC Nov-19

Code Number

ICXHi01

ICXHi02

ICXHi03

ICXH04

ICXHi07

ICXHi08

ICXHi09 ICXHi10

CCTC*

IT-WD 1

IT-WD 2

IT-WD 3

IT - WD 4

IT - WD 5

IT-WD 6

IT-WD 7

IT-WD 8

IT-WD 9

IT-WD 10

Web & Digital Communications Focus Area

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 fociusare using those skill sets for multiple options in a Progam of Study or if you want to use another set of industry

Cluster Knowledge and Skills (CTE standards)

| gital Communications Focus Area | | | | | | | | | | | | | | |
|---|---------------------|-----------------|---------------------------|-------------|----------------------|----------|--------------------|----------------------|---------------------|------------------------|---------|------------|-----------------|----------------|
| r the Program of Study name above. 2) Enter your high school community college name. 4) Enter the date. 5) Click on the ne, Course 2 Name, etc., and replace with your POS course and first year of post-secondary. 6) Enter school course CES code for the course (secondary only). 8) Enter number of dentify those courses that trigger the TSA for this POS. 10) standards that are taught with intent and purpose, and are are. Note: The optional Focus Area tabs below are included have a very specific industry fociusare using those skill sets for Progam of Study or if you want to use another set of industry | cs 160. Exploring C | omputer Science | Design Computer Science 1 | Game Design | Introduction to Engi | Ineering | T 2. Network Admin | T3: Network Security | TA: Server Administ | ration G. Windows Oper | Robotic | s Unnan | Ined Aircraft & | Aerial Photo 2 |
| | 101561 | 21107 | 10156.1 & 10156.2 | 10205 | 21016 | 10251.1 | 10101 | 10111 | 10108 | 10102 | 21009 | 210531 | 210532 | |
| | 10156 | 21107 | 10154 | 10205 | 21016 | 10251 | 10101 | 10111 | 10108 | 10102 | 21009 | 21053 | 21053 | |
| er Knowledge and Skills (CTE standards) | 0.5 | 0.5 | 1 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | |
| per KS Statement | N | N | N | N | N | Y | Y | Υ | Υ | Υ | N | N | N | |
| Analyze customer requirements to design and develop a Web or digital communication product. | | | | | | | | | | | | | | |
| Apply the design and development process to produce user-focused Web and digital communications solutions. | | | | | | | | | | | | | | |
| Write product specifications that define the scope of work aligned to customer requirements. | | | | | | | | | | | | | | |
| Demonstrate the effective use of tools for digital communication production, development and project management. | | | | | | | | | | | | | | |
| Develop, administer and maintain Web applications. | | | | | | | | | | | | | | |
| Design, create and publish a digital communication product based on customer needs | | | | | | | | | | | | | | |
| Evaluate the functionality of a digital communication product using industry accepted techniques and metrics. | | | | | | | | | | | | | | |
| Implement quality assurance processes to deliver quality digital communication products and services | | | | | | | | | | | | | | |
| Perform maintenance and customer support functions for digital | | | | | | | | | | | 7 | | | |
| Comply with intellectual property laws, copyright laws and ethical | | | | | | | | | | |] | | | |
| | | | | | | | | | | | _ | | | |
| | | | | | | | | | | | I | | | |