Table of Contents

Workforce Degree Plan by Program (found on p. 77 of the 2021-2022 Catalog) ......................... 1
  Cloud Computing (found on p. 85 of the 2021-2022 Catalog) ................................................ 1
  Computer Networking (found on p. 91 of the 2021-2022 Catalog) ....................................... 1
  Information Systems Cybersecurity (found on p. 134 of the 2021-2022 Catalog) ..................... 6

Baccalaureate Degree Plans by Program (found on p. 175 of the 2021-2022 Catalog) .............. 7
  Cybersecurity (found on p. 175 of the 2021-2022 Catalog) .................................................. 7

Alphabetized Course Descriptions (found on p. 186 of the 2021-2022 Catalog) ....................... 9
Workforce Degree Plan by Program

CLOUD COMPUTING

AAS – Cloud Computing - Infrastructure
60 credit hours

FIRST YEAR
First Semester
ENGL  1301  Composition I
CPMT  1305  IT Essentials I: PC Hardware and Software
ITNW  1358  Network+
ITNW  1309  Fundamentals of Cloud Computing
ITMT  1372  Installation, Storage, and Computing with Windows Server 2016
ITNW  1354  Implementing and Supporting Servers (Windows Server)

Second Semester
GEN ED  Humanities/Fine Arts course
ITNW  2375  VMware vSphere: Installation, Configuration, and Management
ITSE  1359  Introduction to Scripting Languages – Python
ITNW  1373  Cloud Storage and Database

SECOND YEAR
First Semester
ITNW  2370  Containerization and Micro Services
ITNW  1336  Cloud Deployment & Infrastructure Management
ITNW  1375  Cloud Administrator I

Second Semester
GEN ED  Social/Behavioral Sciences course
ITNW  2327  Advanced Cloud Concepts (Capstone)
ITNW  1376  Cloud Administrator II

Certificate Level 1 – Cloud Computing - Infrastructure
42 credit hours

FIRST YEAR
First Semester
CPMT  1305  IT Essentials I: PC Hardware and Software
ITNW  1358  Network+
ITNW  1309  Fundamentals of Cloud Computing
ITMT  1372  Installation, Storage, and Computing with Windows Server 2016
ITNW  1354  Implementing and Supporting Servers (Windows Server)

Second Semester
ITNW  2375  VMware vSphere: Installation, Configuration, and Management
ITSE  1359  Introduction to Scripting Languages – Python
ITNW  1373  Cloud Storage and Database

SECOND YEAR
First Semester
ITNW  1374  Cloud Computing Security
ITNW  2370  Containerization and Micro Services
ITNW  1336  Cloud Deployment & Infrastructure Management
ITNW  1375  Cloud Administrator I

Second Semester
ITNW  2327  Advanced Cloud Concepts (Capstone)
ITNW  1376  Cloud Administrator II

COMPUTER NETWORKING

AAS – Computer Networking – Integrated Networking Technologies Track
60 Credit Hours

Many CPMT, ITCC, ITMT, ITNW (except ITNW 2374), and ITSy courses are offered in eight-week express sessions.

FIRST YEAR
First Semester
CPMT  1305  IT Essentials I: PC Hardware and Software
ITNW  1358  Network+
### AAS – Computer Networking – Infrastructure Track (Routing and Switching)
60 Credit Hours

Many CPMT, ITCC, ITMT, ITNW (except ITNW 2374), and ITSY courses are offered in eight-week express sessions.

#### FIRST YEAR

**First Semester**
- CPMT 1305 IT Essentials I: PC Hardware and Software
- ENGL 1301 Composition I
- ITNW 1358 Network+
- ITCC 1314 CCNA 1: Introduction to Networks

**Second Semester**
- ITNW 1354 Implementing and Supporting Servers (Windows Server)
- ITSC 2325 Advanced Linux (Red Hat RH124)
- ITSE 1359 Introduction to Scripting Languages – Python

#### SECOND YEAR

**First Semester**
- ITNW 2375 VMware vSphere: Installation, Configuration and Management
- ITCC 2377 Implementing Enterprise Network Core Technologies
- ITNW 1354 Implementing and Supporting Servers (Windows Server)

**Second Semester**
- ITNW 2373 Information Storage Management (EMC)
- ITMT 1372 Installation, Storage and Computing with Windows Server 2016
- ITSC 1316 Linux Installation and Configuration

**ELECTIVE**

* Elective (3 credit hours): ITSE 1359, ITNW 1364 or any ITCC, ITMT, ITNW, or ITSY course not listed above.

Note: ITCC 2320 (CCNA 3) – or the CCNA certification – is the prerequisite for the CCNP courses in the concurrent or postgraduate Enhanced Skills Certificate.
in the concurrent or postgraduate Enhanced Skills Certificate.

**AAS – Computer Networking – Systems Track**

60 Credit Hours

Many CPMT, ITCC, ITMT, ITNW (except ITNW 2374), ITSC and ITSY courses are offered in eight-week express sessions.

**FIRST YEAR**

**First Semester**
- CPMT 1305 IT Essentials I: PC Hardware and Software
- ITNW 1358 Network+
- ITMT 1371 Configuring and Supporting Microsoft Windows 10 (MD-100)
- ITCC 1314 CCNA 1: Introduction to Networks

**GEN ED**
- Humanities/Fine Arts course

**Second Semester**
- ITCC 1344 CCNA 2: Switching, Routing, and Wireless Essentials (SRWE)
- ITMT 1372 Installation, Storage and Computing with Windows Server 2016
- ITNW 1354 Implementing and Supporting Servers (Windows Server)
- ITMT 1373 Networking with Windows Server 2016
- ITSC 1316 Linux Installation and Configuration
- ITMT 1374 Identity with Windows Server 2016
- ITNW 1309 Fundamentals of Cloud Computing
- ITSY 1300 Fundamentals of Information Security (Security+)

**Third Semester**
- ENGL 1301 Composition I
- GEN ED Social/Behavioral Sciences course

**SECOND YEAR**

**First Semester**
- ITSC 2325 Advanced Linux (Red Hat RH124)
- ITSE 1359 Introduction to Scripting Languages - Python
- SPCH 1321 Business and Professional Communication (See Speech options)

**GEN ED**
- Mathematics course

**Second Semester**
- ITNW 2373 Information Storage Management (EMC)
- ITNW 2375 VMware vSphere: Installation, Configuration, and Management (Capstone)

**ITY 2300** Operating System Security

**ELECTIVE** *

*Elective (3 credit hours): ITCC 2320, ITNW 1351, ITNW 1364 or any ITCC, ITMT, ITNW, or ITSY course not listed above.

Note: ITCC 2320 (CCNA 3) – or the CCNA certification – is the prerequisite for the CCNP courses in the concurrent or postgraduate Enhanced Skills Certificate.

**AAS – Computer Networking – Wireless Track**

60 Credit Hours

Many CPMT, ITCC, ITMT, ITNW (except ITNW 2374), ITSC and ITSY courses are offered in eight-week express sessions.

**FIRST YEAR**

**First Semester**
- CPMT 1305 IT Essentials I: PC Hardware and Software
- ITCC 1314 CCNA 1: Introduction to Networks
- ITNW 1351 Fundamentals of Wireless LANs
- ITNW 1358 Network+
- ITNW 1371 Aruba Switching Fundamentals for Mobility

**Second Semester**
- ENGL 1301 Composition I
- GEN ED Mathematics course
- ITNW 1378 Wireless Network Administration
- ITNW 2379 Implementing Aruba Campus Switching Solutions
- ITNW 1372 Implementing Aruba Wireless

**SECOND YEAR**

**First Semester**
- ENGL 2311 Technical and Business Writing
- SPCH 1321 Business and Professional Communication * (See Speech options)
- ITNW 2371 Wireless Network Security
- ITSE 1359 Introduction to Scripting Languages - Python
- ITNW 2377 Aruba Scale-able WLAN Design and Implementation

**Second Semester**
- ITNW 2372 Wireless Network Design
- ITNW 2374 Emerging Wireless Technology (Capstone)
- ITNW 2378 Fundamentals of IoT
- GEN ED Humanities/Fine Arts course
- GEN ED Social/Behavioral Sciences course

1. May substitute SPCH 1311 or SPCH 1315
Integrated Networking Technologies Track

Certificate Level 1 – Integrated Networking Technologies Track – Integrated Networking Virtualization and Storage Technician
18 Credit Hours

Many CPMT, ITCC, ITMT, ITNW (except ITNW 2374), and ITSY courses are offered in eight-week express sessions.

FIRST YEAR
First Semester
ITNW 1358 Network+
ITNW 1309 Fundamentals Cloud Computing
ITMT 1372 Installation, Storage and Computing with Windows Server 2016
ITNW 1354 Implementing and Supporting Servers (Windows Server)

Second Semester
ITMT 1373 Networking with Windows Server 2016
ITSC 1316 Linux Installation and Configuration
ITNW 2373 Information Storage Management (EMC)
ITNW 2375 VMware vSphere: Installation, Configuration and Management (Capstone)

Certificate Level 2 – Integrated Networking Technologies Track – Integrated Networking Administrator
45 Credit Hours

Students must be TSI complete.

Many CPMT, ITCC, ITMT, ITNW (except ITNW 2374), and ITSY courses are offered in eight-week express sessions.

FIRST YEAR
First Semester
CPMT 1305 IT Essentials I: PC Hardware and Software
ITNW 1358 Network+
ITCC 1314 CCNA 1: Introduction to Networks
ITNW 1309 Fundamentals Cloud Computing

Second Semester
ITCC 1344 CCNA 2: Switching, Routing, and Wireless Essentials (SRWE)
ITSY 2300 Operating System Security
ITMT 1372 Installation, Storage and Computing with Windows Server 2016
ITNW 1354 Implementing and Supporting Servers (Windows Server)
ITCC 2320 CCNA 3: Enterprise Networking, Security, and Automation (ENSA)

SECOND YEAR
First Semester
ITNW 1351 Fundamentals of Wireless LANs
ITSC 1316 Linux Installation and Configuration
ITMT 1372 Networking with Windows Server 2016
ITSC 2325 Advanced Linux (Red Hat RH124)
ITSY 1300 Fundamentals of Information Security (Security+)

Second Semester
ITNW 2373 Information Storage Management (EMC)
ITNW 2375 VMware vSphere: Installation, Configuration and Management (Capstone)

ELECTIVE *
* Elective (3 credit hours): ITSE 1359, or any ITCC, ITMT, ITNW, or ITSY course not listed above.

Note: ITCC 2320 (CCNA 3) – or the CCNA certification – is the prerequisite for the CCNP courses in the concurrent or postgraduate Enhanced Skills Certificate.

Infrastructure Track

Certificate Level 2 – Infrastructure Track – Infrastructure Administrator
45 Credit Hours

Students must be TSI complete.

Many CPMT, ITCC, ITMT, ITNW (except ITNW 2374), and ITSY courses are offered in eight-week express sessions.

FIRST YEAR
First Semester
CPMT 1305 IT Essentials I: PC Hardware and Software
ITNW 1358 Network+
ITCC 1314 CCNA 1: Introduction to Networks
ITNW 1351 Fundamentals of Wireless LANs

Second Semester
ITCC 1344 CCNA 2: Switching, Routing, and Wireless Essentials (SRWE)
ITCC 2320 CCNA 3: Enterprise Networking, Security, and Automation (ENSA)
ITNW 1309 Fundamentals Cloud Computing
ITSE 1359 Introduction to Scripting Languages – Python
<table>
<thead>
<tr>
<th>Second Year</th>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITCC 2377</td>
<td>Implementing Enterprise Network Core Technologies</td>
<td>ITMT 1372</td>
</tr>
<tr>
<td>ITCC 2379</td>
<td>Implementing Enterprise Advanced Routing and Services</td>
<td>ITNW 1354</td>
</tr>
<tr>
<td>ITMT 1372</td>
<td>Installation, Storage and Computing with Windows Server 2016</td>
<td>Implementing and Supporting Servers (Windows Server)</td>
</tr>
<tr>
<td>ITNW 1354</td>
<td>Implementing and Supporting Servers (Windows Server)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITMT 1373</td>
<td>Networking with Windows Server 2016</td>
</tr>
<tr>
<td>ITSC 1316</td>
<td>Linux Installation and Configuration</td>
</tr>
<tr>
<td>ITNW 2375</td>
<td>VMware vSphere: Installation, Configuration and Management</td>
</tr>
<tr>
<td>ITSY 2300</td>
<td>Operating Systems Security (Capstone)</td>
</tr>
</tbody>
</table>

**Elective: **
* Elective (3 credit hours): ITMT 1371, or any ITCC, ITMT, ITNW, or ITSY course not listed in the degree plan.

Note: ITCC 2320 (CCNA 3) -- or the CCNA certification -- is the prerequisite for the CCNP courses in the concurrent or postgraduate Enhanced Skills Certificate.

**Systems Track**

**Certificate Level 1 – Systems Track – Systems Software Technician**
24 Credit Hours

Many CPMT, ITCC, ITMT, ITNW (except ITNW 2374), ITSC and ITSY courses are offered in eight-week express sessions.

<table>
<thead>
<tr>
<th>First Year</th>
<th>First Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITNW 1358</td>
<td>Network+</td>
</tr>
<tr>
<td>CPMT 1305</td>
<td>IT Essentials I: PC Hardware and Software</td>
</tr>
<tr>
<td>ITCC 1314</td>
<td>CCNA 1: Introduction to Networks</td>
</tr>
<tr>
<td>ITMT 1372</td>
<td>Installation, Storage and Computing with Windows Server 2016</td>
</tr>
<tr>
<td>ITNW 1354</td>
<td>Implementing and Supporting Servers (Windows Server)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Semester</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ITMT 1373</td>
<td>Networking with Windows Server 2016</td>
</tr>
<tr>
<td>ITSC 1316</td>
<td>Linux Installation and Configuration</td>
</tr>
<tr>
<td>ITMT 1374</td>
<td>Identity with Windows Server 2016 (Capstone)</td>
</tr>
<tr>
<td>ITNW 1309</td>
<td>Fundamentals of Cloud Computing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Certificate Level 2 – Systems Track – Systems Administrator</th>
</tr>
</thead>
<tbody>
<tr>
<td>45 Credit Hours</td>
</tr>
</tbody>
</table>

Students must be TSI complete.

Many CPMT, ITCC, ITMT, ITNW (except ITNW 2374), ITSC and ITSY courses are offered in eight-week express sessions.

**FIRST YEAR**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPMT 1305</td>
<td>IT Essentials I: PC Hardware and Software</td>
</tr>
<tr>
<td>ITCC 1314</td>
<td>CCNA 1: Introduction to Networks</td>
</tr>
<tr>
<td>ITMT 1372</td>
<td>Installation, Storage and Computing with Windows Server 2016</td>
</tr>
<tr>
<td>ITNW 1354</td>
<td>Implementing and Supporting Servers (Windows Server)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Certificate Level 2 – Systems Track – Systems Administrator</th>
</tr>
</thead>
<tbody>
<tr>
<td>45 Credit Hours</td>
</tr>
</tbody>
</table>

Students must be TSI complete.

Many CPMT, ITCC, ITMT, ITNW (except ITNW 2374), ITSC and ITSY courses are offered in eight-week express sessions.

**FIRST YEAR**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPMT 1305</td>
<td>IT Essentials I: PC Hardware and Software</td>
</tr>
<tr>
<td>ITNW 1358</td>
<td>Network+</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Certificate Level 2 – Systems Track – Systems Administrator</th>
</tr>
</thead>
<tbody>
<tr>
<td>45 Credit Hours</td>
</tr>
</tbody>
</table>

Students must be TSI complete.

Many CPMT, ITCC, ITMT, ITNW (except ITNW 2374), ITSC and ITSY courses are offered in eight-week express sessions.
ITMT 1372  Installation, Storage and Computing with Windows Server 2016
ITNW 1354  Implementing and Supporting Servers (Windows Server)
ITCC 1314  CCNA 1: Introduction to Networks

Second Semester
ITCC 1344  CCNA 2: Switching, Routing, and Wireless Essentials (SRWE)
ITMT 1373  Networking with Windows Server 2016
ITSC 1316  Linux Installation and Configuration
ITSE 1359  Introduction to Scripting Languages – Python
ITSY 1300  Fundamentals of Information Security (Security+)

SECOND YEAR
First Semester
ITMT 1371  Configuring and Supporting Microsoft Windows 10 (MD-100)
ITMT 1374  Identity with Windows Server 2016
ITNW 1309  Fundamentals of Cloud Computing
ITSC 2325  Advanced Linux (Red Hat RH124)

Second Semester
ITNW 2373  Information Storage Management (EMC)
ITNW 2375  VMware vSphere: Installation, Configuration, and Management (Capstone)
ITSY 2300  Operating System Security

* Elective (3 credit hours): ITCC 2320, ITNW 1351, or any ITCC, ITMT, ITNW, or ITSY course not listed above.

Note: ITCC 2320 (CCNA 3) – or the CCNA certification – is the prerequisite for the CCNP courses in the concurrent or postgraduate Enhanced Skills Certificate.

INFORMATION SYSTEMS CYBERSECURITY

AAS – Information Systems Cybersecurity
60 credit hours

Many CPMT, ITCC, ITMT, ITNW (except ITNW 2374), ITSC and ITSY courses are offered in eight-week express sessions.

FIRST YEAR
First Semester
CPMT 1305  IT Essentials I: PC Hardware and Software
ITNW 1358  Network+
ITMT 1372  Installation, Storage and Computing with Windows Server 2016

ITSY 1371  OSINT and Introductory Security Analysis
ITSY 2300  Operating System Security
ENGL 1301  Composition I

Second Semester
ITCC 1314  CCNA 1: Introduction to Networks
ITMT 1373  Networking with Windows Server 2016
ITSY 1372  Cyber-Psychology and the Effects of Emerging Technology
ITSC 1316  Linux Installation and Configuration
ITSY 1300  Fundamentals of Information Security (Security+)
ITSY 2301  Firewalls and Network Security

SECOND YEAR
First Semester
ITCC 1344  CCNA 2: Switching, Routing, and Wireless Essentials (SRWE)
ITSY 2330  Intrusion Detection
MATH 1342  Elementary Statistical Methods
(See Mathematics options)
SPCH 1321  Business and Professional Communication (See Speech options)

ELECTIVE *

Second Semester
ECON 2302  Principles of Microeconomics (See Social/Behavioral Sciences options)
ITSE 1359  Introduction to Scripting Languages – Python
ITSY 2341  Security Management Practices (Capstone)
ITSY 2343  Computer System Forensics
PHIL 2303  Introduction to Formal Logic (See Humanities options)

* Elective (3 credit hours): ITSY 2572 (recommended), or any ITCC, ITNW, ITMT, or ITSY course not listed above

Certificate Level 1 – Information Systems Cybersecurity
36 credit hours

Many CPMT, ITCC, ITMT, ITNW (except ITNW 2374), ITSC and ITSY courses are offered in eight-week express sessions.

FIRST YEAR
First Semester
CPMT 1305  IT Essentials I: PC Hardware and Software
ITNW 1358  Network+
ITCC 1314  CCNA 1: Introduction to Networks
Baccalaureate Degree Plans by Program

Cybersecurity

BAT – Cybersecurity
120 credit hours

Many CPMT, ITCC, ITMT, ITNW (except ITNW 2374), ITSC, and ITSY courses are offered in eight-week express sessions.

First Year - AAS

First Semester
CPMT 1305 IT Essentials I: PC Hardware and Software
ITNW 1358 Network+

Second Semester
ITCC 1344 CCNA 2: Switching, Routing, and Wireless Essentials (SRWE)
ITMT 1373 Networking with Windows Server 2016
ITSY 1372 Cyber-Psychology and the Effects of Emerging Technology
ITSY 1300 Fundamentals of Information Security (Security+)

Certificate Level 1 – Cybersecurity

Infrastructure Technician
21 credit hours

Many CPMT, ITCC, ITMT, ITNW (except ITNW 2374), ITSC, and ITSY courses are offered in eight-week express sessions.

First Year

First Semester
First 8 Weeks
CPMT 1305 IT Essentials I: PC Hardware and Software
ITMT 1372 Installation, Storage and Computing with Windows Server 2016
ITSC 1316 Linux Installation and Configuration
ITSY 1371 OSINT and Introductory Security Analysis

Second Semester
First 8 Weeks
ITMT 1373 Networking with Windows Server 2016
ITSY 1372 Cyber-Psychology and the Effects of Emerging Technology
ITSY 2300 Operating System Security

Second Semester

Second 8 Weeks
CPMT 1305 IT Essentials I: PC Hardware and Software
ITNW 1358 Network+

First Semester
First 8 Weeks
CPMT 1305 IT Essentials I: PC Hardware and Software
ITNW 1358 Network+

Second 8 Weeks
ITCC 1344 CCNA 2: Switching, Routing, and Wireless Essentials (SRWE)
ITSY 1372 Cyber-Psychology and the Effects of Emerging Technology
ITSC 1316 Linux Installation and Configuration
ITSY 1300 Fundamentals of Information Security (Security+)
ITSY 2301 Firewalls and Network Security

Second Year - AAS

First Semester
ITCC 1344 CCNA 2: Switching, Routing, and Wireless Essentials (SRWE)
ITSY 2330 Intrusion Detection
MATH 1342 Elementary Statistical Methods (See Mathematics options)
SPCH 1321 Business and Professional Communication (See Speech options)
ELECTIVE *

Second Semester
ECOL 2302 Principles of Microeconomics (See Social/Behavioral Sciences options)
ITSE 1359 Introduction to Scripting Languages – Python
ITSY 2341 Security Management Practices
ITSY 2343 Computer System Forensics
PHIL 2303 Introduction to Formal Logic (See Humanities options)

THIRD YEAR - BAT
First Semester
CYBR 3310 Introduction to Cryptography
CYBR 3320 Digital and Device Forensics
CYBR 3330 Advanced Network Topologies and Protocols
CYBR 3340 Cyber Crime
EDUC 4100 Learning Framework (See Collin options)
ENGL 2311 Technical and Business Writing (See Communication options)

Second Semester
CYBR 3350 Cyber Privacy
CYBR 3360 Mobile Technologies
CYBR 4310 Penetration Testing
GOVT 2305 Federal Government (Federal constitution and topics)
PHYS 1415 Physical Science I (See Life & Physical Sciences options)
PHYS 1405 Conceptual Physics (See Life & Physical Sciences options)

FOURTH YEAR - BAT
First Semester
CYBR 4320 Cyber Defense Operations
CYBR 4330 Virtualization and Cloud Security
CYBR 4340 Information Assurance
ENVR 1401 Environmental Science I (See Life & Physical Sciences options)
HIST 1301 United States History I (See American History options)

Second Semester
CYBR 4350 Senior Project (Capstone)
KINE 1164 Introduction to Physical Fitness and Wellness (See Collin options)
GOVT 2306 Texas Government (Texas constitution and topics)
HIST 1302 United States History II (See American History options)
GEN ED Creative Arts course

* Elective (3 credit hours): ITSY 2572 (recommended) or any CPMT, ITCC, ITMT, ITNW, ITSC, or ITSY course not listed above.
ALPHABETIZED COURSE DESCRIPTIONS

New courses – Effective Fall 2021

**ITNW 1336  Cloud Deployment & Infrastructure Management**
Focus on Cloud infrastructure, deployment, security models, and key considerations in migrating to Cloud computing. Includes the technologies and processes required to build on-premise and Cloud environments, including computation, storage, networking, virtualization, business continuity, security, and management. Lab required. 3 credit hours. (W)

**ITNW 1354  Implementing and Supporting Servers (Windows Server)**
Implement, administer, and troubleshoot information systems that incorporate servers in a networked computing environment. Additionally, this course provides an introduction to Windows Server 2019. Lab required. Prerequisite: ITNW 1358 or ITCC 1314. 3 credit hours. (W)

**ITNW 1373  Cloud Storage and Database**
Cloud Storage and Database technologies used in cloud computing. Topics include data storage for cloud, mobile, social media, and software. Provides a strong understanding of cloud computing concepts, technology, and architecture in support of storage technologies and prepares students for advanced concepts, technologies, and processes. This course investigates the existing concepts of Cloud Computing from the standpoint of technology resources and an internetworking perspective. The concepts that will be explored involve how Cloud Computing has matured, the growth of Cloud Computing and how the strategies that surround Cloud Computing have added to business agility. The course will study the vastness of Cloud Computing, the services that Cloud Computing offers, and several vendor case studies on their methodology that drives Cloud Computing. Lab required. Prerequisite: ITNW 1309. 3 credit hours. (W)

**ITNW 1374  Cloud Computing Security**
Introduction to Cloud Security including tools which monitor data moving to and from the cloud and between cloud platforms, identification of fraudulent use of data in the Cloud and its financial and performance impact. Third-party cloud security solutions including cloud security gateways, centralized cloud management, and native IaaS/PaaS platform security will be presented. Lab required. 3 credit hours. (W)

**ITNW 1375  Cloud Administrator I**
The Administration I course will be based on learning how to administrate Amazon Web Services. Understand how to administrator the key five pillars supporting Amazon Web Servers, which are Operational Excellence, Security Reliability, Performance Efficiency and Cost Optimization. Lab required. 3 credit hours. (W)

**ITNW 1376  Cloud Administrator II**
This course teaches students how to manage their Azure subscriptions, create and scale virtual machines, implement storage solutions, configure virtual networking, back up and share data, connect Azure and on-premises sites, manage network traffic, implement Azure Active Directory, secure identities, and monitor your solution. Lab required. Prerequisite: ITNW 1375. 3 credit hours. (W)

**ITNW 2327  Advanced Cloud Concepts**
Focus on enterprise Cloud architecture, with advanced topics including multi-Cloud platforms inclusive of computing, networking, storage, monitoring and database. Lab required. 3 credit hours. (W)

**ITNW 2370  Containerization and Micro Services**
Skills and knowledge related to Cloud computing architecture and services needed to create, deploy and manage containers will be introduced. Concepts of building blocks, container runtimes, container storage, networking and automation deployment, and orchestration of resources are delivered as skills through labs and lecture. Lab required. 3 credit hours. (W)

**ITSC 1315  Project Management Software**
Use of project management software for developing a project plan including timelines, milestones, scheduling, life cycle phases, management frameworks, skills, processes, and tools. Lab required. 3 credit hours. (W)

**ITSC 2325  Advanced Linux (Red Hat RH124)**
Provides instruction in advance open-source Linux operating system. Develops directory services for clients, support users remotely, and install and configure network services. Additionally, this is an advanced course in the Linux operating system. The course equips you with Linux administration "survival skills" by focusing on foundational Linux concepts and core tasks. You will learn how to apply command-line concepts and enterprise-level tools, starting you on your journey toward becoming a full-time Linux system administrator. Includes Linux installation, basic administration, utilities and commands, upgrading, networking, security, and application installation. Emphasizes hands-on setup, administration, and management of Linux. Lab required. Prerequisite/Concurrent Enrollment: ITSC 1316 or
consent of Associate Dean/Director. 3 credit hours. (W)

New courses – Effective Spring 2022

ITSY 1371 OSINT and Introductory Security Analysis
A study of open source and subscription threat intelligence. Includes the role of threat intelligence and organizational incident response. Topics include collection methods, management of operations, classification, production and analysis, assessment of threat vulnerability, business impact analysis, incidence response, and identification of various reporting requirements. The use of link diagrams and various types of association matrices will be introduced and emphasized. Lab required. 3 credit hours. (W)

ITCY 1372 Cyber-Psychology and the Effects of Emerging Technology
Identify effects of psychological phenomena associated with or affected by emerging technology, identify effects on the individual and the combined effects of interpersonal communication in a globally connected ecosystem. Concepts include the application of cyberpsychology through the identification of emotional intelligence and cultural intelligence in a modern environment. Lab required. 3 credit hours. (W)

Revisions – Effective Spring 2022

DANC 1301 Dance Composition - Choreography
This course is an examination of the principles of movement generation, phrasing, choreographic structure, and manipulation. Integration of choreographic principles will foster the growth of personal artisitic style. Lab required. Prerequisite: DANC 1201. 3 credit hours. (A)

ITCC 2377 Implementing Enterprise Network Core Technologies
This course gives you the knowledge needed to implement core enterprise network technologies including dual stack (IPv4 and IPv6) architecture, virtualization, infrastructure, network assurance, security and automation. Lab required. Prerequisite: ITCC 2320, CCNA Certification, or consent of Associate Dean/Director. 3 credit hours. (W)

ITCC 2379 Implementing Enterprise Advanced Routing and Services
This course gives you the knowledge you need to install, configure, operate, and troubleshoot an enterprise network. This course covers advanced routing and infrastructure technologies, expanding on the topics covered in the Implementing and Operating Enterprise Network Core Technologies course. Lab required. Prerequisite / Concurrent Enrollment: ITCC 2377 or consent of Associate Dean/Director. 3 credit hours. (W)

ITMT 1371 Configuring and Supporting Microsoft Windows 10 (MD-100)
Addresses the implementation and desktop support needs of customers that are planning to deploy and support Microsoft Windows 10 in a variety of stand-alone and network operating system environments. In-depth, hands-on training for Information Technology (IT) professionals responsible for the planning, implementation, management, and support of Windows 10. Lab required. Prerequisite: ITNW 1358 or consent of Associate Dean/Director. 3 credit hours. (W)

ITNW 2375 VMware vSphere: Installation, Configuration, and Management
A study of Virtualization in computer network technology. The course covers the installation, configuration, and management of VMware vSphere, which consists of VMware vSphere ESXi and VMware vCenter Server. Lab required. Prerequisite: ITCC 1344 and ITMT 1373, or consent of Associate Dean ITCC 1344, or ITNW 1354, or ITSC 1316, or consent of Associate Dean/Director. 3 credit hours. (W)

ITNW 2378 Fundamentals of IoT
This course covers standards, devices, protocols, and security concepts necessary to design, deploy, and troubleshoot IoT solutions. Lab required. Prerequisite: ITNW 1309, ITNW 2371, and ITSC 1342 ITSE 1359. 3 credit hours. (W)

ITSC 1316 Linux Installation and Configuration
Introduction to Linux operating system. Includes Linux installation, basic administration, utilities and commands, upgrading, networking, security, and application installation. Emphasizes hands-on setup, administration, and management of Linux. Lab required. Prerequisite: ITNW 1358 or consent of the Associate Dean/Director. 3 credit hours. (W)

ITSM 2300 Operating System Security
Safeguard computer operating systems by demonstrating server support skills and designing and implementing a security system. Identify security threats and monitor network security implementations. Use best practices to configure operating systems to industry security standards. Lab required. Prerequisite: ITNW 1358. ITMT1372 is strongly recommended. 3 credit hours. (W)

ITSC 2301 Firewalls and Network Security
Identify elements of firewall design, types of security threats and responses to security attacks. Use Best Practices to design, implement, and monitor a network
security plan. Examine security incident postmortem reporting and ongoing network security activities. Lab required. Prerequisite: ITSY 2300 or consent of the Associate Dean/Director. 3 credit hours. (W)

**ITSY 2341 Security Management Practices**
In-depth coverage of security management practices, including asset evaluation and risk management; cyber law and ethics issues; policies and procedures; business recovery and business continuity planning; network security design; and developing and maintaining a security plan. Lab required. Prerequisite: ITSY 2300 or consent of Associate Dean/Director. 3 credit hours. (W)

**ITSY 2342 Incident Response & Handling**
In-depth coverage of incident response and incident handling, including identifying sources of attacks and security breaches; analyzing security logs; recovering the system to normal; performing postmortem analysis; and implementing and modifying security measures. Lab required. Prerequisite: ITSY 2300 or consent of Associate Dean/Director. 3 credit hours. (W)

**ITSY 2343 Computer System Forensics**
In-depth study of system forensics including methodologies used for analysis of computer security breaches. Collect document and evaluate evidence to perform postmortem analysis of a security breach. Lab required. Prerequisite: ITSY 2342, or ITSY 2330, or consent of Associate Dean/Director. 3 credit hours. (W)

**ITSY 2572 Certified Information Systems Security Professional (CISSP) Common Body Of Knowledge Domain Instruction**
An in-depth study of the 10 domains which make up the Common Body of Knowledge (CBK) of information security professionals. The course is designed to instruct individuals to implement solid security practices, perform risk analysis, identify necessary countermeasures, and help the enterprise as a whole protect its facility, network, systems, and information. Prerequisites: ITSY 1300 and ITSY 2300, or equivalent experience and consent of Associate Dean/Director. 5 credit hours. (W)

**ITSY 2575 Certified Information Security Manager (CISM)**
An in-depth study of the five domains covered on the ISACA* – CISM professional certification exam. Each domain (Information Security Governance, Information Risk Management, Information Security Program Development, Information Security Program Management, and Incident Management and Response) covers the knowledge and tasks that cybersecurity professionals are expected to know how to perform in the workplace.*Previously known as Information Systems Audit and Control Association. Prerequisite: ITSY 1300 or ITSY 2300 or equivalent experience and consent of Associate Dean/Director. 5 credit hours. (W)

**PHYS 1402 College Physics II**
Lecture: Fundamental principles of physics, using algebra and trigonometry; the principles and applications of electricity and magnetism, including circuits, electrostatics, electromagnetism, waves, sound, light, optics, and modern physics topics; with emphasis on problem solving. Lab: Laboratory activities will reinforce fundamental principles of physics, using algebra and trigonometry; the principles and applications of electricity and magnetism, including circuits, electrostatics, electromagnetism, waves, sound, light, optics, and modern physics topics; with emphasis on problem solving. Lab required. Prerequisite: PHYS 1401 in the last five years with a grade of C or better. 4 credit hours. (A)