

# DIGITAL & INFORMATION TECHNOLOGY - COE 2020 - 2021 V.3

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# Workforce Degrees and Certificates 2020-2021

## ARTIFICIAL INTELLIGENCE (A.I.)

### ARTIFICIAL INTELLIGENCE

#### Associate of Applied Science

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
MATH1314	College Algebra	3
ENGL 1301	English Compositionv	3
XXXX #3## <sup>1</sup>	General Education Elective	3
ITAI 1370	Artificial Intelligence (A.I.) History, Theory & Platforms	3

**Semester Total** **15**

##### Second Semester - Spring

COSC 1436	Programming Fundamentals I (Python)	4
ITAI 1371	Introduction to Machine Learning	3
ITAI 1372	Artificial Intelligence (A.I.) in Cybersecurity	3
ITAI 1378	Computer Vision for Artificial Intelligence (A.I.)	3

**Semester Total** **13**

##### Third Semester - Summer

ITSC 1316	LINUX Installation & Configuration	3
ITNW 1313	Computer Virtualization	3

**Semester Total** **6**

#### SECOND YEAR

##### First Semester - Fall

ITAI 2374	Robot Operating System & Platforms in Artificial Intelligence (A.I.)	3
ITAI 2373	Natural Language Processing	3
ITAI 2372	Artificial Intelligence (A.I.) Applications & Case Histories	3
XXXX #3## <sup>1</sup>	Humanities / Fine Arts Elective	3
ITSE 1346	Database Design and Theory	3

**Semester Total** **15**

##### Second Semester - Spring

PHIL 1301	Introduction to Philosophy	3
ITAI 2377	Data Science in Artificial Intelligence (A.I.)	3
ITAI 2376	Deep Learning in Artificial Intelligence (A.I.)	3
ITAI 2275	Cooperative Education - Artificial Intelligence (A.I.) <b>OR</b>	
ITAI 2277	Artificial Intelligence (A.I.) Resources & References (Capstone)	2

**Semester Total** **11**

**Total Minimum Credits for the AAS Degree** **60**

<sup>1</sup>A list of electives appears in the Core Curriculum section of this catalog.

# Academic Degrees and Certificates 2020-2021

## Associate of Arts in COMPUTER INFORMATION SYSTEMS

FIRST YEAR		SCH
<b>First Semester - Fall</b>		
EDUC 1300	Learning Framework	3
ENGL 1301	Composition I	3
MATH 1324	Mathematics for Business & Social Sciences	3
BCIS 1305	Business Computer Applications	3
HIST #3## <sup>1</sup>	American History Elective	3
<b>Semester Total</b>		<b>15</b>
<b>Second Semester - Spring</b>		
ENGL 1302	Composition II	3
MATH 1325	Calculus for Business & Social Sciences	3
COSC 1436	Programming Fundamentals I	4
XXXX #3## <sup>1</sup>	Life & Physical Sciences Elective	3
HIST #3## <sup>1</sup>	American History Elective	3
<b>Semester Total</b>		<b>16</b>
<b>SECOND YEAR</b>		
<b>First Semester - Fall</b>		
ACCT 2301	Principles of Financial Accounting	3
COSC 1437	Programming Fundamentals II	4
ECON 2301	Principles of Macroeconomics <b>OR</b>	
ECON 2302	Principles of Microeconomics	3
GOVT 2305	Federal Government	3
XXXX #3## <sup>1</sup>	Creative Arts Elective	3
<b>Semester Total</b>		<b>16</b>
<b>Second Semester - Spring</b>		
MATH 1342	Elementary Statistical Methods <b>OR</b>	
ACCT 2302	Principles of Managerial Accounting	3
COSC 2425	Computer Organization	4
XXXX #3## <sup>1</sup>	Language, Philosophy, & Culture Elective	3
GOVT 2306	Texas Government	3
<b>Semester Total</b>		<b>13</b>
<b>Total Minimum Credits for the AA Degree</b>		<b>60</b>

<sup>1</sup>A list of electives appears in the Core Curriculum section of this catalog.

# Academic Degrees and Certificates 2020-2021

## Associate of Science in COMPUTER SCIENCE Field of Study Curriculum

FIRST YEAR		SCH
<b>First Semester - Fall</b>		
EDUC 1300	Learning Framework	3
ENGL 1301	Composition I	3
MATH 2412	Pre-Calculus Math	4
COSC 1436	Programming Fundamentals I	4
HIST #3## <sup>1</sup>	American History Elective	3
<b>Semester Total</b>		<b>17</b>
<b>Second Semester - Spring</b>		
ENGL 1302	Composition II	3
MATH 2413	Calculus I	4
COSC 1437	Programming Fundamentals II	4
HIST #3## <sup>1</sup>	American History Elective	3
<b>Semester Total</b>		<b>14</b>
<b>SECOND YEAR</b>		
<b>First Semester - Fall</b>		
MATH 2414	Calculus II	4
PHYS 2325	University Physics I (Lecture)	3
PHYS 2125	University Physics I (Lab)	1
COSC 2436	Programming Fundamentals III	4
GOVT 2305	Federal Government	3
<b>Semester Total</b>		<b>15</b>
<b>Second Semester - Spring</b>		
PHYS 2326	University Physics II (Lecture)	3
PHYS 2126	University Physics II (Lab)	1
COSC 2425	Computer Organization	4
XXXX #3## <sup>1</sup>	Social & Behavioral Sciences Elective	3
GOVT 2306	Texas Government	3
<b>Semester Total</b>		<b>14</b>
<b>Total Minimum Credits for the AS Degree</b>		<b>60</b>

<sup>1</sup>A list of electives appears in the Core Curriculum section of this catalog.

Consult with advisor regarding Core completion

# Workforce Degrees and Certificates 2020-2021

## COMPUTER PROGRAMMING

### COMPUTER PROGRAMMING - APPLICATIONS DEVELOPMENT - CLOUD COMPUTING AND APPLICATION DEVELOPMENT - SPECIALIZATION

Associate of Applied Science SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
ITSE 1411	Beginning Web Programming	4
MATH 1314	College Algebra	3
COSC 1436	Programming Fundamentals I	4
<b>Semester Total</b>		<b>14</b>

##### Second Semester - Spring

COSC 1437	Programming Fundamentals II	4
ITSE 2402	Intermediate Web Programming	4
ITCC 1414	CCNA1: Introduction to Computer Networks <b>OR</b>	
ITNW 1425	Fundamentals of Networking Technologies	4
ITSE 1345	Introduction to Oracle SQL <b>OR</b>	
ITSE 1346	Database Theory and Design	3
<b>Semester Total</b>		<b>15</b>

##### Third Semester - Summer

ENGL 1301	Composition I	3
ITNW 1313	Computer Virtualization	3
<b>Semester Total</b>		<b>6</b>

#### SECOND YEAR

##### First Semester - Fall

ITSE 2473	Cloud Computing I- Solution Architect	4
INEW 2434	Advanced Web Programming	4
XXXX #3##	Social / Behavioral Sciences Elective	3
<b>Semester Total</b>		<b>11</b>

# Workforce Degrees and Certificates 2020-2021

## Second Semester - Spring

ITSE 2474	Cloud Computing II- Developer	4
XXXX #4## <sup>2</sup>	Program Approved IT Elective	4
XXXX #3## <sup>1</sup>	Humanities/Fine Arts Elective	3
ITSE 1380 <sup>3</sup>	Cooperative Education - Computer Programming/Programmer, General (Capstone) <b>OR</b>	
INEW 2332 <sup>3</sup>	Comprehensive Software Project	3
	<b>Semester Total</b>	<b>14</b>
<b>Total Minimum Credits for the AAS Degree</b>		<b>60</b>

<sup>1</sup>A list of electives appears in the Core Curriculum section of this catalog.

<sup>2</sup>COSC 2436; GISC 1411; INEW 2475; ITNW 1313; ITSE 2333, 2471; ITSY 1342.

<sup>3</sup>Choose one as the capstone ITSE 1380 or INEW 2332

# Workforce Degrees and Certificates 2020-2021

## COMPUTER PROGRAMMING - APPLICATIONS DEVELOPMENT - MICROSOFT C# SPECIALIZATION

Associate of Applied Science SCH

### FIRST YEAR

#### First Semester - Fall

EDUC 1300	Learning Framework	3
ENGL 1301	Composition I	3
MATH 1314	College Algebra	3
BCIS 1305	Business Computer Applications	3
COSC 1436	Programming Fundamentals I (with C#)	4

**Semester Total** **16**

#### Second Semester - Spring

MATH 1324	Mathematics for Business & Social Sciences	3
COSC 1437	Programming Fundamentals II (with C#)	4
ITSE 1346	Database Theory & Design <b>OR</b>	
ITSE 1345	Introduction to Oracle SQL	3
XXXX #3## <sup>1</sup>	Humanities/Fine Arts Elective	3

**Semester Total** **13**

#### Third Semester - Summer

XXXX #3## <sup>1</sup>	Social / Behavioral Sciences Elective	3
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**Semester Total** **3**

### SECOND YEAR

#### First Semester - Fall

ITSE 2402	Intermediate Web Programming	4
ITSE 2471	Mobile Application Programming I	4
XXXX #3## <sup>1</sup>	General Education Elective	3
XXXX #3## <sup>2</sup>	Program Approved Business Elective	3

**Semester Total** **14**

#### Second Semester - Spring

INEW 2434	Advanced Web Programming	4
ITSE 2453	Advanced C# Programming	4
ITSE 1380	Cooperative Education - Computer Programming/Programmer, General <b>OR</b>	
INEW 2332	Comprehensive Software Project: Coding, Testing, & Implementation (Capstone)	3
XXXX #3## <sup>3</sup>	Program Approved IT Elective	3

**Semester Total** **14**

**Total Minimum Credits for the AAS Degree** **60**

<sup>1</sup> A list of electives appears in the Core Curriculum section of this catalog.

<sup>2</sup> ACCT 2301, 2302; BMGT 1301, 1325; BUSG 1301, 2305; ECON 1301, 2301, 2302; HRPO 1311, 2307.

<sup>3</sup> COSC 2436; GISC 1411; INEW 2475; ITNW 1313; ITSE 2333, 2471; ITSY 1342.



# Workforce Degrees and Certificates 2020-2021

## COMPUTER PROGRAMMING - APPLICATIONS DEVELOPMENT - MICROSOFT C++ SPECIALIZATION

### Associate of Applied Science SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
ENGL 1301	Composition I	3
MATH 1314	College Algebra	3
BCIS 1305	Business Computer Applications	3
COSC 1436	Programming Fundamentals I (with C++)	4

**Semester Total** **16**

##### Second Semester - Spring

MATH 1324	Mathematics for Business & Social Sciences	3
COSC 1437	Programming Fundamentals II (with C++)	4
ITSE 1346	Database Theory & Design <b>OR</b>	
ITSE 1345	Introduction to Oracle SQL	3
XXXX #3## <sup>1</sup>	Social/Behavioral Sciences Elective	3

**Semester Total** **13**

##### Third Semester - Summer

XXXX #3## <sup>1</sup>	Humanities/Fine Arts Elective	3
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**Semester Total** **3**

#### SECOND YEAR

##### First Semester - Fall

ITSE 2402	Intermediate Web Programming	4
COSC 2425	Computer Organization & Machine Language	4
COSC 2436	Programming Fundamentals III (with C++)	4
XXXX #3## <sup>2</sup>	Program Approved Business Elective	3

**Semester Total** **15**

##### Second Semester - Spring

INEW 2434	Advanced Web Programming	4
ITSE 1380	Cooperative Education - Computer Programming/Programmer, General <b>OR</b>	
INEW 2332	Comprehensive Software Project: Coding, Testing, & Implementation (Capstone)	3
XXXX #3## <sup>1</sup>	General Education Elective	3
XXXX #3## <sup>3</sup>	Program Approved IT Elective	3

**Semester Total** **13**

**Total Minimum Credits for the AAS Degree** **60**

<sup>1</sup> A list of electives appears in the Core Curriculum section of this catalog.

<sup>2</sup> ACCT 2301, 2302; BMGT 1301, 1325; BUSG 1301, 2305; ECON 1301, 2301, 2302; HRPO 1311, 2307.

<sup>3</sup> COSC 2436; GISC 1411; INEW 2475; ITNW 1313; ITSE 2333, 2471; ITSY 1342.

# Workforce Degrees and Certificates 2020-2021

## COMPUTER PROGRAMMING - APPLICATIONS DEVELOPMENT - JAVA SPECIALIZATION

### Associate of Applied Science SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
ENGL 1301	Composition I	3
MATH 1314	College Algebra	3
BCIS 1305	Business Computer Applications	3
COSC 1436	Programming Fundamentals I (with Java)	4

**Semester Total** **16**

##### Second Semester - Spring

MATH 1324	Mathematics for Business & Social Sciences	3
COSC 1437	Programming Fundamentals II (with Java)	4
ITSE 1346	Database Theory & Design <b>OR</b>	
ITSE 1345	Introduction to Oracle SQL	3
XXXX #2## <sup>1</sup>	General Education Elective	2

**Semester Total** **12**

##### Third Semester - Summer

XXXX #3## <sup>1</sup>	Humanities/Fine Arts Elective	3
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**Semester Total** **3**

#### SECOND YEAR

##### First Semester - Fall

ITSE 2402	Intermediate Web Programming	4
COSC 2436	Programming Fundamentals III (with Java)	4
INEW 2438	Advanced Java Programming	4
XXXX #3## <sup>2</sup>	Program Approved Business Elective	3

**Semester Total** **15**

##### Second Semester - Spring

INEW 2434	Advanced Web Programming	4
XXXX #3## <sup>1</sup>	Social/Behavioral Sciences Elective	3
ITSE 1380	Cooperative Education - Computer Programming/Programmer, General <b>OR</b>	
INEW 2332	Comprehensive Software Project: Coding, Testing, & Implementation (Capstone)	3
XXXX #4## <sup>3</sup>	Program Approved IT Elective	4

**Semester Total** **14**

**Total Minimum Credits for the AAS Degree** **60**

<sup>1</sup> A list of electives appears in the Core Curriculum section of this catalog.

<sup>2</sup> ACCT 2301, 2302; BMGT 1301, 1325; BUSG 1301, 2305; ECON 1301, 2301, 2302; HRPO 1311, 2307.

<sup>3</sup> COSC 2436; GISC 1411; INEW 2475; ITNW 1313; ITSE 2333, 2471; ITSY 1342.

# Workforce Degrees and Certificates 2020-2021

## COMPUTER PROGRAMMING - DATABASE ADMINISTRATOR

### Certificate - Level 2

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
ITSC 1309	Integrated Software Applications I <b>OR</b>	
BCIS 1305	Business Computer Applications	3
COSC 1436	Programming Fundamentals I	4
MATH 1314	College Algebra	3
<b>Semester Total</b>		<b>13</b>

##### Second Semester - Spring

ITSC 1307	UNIX Operating System I <b>OR</b>	
ITMT 1358	Windows Client Operating System	3
ITSE 1345	Introduction to Oracle SQL	3
ITSE 1456	Extensible Markup Language (XML)	4
<b>Semester Total</b>		<b>10</b>

##### Third Semester - Summer

ITSE 2456	Oracle Database Administration I <b>OR</b>	
ITMT 2403	Administering a Microsoft SQL Server Database	4
<b>Semester Total</b>		<b>4</b>

#### SECOND YEAR

##### First Semester - Fall

ITSE 2458	Oracle Database Administration II <b>OR</b>	
ITSE 2333	Implementing a Database on Microsoft SQL Server (Capstone)	4
<b>Semester Total</b>		<b>4</b>

### Total Minimum Credits for the Level 2 Certificate

**31**

# Workforce Degrees and Certificates 2020-2021

## COMPUTER PROGRAMMING - MOBILE APPLICATION DEVELOPER

### Certificate - Level 2

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
ITSC 1309	Integrated Software Applications I <b>OR</b>	
BCIS 1305	Business Computer Applications	3
COSC 1436	Programming Fundamentals I	4
MATH 1314	College Algebra	3
<b>Semester Total</b>		<b>13</b>

##### Second Semester - Spring

ITSE 1346	Database Theory & Design <b>OR</b>	
ITSE 1345	Introduction to Oracle SQL	3
ITSE 2410	iOS Application Development	4
ITSE 1411	Beginning Web Programming	4
<b>Semester Total</b>		<b>11</b>

#### SECOND YEAR

##### First Semester - Fall

ITSE 2402	Intermediate Web Programming	4
ITSE 2472	Mobile Application Programming II (Capstone)	4
<b>Semester Total</b>		<b>8</b>

##### Total Minimum Credits for the Level 2 Certificate

**32**

# Workforce Degrees and Certificates 2020-2021

## COMPUTER PROGRAMMING - SHAREPOINT ADMINISTRATOR

### Certificate - Level 2

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
COSC 1436	Programming Fundamentals I	4
ITSC 1319	Internet/Web Page Development	3
MATH 1314	College Algebra	3
<b>Semester Total</b>		<b>13</b>

##### Second Semester - Spring

INEW 2475	SharePoint Administration I	4
ITSE 1346	Database Theory & Design <b>OR</b>	
ITSE 1345	Introduction to Oracle SQL	3
ITSE 2402	Intermediate Web Programming	4
<b>Semester Total</b>		<b>11</b>

#### SECOND YEAR

##### First Semester - Fall

INEW 1340	ASP.NET Programming	3
INEW 2476	SharePoint Administration II (Capstone)	4
<b>Semester Total</b>		<b>7</b>

### Total Minimum Credits for the Level 2 Certificate

**31**

# Workforce Degrees and Certificates 2020-2021

## COMPUTER PROGRAMMING - WEB APPLICATION DEVELOPER

### Certificate - Level 2

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
COSC 1436	Programming Fundamentals I	4
ITSC 1319	Internet/Web Page Development	3
MATH 1314	College Algebra	3
<b>Semester Total</b>		<b>13</b>

##### Second Semester - Spring

ITSE 2402	Intermediate Web Programming	4
COSC 1437	Programming Fundamentals II	4
ITSC 1309	Integrated Software Applications I <b>OR</b>	
BCIS 1305	Business Computer Applications	3
ITSC 1307	UNIX Operating System I <b>OR</b>	
ITMT 1358	Windows Client Operating System	3
<b>Semester Total</b>		<b>14</b>

#### SECOND YEAR

##### First Semester - Fall

ITSE 1346 <sup>1</sup>	Database Theory & Design (Capstone) <b>OR</b>	
ITSE 1345 <sup>1</sup>	Introduction to Oracle SQL	3
<b>Semester Total</b>		<b>3</b>

##### Total Minimum Credits for the Level 2 Certificate

**30**

<sup>1</sup>Choose one as the capstone ITSE 1346 or ITSE 1345

# Workforce Degrees and Certificates 2020-2021

## COMPUTER SYSTEMS NETWORKING

### COMPUTER SYSTEMS NETWORKING - CISCO SPECIALIZATION

#### Associate of Applied Science

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
ENGL 1301	Composition I	3
MATH 1314	College Algebra	3
ITSC 1309	Integrated Software Applications I <b>OR</b>	
BCIS 1305	Business Computer Applications	3
ITSC 1316	Linux Installation & Configuration <b>OR</b>	
ITSC 1307	UNIX Operating System I <b>OR</b>	
ITMT 1358	Windows Client Operating System	3

**Semester Total** **15**

##### Second Semester - Spring

ITSC 1319	Internet/Web Page Development	3
ITSC 1425	Personal Computer Hardware	4
ITCC 1414	CCNA 1: Introduction to Networks	4
ITSY 1342	Information Technology Security	3

**Semester Total** **14**

##### Third Semester - Summer

ITCC 1444	CCNA 2: Switching, Routing & Wireless Essentials	4
XXXX #3## <sup>1</sup>	Humanities/Fine Arts Elective	3

**Semester Total** **7**

#### SECOND YEAR

##### First Semester - Fall

XXXX #3## <sup>1</sup>	Social/Behavioral Sciences Elective	3
ITCC 2420	CCNA 3: Enterprise Networking, Security, and Automation	4
XXXX #3## <sup>1</sup>	General Education Elective	3
ITSC 1358	UNIX System Administration I	3

**Semester Total** **13**

##### Second Semester - Spring

ITCC 2441	CCNA Security	4
ITSY 2401	Firewalls & Network Security	4
ITNW 1380	Cooperative Education - Computer Systems Networking & Telecommunications <b>OR</b>	
ITNW 2335	Network Troubleshooting & Support (Capstone)	3

**Semester Total** **11**

**Total Minimum Credits for the AAS Degree** **60**

<sup>1</sup>A list of electives appears in the Core Curriculum section of this catalog.

# Workforce Degrees and Certificates 2020-2021

## COMPUTER SYSTEMS NETWORKING - CERTIFIED CISCO NETWORK PROFESSIONAL (CCNP)

Certificate - Level 1		SCH
<b>FIRST YEAR</b>		
<b>First Semester - Fall</b>		
ITCC 1414	CCNA 1: Introduction to Networks	4
<b>Semester Total</b>		<b>4</b>
<b>Second Semester - Spring</b>		
ITCC 1444	CCNA 2: Switching, Routing & Wireless Essentials	4
ITCC 2420	CCNA 3: Enterprise Networking, Security, and Automation	4
<b>Semester Total</b>		<b>8</b>
<b>Third Semester - Summer</b>		
ITSY 2401	Firewalls & Network Security	4
<b>Semester Total</b>		<b>4</b>
<b>SECOND YEAR</b>		
<b>First Semester - Fall</b>		
ITCC 2454	CCNP R&S ROUTE	4
ITCC 2455	CCNP R&S SWITCH	4
<b>Semester Total</b>		<b>8</b>
<b>Second Semester - Spring</b>		
ITCC 2456	CCNP R&S TSHOOT (Capstone)	4
ITSC 1307	UNIX Operating System I	3
<b>Semester Total</b>		<b>7</b>
<b>Total Minimum Credits for the Level 1 Certificate</b>		<b>31</b>



# Workforce Degrees and Certificates 2020-2021

## COMPUTER SYSTEMS NETWORKING - CERTIFIED CISCO NETWORK ASSOCIATE (CCNA)

### Certificate - Level 1 SCH

#### First Semester - Fall

ITCC 1414	CCNA 1: Introduction to Networks	4
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<b>Semester Total</b>		<b>4</b>
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#### Second Semester - Spring

ITCC 1444	CCNA 2: Switching, Routing & Wireless Essentials	4
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ITCC 2420	CCNA 3: Enterprise Networking, Security, and Automation	4
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<b>Semester Total</b>		<b>8</b>
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#### Third Semester - Summer

ITSY 2401	Firewalls & Network Security	4
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<b>Semester Total</b>		<b>4</b>
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<b>Total Minimum Credits for the Level 1 Certificate</b>		<b>16</b>
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# Workforce Degrees and Certificates 2020-2021

## COMPUTER SYSTEMS NETWORKING - CYBERSECURITY- SPECIALIZATION

### Associate of Applied Science

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
ENGL 1301	Composition I	3
MATH 1314	College Algebra	3
BCIS 1305	Business Computer Applications <b>OR</b>	
ITMT 1358	Windows Client Operating System	3
ITSC 1307	UNIX Operating System I	3
<b>Semester Total</b>		<b>15</b>

##### Second Semester - Spring

XXXX #3## <sup>1</sup>	Humanities/Fine Arts Elective	3
XXXX #3## <sup>1</sup>	Social/Behavioral Sciences Elective	3
ITNW 1425	Fundamentals of Networking Technologies <b>OR</b>	
ITCC 1414	CCNA 1: Introduction to Networks	4
ITSY 1342	Information Technology Security	3
COSC 1436	Programming Fundamentals I	4
<b>Semester Total</b>		<b>17</b>

##### Third Semester - Summer

ITMT 1357	Administering a Windows Server Operating System	3
<b>Semester Total</b>		<b>3</b>

#### SECOND YEAR

##### First Semester - Fall

XXXX #3## <sup>1</sup>	Social/Behavioral Sciences Elective	3
ITNW 1313	Computer Virtualization	3
ITSY 2330	Intrusion Detection	3
ITSY 2401	Firewalls & Network Security	4
<b>Semester Total</b>		<b>13</b>

##### Second Semester - Spring

ITSY 2443	Computer System Forensics	4
ITSY 1491	Special Topics in Information Technology/Security	4
ITSY 2472	Cybersecurity Challenge (Capstone)	4
<b>Semester Total</b>		<b>12</b>

##### Total Minimum Credits for the AAS Degree

**60**

<sup>1</sup>A list of electives appears in the Core Curriculum section of this catalog.

# Workforce Degrees and Certificates 2020-2021

## COMPUTER SYSTEMS NETWORKING - CYBERSECURITY- SPECIALIZATION

Certificate - Level 1		SCH
<b>First Semester - Fall</b>		
ITSC 1307	UNIX Operating System I	3
ITMT 1358	Windows Client Operating System	3
ITNW 1425	Fundamentals of Networking Technologies <b>OR</b>	
ITCC 1414	CCNA 1: Introduction to Networks	4
<b>Semester Total</b>		<b>10</b>
<b>Second Semester - Spring</b>		
ITSY 1342	Information Technology Security	3
ITSY 2330	Intrusion Detection (Capstone)	3
<b>Semester Total</b>		<b>6</b>
<b>Total Minimum Credits for the Level 1 Certificate</b>		<b>16</b>

# Workforce Degrees and Certificates 2020-2021

## COMPUTER SYSTEMS NETWORKING - CYBERSECURITY

### Certificate - Level 2

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
ITSC 1307	UNIX Operating System I	3
BCIS 1305	Business Computer Applications <b>OR</b>	
ITMT 1358	Windows Client Operating System	3
ITNW 1425	Fundamentals of Networking Technologies <b>OR</b>	
ITCC 1414	CCNA 1: Introduction to Networks	4
<b>Semester Total</b>		<b>13</b>

##### Second Semester - Spring

ITSY 1342	Information Technology Security	3
ITNW 1313	Computer Virtualization	3
<b>Semester Total</b>		<b>6</b>

#### SECOND YEAR

##### First Semester - Fall

ITSY 2401	Firewalls & Network Security	4
ITSY 2330	Intrusion Detection	3
ITSY 2443	Computer System Forensics	4
<b>Semester Total</b>		<b>11</b>

##### Second Semester - Spring

ITSY 1491	Special Topics in Information Technology/Security	4
ITSY 2472	Cybersecurity Challenge (Capstone)	4
<b>Semester Total</b>		<b>8</b>

**Total Minimum Credits for the Level 2 Certificate**

**38**

# Workforce Degrees and Certificates 2020-2021

## COMPUTER SYSTEMS NETWORKING - INFORMATION TECHNOLOGY CORE

### Certificate - Level 1

SCH

#### First Semester - Fall

ITSC 1301	Introduction to Computers	3
ITSC 1425	Personal Computer Hardware	4
ITMT 1358	Windows Client Operating System	3
ITSC 1307	UNIX Operating System I	3

#### **Semester Total**

**13**

#### Second Semester - Spring

ITNW 1425	Fundamentals of Networking Technologies	4
ITSE 1402	Computer Programming (Swift I)	4
ITSY 1342	Information Technology Security (Capstone)	3
ITNW 1313	Computer Virtualization	3

#### **Semester Total**

**14**

#### **Total Minimum Credits for the Level 1 Certificate**

**30**

# Workforce Degrees and Certificates 2020-2021

## COMPUTER SYSTEMS NETWORKING - LINUX SERVER ADMINISTRATOR SPECIALIZATION

### Associate of Applied Science

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
ENGL 1301	Composition I	3
MATH 1314	College Algebra	3
ITSC 1307	UNIX Operating System I	3
ITSC 1425	Personal Computer Hardware	4
<b>Semester Total</b>		<b>16</b>

##### Second Semester - Spring

ENGL 1302	Composition II	3
ITSC 1458	UNIX System Administration I	4
ITNW 1425	Fundamentals of Networking Technologies <b>OR</b>	
ITCC 1414	CCNA 1: Introduction to Networks	4
XXXX #3## <sup>1</sup>	Humanities/Fine Arts Elective	3
<b>Semester Total</b>		<b>14</b>

##### Third Semester - Summer

ITSC 1319	Internet/Web Page Development <b>OR</b>	
ITSC 1391	Special Topics in Computer and Information Sciences, General (Linux OS Red Hat)	3
XXXX #3## <sup>1</sup>	Humanities/Fine Arts Elective	3
<b>Semester Total</b>		<b>6</b>

#### SECOND YEAR

##### First Semester - Fall

ITSC 1447	UNIX System Administration II	4
ITNW 1313	Computer Virtualization	3
ITSY 1342	Information Technology Security	3
XXXX #3## <sup>1</sup>	Social/Behavioral Sciences Elective	3
<b>Semester Total</b>		<b>13</b>

##### Second Semester - Spring

ITSC 2425	Advanced Linux (Capstone)	4
ITSC 1491	Special Topics in Computer and Information Sciences, General	4
XXXX #3## <sup>2</sup>	Program Approved Business Elective	3
<b>Semester Total</b>		<b>11</b>

##### Total Minimum Credits for the AAS Degree

**60**

<sup>1</sup>A list of electives appears in the Core Curriculum section of this catalog.

<sup>2</sup>Consult with an advisor to select a Program Approved Business Elective.

# Workforce Degrees and Certificates 2020-2021

## COMPUTER SYSTEMS NETWORKING - LINUX SYSTEM ADMINISTRATION SPECIALIZATION

<b>Certificate - Level 1</b>		<b>SCH</b>
<b>First Semester - Fall</b>		
ITSC 1425	Personal Computer Hardware	4
ITSC 1307	UNIX Operating System I	3
ITNW 1425	Fundamentals of Networking Technologies <b>OR</b>	
ITCC 1414	CCNA 1: Introduction to Networks	4
<b>Semester Total</b>		<b>11</b>
<b>Second Semester - Spring</b>		
ITSC1319	Internet/Web Page Development <b>OR</b>	
ITSC 1391	Special Topics in Computer and Information Sciences, General (Linux OS Red Hat)	3
ITSC 1491	Special Topics in Computer and Information Sciences, General	4
ITSC 1458	UNIX System Administration I (Capstone)	4
<b>Semester Total</b>		<b>11</b>
<b>Total Minimum Credits for the Level 1 Certificate</b>		<b>22</b>

# Workforce Degrees and Certificates 2020-2021

## COMPUTER SYSTEMS NETWORKING - LINUX ADMINISTRATOR

### Certificate - Level 2

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
ITSC 1425	Personal Computer Hardware	4
ITSC 1307	UNIX Operating System I	3
ITNW 1425	Fundamentals of Networking Technologies <b>OR</b>	
ITCC 1414	CCNA 1: Introduction to Networks	4

##### Semester Total

14

##### Second Semester - Spring

ITSC 1458	UNIX System Administration I	4
ITSC 1319	Internet/Web Page Development <b>OR</b>	
ITSC 1391	Special Topics in Computer and Information Sciences, General (Linux OS Red Hat)	3

##### Semester Total

7

##### Third Semester - Summer

ITSC 1447	UNIX System Administration II	4
ITNW 1313	Computer Virtualization	3

##### Semester Total

7

#### SECOND YEAR

##### First Semester - Fall

ITSC 1491	Special Topics in Computer and Information Sciences, General	4
ITSC 2425	Advanced Linux (Capstone)	4

##### Semester Total

8

##### Total Minimum Credits for the Level 2 Certificate

36



# Workforce Degrees and Certificates 2020-2021

## COMPUTER SYSTEMS NETWORKING - MICROSOFT SERVER ADMINISTRATION SPECIALIZATION

### Associate of Applied Science SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
ITSC 1309	Integrated Software Applications I <b>OR</b>	
BCIS 1305	Business Computer Applications	3
MATH 1314	College Algebra	3
ITSC 1425	Personal Computer Hardware	4
ITMT 1358	Windows Client Operating System	3
<b>Semester Total</b>		<b>16</b>

##### Second Semester - Spring

ENGL 1301	Composition I	3
ITNW 1425	Fundamentals of Networking Technologies <b>OR</b>	
ITCC 1414	CCNA 1: Introduction to Networks	4
ITMT 1357	Administering a Windows Server Operating System	3
ITSY 1342	Information Technology Security	3
<b>Semester Total</b>		<b>13</b>

##### Third Semester - Summer

XXXX #3## <sup>1</sup>	General Education Elective	3
ITSC 1319	Internet/Web Page Development	3
<b>Semester Total</b>		<b>6</b>

#### SECOND YEAR

##### First Semester - Fall

ITNW 1313	Computer Virtualization	3
COSC 1436	Programming Fundamentals I	4
ITMT 2304	Implementing an Advanced Server Infrastructure	3
XXXX #3## <sup>1</sup>	Social/Behavioral Sciences Elective	3
<b>Semester Total</b>		<b>13</b>

##### Second Semester - Spring

ITMT 2305	Designing & Implementing a Server Infrastructure	3
ITSY 2330	Intrusion Detection	3
ITNW 1380	Cooperative Education - Computer Systems Networking & Telecommunications <b>OR</b>	
ITNW 2335	Network Troubleshooting & Support (Capstone)	3
XXXX #3## <sup>1</sup>	Humanities/Fine Arts Elective	3
<b>Semester Total</b>		<b>12</b>

**Total Minimum Credits for the AAS Degree 60**

<sup>1</sup>A list of electives appears in the Core Curriculum section of this catalog.

# Workforce Degrees and Certificates 2020-2021

## COMPUTER SYSTEMS NETWORKING - MICROSOFT SERVER ADMINISTRATION

Certificate - Level 1		SCH
<b>First Semester - Fall</b>		
ITMT 1358	Windows Client Operating System	3
ITSC 1309	Integrated Software Applications I <b>OR</b>	
BCIS 1305	Business Computer Applications	3
ITSC 1425	Personal Computer Hardware	4
<b>Semester Total</b>		<b>10</b>
<b>Second Semester - Spring</b>		
ITMT 1357	Administering a Windows Server Operating System (Capstone)	3
ITNW 1425	Fundamentals of Networking Technologies <b>OR</b>	
ITCC 1414	CCNA 1: Introduction to Networks	4
ITSY 1342	Information Technology Security	3
<b>Semester Total</b>		<b>10</b>
<b>Total Minimum Credits for the Level 1 Certificate</b>		<b>20</b>

# Workforce Degrees and Certificates 2020-2021

## COMPUTER SYSTEMS NETWORKING - MICROSOFT SERVER ADMINISTRATION

### Certificate - Level 2

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
ITSC 1309	Integrated Software Applications I <b>OR</b>	
BCIS 1305	Business Computer Applications	3
ITMT 1358	Windows Client Operating System	3
ITSC 1425	Personal Computer Hardware	4
<b>Semester Total</b>		<b>13</b>

##### Second Semester - Spring

ITMT 1357	Administering a Windows Server Operating System	3
ITNW 1425	Fundamentals of Networking Technologies <b>OR</b>	
ITCC 1414	CCNA 1: Introduction to Networks	4
ITSY 1342	Information Technology Security	3
<b>Semester Total</b>		<b>10</b>

##### Third Semester - Summer

ITSC 1319	Internet/Web Page Development	3
<b>Semester Total</b>		<b>3</b>

#### SECOND YEAR

##### First Semester - Fall

ITNW 1313	Computer Virtualization	3
ITSY 2330	Intrusion Detection	3
ITMT 2304	Implementing an Advanced Server Infrastructure (Capstone)	3
<b>Semester Total</b>		<b>9</b>

### Total Minimum Credits for the Level 2 Certificate

**35**

# Workforce Degrees and Certificates 2020-2021

## DIGITAL COMMUNICATION

### DIGITAL COMMUNICATION - GENERAL

#### Associate of Applied Science

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
ARTC 1325	Introduction to Computer Graphics	3
ARTC 1302	Digital Imaging I (Photoshop)	3
ARTC 1309	Basic Illustration	3
ARTC 1305	Basic Graphic Design	3
<b>Semester Total</b>		<b>15</b>

##### Second Semester - Spring

ARTC 1353	Computer Illustration (Illustrator)	3
PHTC 1311	Fundamentals of Photography	3
ARTC 1313	Digital Publishing I	3
IMED 1316	Web Design I	3
ARTV 1351	Digital Video	3
<b>Semester Total</b>		<b>15</b>

##### Third Semester - Summer

IMED 1341	Interface Design	3
XXXX #3## <sup>1</sup>	General Education Elective	3
<b>Semester Total</b>		<b>6</b>

#### SECOND YEAR

##### First Semester - Fall

IMED 2359	Interactive Web Elements	3
IMED 1359	Writing for Digital Media	3
ARTS 1303	Art History I	3
XXXX #3## <sup>1</sup>	Humanities/Fine Arts Elective	3
<b>Semester Total</b>		<b>12</b>

##### Second Semester - Spring

ARTV 1345	3-D Modeling & Rendering I	3
ARTC 2335	Portfolio Development for Graphic Design <b>OR</b>	
IMED 2313	Project Analysis & Design	3
XXXX #3## <sup>1</sup>	Math/Natural Science Elective	3
IMED 2388	Internship - Digital Communication & Media/Multimedia (Capstone)	3
<b>Semester Total</b>		<b>12</b>

#### Total Minimum Credits for the AAS Degree

**60**

<sup>1</sup>A list of electives appears in the Core Curriculum section of this catalog.

# Workforce Degrees and Certificates 2020-2021

## DIGITAL COMMUNICATION - GENERAL

### Certificate - Level 1

SCH

#### First Semester - Fall

ARTC 1325 Introduction to Computer Graphics 3

ARTC 1305 Basic Graphic Design 3

ARTC 1302 Digital Imaging I (Photoshop) 3

**Semester Total 9**

#### Second Semester - Spring

PHTC 1311 Fundamentals of Photography 3

IMED 1316 Web Design I (Capstone) 3

ARTV 1351 Digital Video 3

**Semester Total 9**

**Total Minimum Credits for the Level 1 Certificate 18**

# Workforce Degrees and Certificates 2020-2021

## DIGITAL COMMUNICATION - GENERAL

### Certificate - Level 2

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
ARTC 1325	Introduction to Computer Graphics	3
ARTC 1302	Digital Imaging I (Photoshop)	3
ARTC 1309	Basic Illustration	3
ARTC 1305	Basic Graphic Design	3
<b>Semester Total</b>		<b>15</b>

##### Second Semester - Spring

PHTC 1311	Fundamentals of Photography	3
ARTC 1353	Computer Illustration (Illustrator)	3
IMED 1316	Web Design I	3
<b>Semester Total</b>		<b>9</b>

#### SECOND YEAR

##### First Semester - Fall

IMED 1341	Interface Design	3
IMED 2359	Interactive Web Elements	3
ARTV 1351	Digital Video	3
<b>Semester Total</b>		<b>9</b>

##### Second Semester - Spring

IMED 1359	Writing for Digital Media	3
ARTV 1345	3-D Modeling & Rendering I	3
ARTC 1313	Digital Publishing I	3
ARTC 2335	Portfolio Development for Graphic Design <b>OR</b>	
IMED 2313	Project Analysis & Design (Capstone)	3
<b>Semester Total</b>		<b>12</b>

**Total Minimum Credits for the Level 2 Certificate**

**45**

# Workforce Degrees and Certificates 2020-2021

## DIGITAL COMMUNICATION - XR DESIGN & DEVELOPMENT SPECIALIZATION

### Associate of Applied Science

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
ARTC 1302	Digital Imaging I (Photoshop)	3
ARTC 1305	Basic Graphic Design	3
IMED 1345	Interactive Digital Media I (Virtual Reality -Introduction)	3
<b>Semester Total</b>		<b>12</b>

##### Second Semester - Spring

ARTV 1351	Digital Video	3
IMED 1341	Interface Design	3
IMED 2345	Interactive Digital Media II (Virtual Reality - Intermediate)	3
ARTV 1345	3-D Modeling & Rendering I	3
ARTC 1353	Computer Illustration (Illustrator)	3
<b>Semester Total</b>		<b>15</b>

##### Third Semester - Summer

XXXX #3## <sup>1</sup>	Math/Natural Science Elective	3
IMED 1359	Writing for Digital Media	3
<b>Semester Total</b>		<b>6</b>

#### SECOND YEAR

##### First Semester - Fall

ARTS 1303	Art History I	3
ARTV 2341	Advanced Digital Video	3
ARTV 2345	3-D Modeling & Rendering II	3
ARTV 2301	2-D Animation I	3
ITXR 2375	Advanced XR Design	3
<b>Semester Total</b>		<b>15</b>

##### Second Semester - Spring

XXXX #3## <sup>1</sup>	General Education Elective	3
XXXX #3## <sup>1</sup>	General Education Elective	3
IMED 2313	Project Analysis & Design (Assessment)	3
IMED 2388	Internship - Digital Communication & Media/Multimedia (Capstone)	3
<b>Semester Total</b>		<b>12</b>

##### Total Minimum Credits for the AAS Degree

**60**

<sup>1</sup>A list of electives appears in the Core Curriculum section of this catalog.

# Workforce Degrees and Certificates 2020-2021

## DIGITAL COMMUNICATION - XR DESIGN & DEVELOPMENT SPECIALIZATION

### Certificate - Level 1

SCH

#### First Semester - Fall

ARTC 1302	Digital Imaging I (Photoshop)	3
ARTC 1305	Basic Graphic Design	3
ARTV 1351	Digital Video	3
<b>Semester Total</b>		<b>9</b>

#### Second Semester - Spring

IMED 1341	Interface Design	3
ARTV 1345	3-D Modeling & Rendering I	3
IMED 1345	Interactive Digital Media I (Virtual Reality -Introduction) (Capstone)	3
<b>Semester Total</b>		<b>9</b>

#### Total Minimum Credits for the Level 1 Certificate

18



# Workforce Degrees and Certificates 2020-2021

## DIGITAL COMMUNICATION - XR DESIGN & DEVELOPMENT SPECIALIZATION

### Certificate - Level 2

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
IMED 1345	Interactive Digital Media I (Virtual Reality -Introduction)	3
ARTV 1345	3-D Modeling & Rendering I	3
ARTC 1302	Digital Imaging I (Photoshop)	3
<b>Semester Total</b>		<b>12</b>

##### Second Semester - Spring

ARTC 1305	Basic Graphic Design	3
IMED 2345	Interactive Digital Media II (Virtual Reality - Intermediate)	3
ARTC 1353	Computer Illustration (Illustrator)	3
ARTV 2345	3-D Modeling & Rendering II	3
<b>Semester Total</b>		<b>12</b>

#### SECOND YEAR

##### First Semester - Fall

ITXR 2375	Advanced XR Design	3
ARTV 1351	Digital Video	3
IMED 1341	Interface Design	3
IMED 1359	Writing for Digital Media	3
<b>Semester Total</b>		<b>12</b>

##### Second Semester - Spring

ARTV 2301	2-D Animation I	3
ARTV 2341	Advanced Digital Video	3
IMED 2313	Project Analysis & Design (Capstone)	3
<b>Semester Total</b>		<b>9</b>

### Total Minimum Credits for the Level 2 Certificate

45

*\* TSI testing is required prior to first enrollment*

# Workforce Degrees and Certificates 2020-2021

## DIGITAL COMMUNICATION - DIGITAL PHOTOGRAPHY SPECIALIZATION

### Associate of Applied Science

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
PHTC 1343	Expressive Photography	3
PHTC 1371	Adobe Photoshop Lightroom CC	3
ARTC 1302	Digital Imaging I (Photoshop)	3
PHTC 1311	Fundamentals of Photography	3
<b>Semester Total</b>		<b>15</b>

##### Second Semester - Spring

PHTC 2349	Photo Digital Imaging II	3
IMED 1359	Writing for Digital Media	3
ARTC 1305	Basic Graphic Design	3
PHTC 1353	Portraiture I	3
<b>Semester Total</b>		<b>12</b>

##### Third Semester - Summer

XXXX #3## <sup>1</sup>	Humanities/Fine Arts Elective	3
ARTV 1351	Digital Video	3
ARTS 1303	Art History I	3
<b>Semester Total</b>		<b>9</b>

#### SECOND YEAR

##### First Semester - Fall

PHTC 1345	Illustrative Photography I	3
PHTC 1351	Photojournalism I	3
PHTC 2353	Portraiture II	3
XXXX #3## <sup>1</sup>	General Education Elective	3
<b>Semester Total</b>		<b>12</b>

##### Second Semester - Spring

XXXX #3## <sup>1</sup>	Math/Natural Science Elective	3
PHTC 2340	Photographic Studio Management	3
IMED 2388	Internship - Digital Communication & Media/Multimedia (Capstone)	3
PHTC 2343	Portfolio Development	3
<b>Semester Total</b>		<b>12</b>

##### Total Minimum Credits for the AAS Degree

**60**

<sup>1</sup>A list of electives appears in the Core Curriculum section of this catalog.

# Workforce Degrees and Certificates 2020-2021

## DIGITAL COMMUNICATION - DIGITAL PHOTOGRAPHY SPECIALIZATION

Certificate - Level 1		SCH
<b>First Semester - Fall</b>		
ARTC 1302	Digital Imaging I (Photoshop)	3
ARTC 1305	Basic Graphic Design	3
PHTC 1311	Fundamentals of Photography	3
<b>Semester Total</b>		<b>9</b>
<b>Second Semester - Spring</b>		
IMED 1359	Writing for Digital Media	3
PHTC 1353	Portraiture I	3
PHTC 1343	Expressive Photography (Capstone)	3
<b>Semester Total</b>		<b>9</b>
<b>Total Minimum Credits for the Level 1 Certificate</b>		<b>18</b>

# Workforce Degrees and Certificates 2020-2021

## DIGITAL COMMUNICATION - DIGITAL PHOTOGRAPHY SPECIALIZATION

### Certificate - Level 2

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
PHTC 1371	Adobe Photoshop Lightroom CC	3
PHTC 1311	Fundamentals of Photography	3
PHTC 1343	Expressive Photography	3
ARTC 1302	Digital Imaging I (Photoshop)	3
<b>Semester Total</b>		<b>15</b>

##### Second Semester - Spring

PHTC 2349	Photo Digital Imaging II	3
IMED 1359	Writing for Digital Media	3
ARTC 1305	Basic Graphic Design	3
PHTC 1353	Portraiture I	3
<b>Semester Total</b>		<b>12</b>

#### SECOND YEAR

##### First Semester - Fall

PHTC 1351	Photojournalism I	3
PHTC 1345	Illustrative Photography I	3
ARTV 1351	Digital Video	3
PHTC 2353	Portraiture II	3
<b>Semester Total</b>		<b>12</b>

##### Second Semester - Spring

PHTC 2343	Portfolio Development	3
PHTC 2340	Photographic Studio Management (Capstone)	3
<b>Semester Total</b>		<b>6</b>

**Total Minimum Credits for the Level 2 Certificate** **45**

# Workforce Degrees and Certificates 2020-2021

## DIGITAL COMMUNICATION - GRAPHIC DESIGN SPECIALIZATION

### Associate of Applied Science

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
ARTC 2311	History of Communication Graphics	3
ARTC 1302	Digital Imaging I (Photoshop)	3
ARTC 1309	Basic Illustration	3
ARTC 1305	Basic Graphic Design	3
<b>Semester Total</b>		<b>15</b>

##### Second Semester - Spring

ARTC 1313	Digital Publishing I	3
ARTC 1321	Illustration Techniques I	3
ARTC 1353	Computer Illustration (Illustrator)	3
XXXX #3## <sup>1</sup>	Humanities/Fine Arts Elective	3
<b>Semester Total</b>		<b>12</b>

##### Third Semester - Summer

XXXX #3## <sup>1</sup>	Math/Natural Science Elective	3
XXXX #3## <sup>1</sup>	Social/Behavioral Sciences Elective	3
<b>Semester Total</b>		<b>6</b>

#### SECOND YEAR

##### First Semester - Fall

ARTC 1317	Design Communication I	3
ARTC 2313	Digital Publishing II	3
ARTC 2305	Digital Imaging II	3
ARTC 2317	Typographic Design	3
<b>Semester Total</b>		<b>12</b>

##### Second Semester - Spring

XXXX #3## <sup>1</sup>	General Education Elective	3
ARTC 2347	Design Communication II	3
ARTC 2335	Portfolio Development for Graphic Design	3
IMED 1316	Web Design I	3
<b>Semester Total</b>		<b>12</b>

##### Third Semester - Summer

IMED 2388	Internship - Digital Communication & Media/Multimedia (Capstone)	3
<b>Semester Total</b>		<b>3</b>

**Total Minimum Credits for the AAS Degree** **60**

<sup>1</sup>A list of electives appears in the Core Curriculum section of this catalog.

# Workforce Degrees and Certificates 2020-2021

## DIGITAL COMMUNICATION - GRAPHIC DESIGN SPECIALIZATION

Certificate - Level 1		SCH
<b>First Semester - Fall</b>		
ARTC 1302	Digital Imaging I (Photoshop)	3
ARTC 1305	Basic Graphic Design	3
ARTC 1309	Basic Illustration	3
<b>Semester Total</b>		<b>9</b>
<b>Second Semester - Spring</b>		
IMED 1316	Web Design I	3
ARTC 1353	Computer Illustration (Illustrator)	3
ARTC 1313	Digital Publishing I (Capstone)	3
<b>Semester Total</b>		<b>9</b>
<b>Total Minimum Credits for the Level 1 Certificate</b>		<b>18</b>

# Workforce Degrees and Certificates 2020-2021

## DIGITAL COMMUNICATION - GRAPHIC DESIGN SPECIALIZATION

### Certificate - Level 2

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
ARTC 1305	Basic Graphic Design	3
ARTC 2311	History of Communication Graphics	3
ARTC 1302	Digital Imaging I (Photoshop)	3
ARTC 1309	Basic Illustration	3
<b>Semester Total</b>		<b>15</b>

##### Second Semester - Spring

ARTC 1321	Illustration Techniques I	3
ARTC 1353	Computer Illustration (Illustrator)	3
ARTC 1317	Design Communication I	3
ARTC 1313	Digital Publishing I	3
<b>Semester Total</b>		<b>12</b>

#### SECOND YEAR

##### First Semester - Fall

ARTC 2313	Digital Publishing II	3
ARTC 2305	Digital Imaging II	3
IMED 1316	Web Design I	3
ARTC 2317	Typographic Design	3
<b>Semester Total</b>		<b>12</b>

##### Second Semester - Spring

ARTC 2347	Design Communication II	3
ARTC 2335	Portfolio Development for Graphic Design (Capstone)	3
<b>Semester Total</b>		<b>6</b>

**Total Minimum Credits for the Level 2 Certificate** **45**

# Workforce Degrees and Certificates 2020-2021

## DIGITAL COMMUNICATION - MOBILE APPLICATION

### Certificate - Level 1

SCH

#### First Semester - Fall

ARTC 1325	Introduction to Computer Graphics	3
IMED 1316	Web Design I	3
IMED 1341	Interface Design	3
<b>Semester Total</b>		<b>9</b>

#### Second Semester - Spring

IMED 2351	Digital Media Programming	3
IMED 2359	Interactive Web Elements	3
IMED 2345	Interactive Digital Media II (Capstone)	3
<b>Semester Total</b>		<b>9</b>

**Total Minimum Credits for the Level 1 Certificate** **18**



# Workforce Degrees and Certificates 2020-2021

## DIGITAL COMMUNICATION - VISUAL EFFECTS & MOTION GRAPHICS SPECIALIZATION

Associate of Applied Science

SCH

### FIRST YEAR

#### First Semester - Fall

EDUC 1300	Learning Framework	3
ARTC 1302	Digital Imaging I (Photoshop)	3
ARTV 1303	Basic Animation	3
ARTC 1309	Basic Illustration	3
ARTV 1345	3-D Modeling & Rendering I	3
<b>Semester Total</b>		<b>15</b>

#### Second Semester - Spring

XXXX #3## <sup>1</sup>	Math/Natural Science Elective	3
ARTV 2301	2-D Animation I	3
ARTV 2345	3-D Modeling & Rendering II	3
ARTV 1351	Digital Video	3
ARTC 1353	Computer Illustration (Illustrator)	3
<b>Semester Total</b>		<b>15</b>

#### Third Semester - Summer

ARTS 1303	Art History I	3
XXXX #3## <sup>1</sup>	Social/Behavioral Sciences Elective	3
<b>Semester Total</b>		<b>6</b>

### SECOND YEAR

#### First Semester - Fall

ARTV 2355	Character Rigging & Animation	3
ARTV 2330	2-D Animation II	3
ARTC 1359	Visual Design For New Media	3
ARTV 2341	Advanced Digital Video	3
XXXX #3## <sup>1</sup>	General Education Elective	3
<b>Semester Total</b>		<b>15</b>

#### Second Semester - Spring

XXXX #3## <sup>1</sup>	Humanities/Fine Arts Elective	3
ARTV 2335	Portfolio Development for Animation	3
IMED 2388	Internship-Digital Communication & Media/Multimedia (Capstone)	3
<b>Semester Total</b>		<b>9</b>

**Total Minimum Credits for the AAS Degree**

**60**

<sup>1</sup>A list of electives appears in the Core Curriculum section of this catalog.

# Workforce Degrees and Certificates 2020-2021

## DIGITAL COMMUNICATION - VISUAL EFFECTS & MOTION GRAPHICS SPECIALIZATION

### Certificate - Level 1

SCH

#### FIRST YEAR

##### First Semester - Fall

ARTC 1302	Digital Imaging I (Photoshop)	3
ARTV 1303	Basic Animation	3
ARTC 1309	Basic Illustration	3
<b>Semester Total</b>		<b>9</b>

##### Second Semester - Spring

ARTV 1345	3-D Modeling & Rendering I	3
ARTC 1305	Basic Graphic Design	3
ARTV 2301	2-D Animation I (Capstone)	3
<b>Semester Total</b>		<b>9</b>

**Total Minimum Credits for the Level 1 Certificate** **18**

# Workforce Degrees and Certificates 2020-2021

## DIGITAL COMMUNICATION - VISUAL EFFECTS & MOTION GRAPHICS SPECIALIZATION

### Certificate - Level 2

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
ARTC 1302	Digital Imaging I (Photoshop)	3
ARTV 1303	Basic Animation	3
ARTC 1309	Basic Illustration	3
ARTV 1345	3-D Modeling & Rendering I	3
<b>Semester Total</b>		<b>15</b>

##### Second Semester - Spring

ARTV 2345	3-D Modeling & Rendering II	3
ARTV 1351	Digital Video	3
ARTC 1353	Computer Illustration (Illustrator)	3
ARTC 1305	Basic Graphic Design	3
ARTV 2301	2-D Animation I	3
<b>Semester Total</b>		<b>15</b>

#### SECOND YEAR

##### First Semester - Fall

ARTV 2330	2-D Animation II	3
ARTV 2355	Character Rigging & Animation	3
ARTC 1359	Visual Design For New Media	3
ARTV 2341	Advanced Digital Video	3
<b>Semester Total</b>		<b>12</b>

##### Second Semester - Spring

ARTV 2335	Portfolio Development for Animation (Capstone)	3
<b>Semester Total</b>		<b>3</b>

**Total Minimum Credits for the AAS Degree** **45**

<sup>1</sup>A list of electives appears in the Core Curriculum section of this catalog.

# Workforce Degrees and Certificates 2020-2021

## DIGITAL COMMUNICATION - WEB PUBLISHING SPECIALIZATION

### Associate of Applied Science

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
ARTC 1325	Introduction to Computer Graphics	3
ARTC 1305	Basic Graphic Design	3
IMED 1316	Web Design I	3
ARTC 1302	Digital Imaging I (Photoshop)	3
<b>Semester Total</b>		<b>15</b>

##### Second Semester - Spring

XXXX #3## <sup>1</sup>	General Education Elective	3
IMED 2351	Digital Media Programming	3
IMED 1341	Interface Design	3
IMED 2315	Web Design II	3
<b>Semester Total</b>		<b>12</b>

##### Third Semester - Summer

IMED 2359	Interactive Web Elements	3
XXXX #3## <sup>1</sup>	Social/Behavioral Sciences Elective	3
XXXX #3## <sup>1</sup>	Math/Natural Science Elective	3
<b>Semester Total</b>		<b>9</b>

#### SECOND YEAR

##### First Semester - Fall

IMED 1359	Writing for Digital Media	3
IMED 2309	Internet Commerce	3
ARTV 1351	Digital Video	3
ARTS 1303	Art History I	3
<b>Semester Total</b>		<b>12</b>

##### Second Semester - Spring

IMED 2371	Content Management Systems	3
IMED 2313	Project Analysis & Design	3
XXXX #3## <sup>1</sup>	Approved Program Elective	3
IMED 2388	Internship-Digital Communication & Media/Multimedia (Capstone)	3
<b>Semester Total</b>		<b>12</b>

##### Total Minimum Credits for the AAS Degree

**60**

<sup>1</sup>A list of electives appears in the Core Curriculum section of this catalog.

# Workforce Degrees and Certificates 2020-2021

## DIGITAL COMMUNICATION - WEB PUBLISHING SPECIALIZATION

Certificate - Level 1		SCH
<b>First Semester - Fall</b>		
ARTC 1325	Introduction to Computer Graphics	3
ARTC 1305	Basic Graphic Design	3
IMED 1341	Interface Design	3
IMED 1316	Web Design I	3
<b>Semester Total</b>		<b>12</b>
<b>Second Semester - Spring</b>		
ARTC 1302	Digital Imaging I (Photoshop)	3
IMED 2359	Interactive Web Elements (Capstone)	3
<b>Semester Total</b>		<b>6</b>
<b>Total Minimum Credits for the Level 1 Certificate</b>		<b>18</b>

# Workforce Degrees and Certificates 2020-2021

## DIGITAL COMMUNICATION - WEB PUBLISHING SPECIALIZATION

### Certificate - Level 2

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
ARTC 1325	Introduction to Computer Graphics	3
ARTC 1305	Basic Graphic Design	3
IMED 1316	Web Design I	3
ARTC 1302	Digital Imaging I (Photoshop)	3
<b>Semester Total</b>		<b>15</b>

##### Second Semester - Spring

IMED 1341	Interface Design	3
IMED 2351	Digital Media Programming	3
IMED 2315	Web Design II	3
<b>Semester Total</b>		<b>9</b>

#### SECOND YEAR

##### First Semester - Fall

IMED 2359	Interactive Web Elements	3
ARTV 1351	Digital Video	3
IMED 2309	Internet Commerce	3
<b>Semester Total</b>		<b>9</b>

##### Second Semester - Spring

IMED 2371	Content Management Systems	3
IMED 1359	Writing for Digital Media	3
IMED 2313	Project Analysis & Design (Capstone)	3
<b>Semester Total</b>		<b>9</b>

**Total Minimum Credits for the Level 2 Certificate** **42**

# Workforce Degrees and Certificates 2020-2021

## DIGITAL GAMING

### DIGITAL GAMING & SIMULATION FOR ARTISTS

#### Associate of Applied Science

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
GAME 1378	Art for 2D Games	3
GAME 1306	Design & Creation of Games	3
GAME 1373	Introduction to Perspective Drawing	3
GAME 1336	Introduction to 3D Game Modeling	3
<b>Semester Total</b>		<b>15</b>

##### Second Semester - Spring

ARTS 1303	Art History I <b>OR</b>	
ARTS 1304	Art History II (14th century to present)	3
GAME 1375	Principles of Game Concept Art	3
GAME 2312	Interactive Audio <b>OR</b>	
GAME 2341	Game Scripting	3
GAME 1304	Level Design	3
GAME 2376	Advanced 3D Game Modeling	3
<b>Semester Total</b>		<b>15</b>

##### Third Semester - Summer

XXXX #3## <sup>1</sup>	Social/Behavioral Sciences Elective	3
XXXX #3## <sup>1</sup>	Math/Natural Science Elective	3
<b>Semester Total</b>		<b>6</b>

#### SECOND YEAR

##### First Semester - Fall

GAME 1314	Character Sculpting	3
GAME 2304	Level Design II	3
GAME 2332	Project Development I	3
GAME 1374	Introduction to 3D Game Animation	3
<b>Semester Total</b>		<b>12</b>

##### Second Semester - Spring

GAME 2374	3D Rigging for Games & Simulations	3
PSYC 2301	General Psychology	3
GAME 2308	Portfolio for Game Development	3
GAME 2334	Project Development II (Capstone)	3
<b>Semester Total</b>		<b>12</b>

#### Total Minimum Credits for the AAS Degree

**60**

<sup>1</sup>A list of electives appears in the Core Curriculum section of this catalog.

# Workforce Degrees and Certificates 2020-2021

## DIGITAL GAMING & SIMULATION FOR ARTISTS

### Certificate - Level 2

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
GAME 1378	Art for 2D Games	3
GAME 1306	Design & Creation of Games	3
GAME 1373	Introduction to Perspective Drawing	3
GAME 1336	Introduction to 3D Game Modeling	3
<b>Semester Total</b>		<b>15</b>

##### Second Semester - Spring

ARTS 1303	Art History I <b>OR</b>	
ARTS 1304	Art History II (14th century to present)	3
GAME 1375	Principles of Game Concept Art	3
GAME 2312	Interactive Audio <b>OR</b>	
GAME 2341	Game Scripting	3
GAME 1304	Level Design	3
GAME 2376	Advanced 3D Game Modeling	3
<b>Semester Total</b>		<b>15</b>

#### SECOND YEAR

##### First Semester - Fall

GAME 1314	Character Sculpting	3
GAME 2304	Level Design II	3
GAME 1374	Introduction to 3D Game Animation	3
GAME 2332	Project Development I (Capstone)	3
<b>Semester Total</b>		<b>12</b>

##### Total Minimum Credits for the Level 2 Certificate

**42**



# Workforce Degrees and Certificates 2020-2021

## DIGITAL GAMING & SIMULATION FOR PROGRAMMERS

### Associate of Applied Science

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
GAME 1306	Design & Creation of Games	3
GAME 1379	Introduction to Game Programming	3
GAME 2341	Game Scripting	3
MATH 1314	College Algebra	3
<b>Semester Total</b>		<b>15</b>

##### Second Semester - Spring

GAME 2373	2D Game Programming	3
GAME 2312	Interactive Audio	3
GAME 1336	Introduction to 3D Game Modeling	3
GAME 2347	Advanced Game Programming	3
GAME 2302	Mathematical Applications for Game Development	3
<b>Semester Total</b>		<b>15</b>

##### Third Semester - Summer

XXXX #3## <sup>1</sup>	Social/Behavioral Sciences Elective	3
XXXX #3## <sup>1</sup>	Humanities/Fine Arts Elective	3
<b>Semester Total</b>		<b>6</b>

#### SECOND YEAR

##### First Semester - Fall

GAME 2319	Game Engine	3
GAME 2304	Level Design II	3
GAME 2342	Game Development Using C++	3
GAME 2332	Project Development I	3
<b>Semester Total</b>		<b>12</b>

##### Second Semester - Spring

PSYC 2301	General Psychology	3
GAME 2379	Motion Capture	3
GAME 2308	Portfolio for Game Development	3
GAME 2334	Project Development II (Capstone)	3
<b>Semester Total</b>		<b>12</b>

##### Total Minimum Credits for the AAS Degree

**60**

<sup>1</sup>A list of electives appears in the Core Curriculum section of this catalog.

# Workforce Degrees and Certificates 2020-2021

## DIGITAL GAMING & SIMULATION FOR PROGRAMMERS

### Certificate - Level 2

SCH

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
GAME 1306	Design & Creation of Games	3
GAME 1379	Introduction to Game Programming	3
GAME 2341	Game Scripting	3
MATH 1314	College Algebra	3
<b>Semester Total</b>		<b>15</b>

##### Second Semester - Spring

GAME 2312	Interactive Audio	3
GAME 1336	Introduction to 3D Game Modeling	3
GAME 2373	2D Game Programming	3
GAME 2347	Advanced Game Programming	3
GAME 2302	Mathematical Applications for Game Development	3
<b>Semester Total</b>		<b>15</b>

#### SECOND YEAR

##### First Semester - Fall

GAME 2319	Game Engine	3
GAME 1304	Level Design	3
GAME 2342	Game Development Using C++	3
GAME 2332	Project Development I (Capstone)	3
<b>Semester Total</b>		<b>12</b>

**Total Minimum Credits for the Level 2 Certificate**

**42**