



THE UNIVERSITY OF ARIZONA  
Yuma

# WESTERN CATS

## Applied Computing: Network Operations Emphasis

2021—2022

### ARIZONA WESTERN COLLEGE COURSES

| Semester One |  |       |
|--------------|--|-------|
| Course       | Title  | Units |
| MAT 151      | College Algebra                              | 4     |
| ENG 101      | Freshman English                             | 3     |
| CIS 105      | Introduction to Business Information Systems | 3     |
| CIS 175      | Computer Security                            | 3     |
| Total        |  | 13    |

| Semester Two                                  |  |       |
|---|--|-------|
| Course  | Title  | Units |
| ENG 102                                       | Freshman English                                   | 3     |
| ECN 240 or<br>ECN 250                         | Intro to Macroeconomics or Intro to Microeconomics | 3     |
| CIS 170                                       | Microcomputer Installation and Support             | 3     |
| CIS 260                                       | Introduction to Operating Systems                  | 3     |
| Physical/Biological Sciences (AGEC) - Ex. CHM |  | 4     |
| Total   |  | 16    |

| Semester Three                  |                         |       |
|---------------------------------|-------------------------|-------|
| Course                          | Title                   | Units |
| CIS 270                         | Networking Fundamentals | 3     |
| CSC 127A                        | Programming I (Java)    | 4     |
| Additional Courses (AGEC)       |                         | 3     |
| Arts (AGEC) Ex. MUS 120         |                         | 3     |
| Humanities (AGEC) - Ex. PHI 101 |                         | 3     |
| Total                           |                         | 16    |

### ARIZONA WESTERN COLLEGE COURSES

| Semester Four                                     |  |       |
|---|--|-------|
| Course  | Title  | Units |
| CIS 180 or<br>EGR 123                             | Computer Programming Logic or Introduction to Structured Programming | 3     |
| CIS 271   | Network Administration   | 3     |
| ECN 240 or  | Intro to Macroeconomics or Intro to                                  | 3     |
| Focus Area  |  | 3/4   |
| Physical or Biological Science (AGEC) Ex. PHY 111 |  | 4     |
| Total   |  | 16/17 |

| Semester Five             |                             |       |
|---------------------------|-----------------------------|-------|
| Course                    | Title                       | Units |
| CSC 210                   | Human Computer Interaction  | 4     |
| CIS 272                   | Network Routing & Switching | 3     |
| Additional Courses (AGEC) |                             | 3     |
| Focus Area                |                             | 3/4   |
| Focus Area                |                             | 3/4   |
| Total                     |                             | 16/18 |

|                                    |       |  |
|------------------------------------|-------|--|
| Total AGEC Credits                 | 36+   |  |
| Total Required Major Credits       | 32    |  |
| INFORMATICS AREAS OF FOCUS CREDITS | 9-11  |  |
| TOTAL CREDITS                      | 77-79 |  |



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### ARIZONA WESTERN COLLEGE COURSES

| FOCUS AREAS COURSES<br>SYSTEMS ADMINISTRATION |                                     |       |
|---|-------------------------------------|-------|
| Course  | Title                               | Units |
| CIS 231                                       | Database Design and Programming     | 3     |
| CIS 151                                       | Web Design                          | 3     |
| CIS 295                                       | Structured System Analysis & Design | 3     |
| Total   |                                     | 9     |

| FOCUS AREAS COURSES<br>CYBER OPERATIONS |                                 |       |
|---|---------------------------------|-------|
| Course                                  | Title                           | Units |
| CIS 275                                 | Fundamental of Network Security | 3     |
| CSC 127B                                | Computer Programming 2          | 4     |
| MAT 227                                 | Discrete Math                   | 3     |
| Total                                   |                                 | 10    |

**NOTE:** This is the advised sequence course for the A.A.S. in Informatics. The official degree requirements can be found in AWC's catalog.

### ARIZONA WESTERN COLLEGE COURSES

| FOCUS AREAS COURSES<br>DIGITAL DESIGN |                                 |       |
|---------------------------------------|---------------------------------|-------|
| Course                                | Title                           | Units |
| CIS 231                               | Database Design and Programming | 3     |
| GRA 101                               | Intro to Graphic Communication  | 4     |
| GRA 104                               | Digital Imaging I               | 4     |
| Total                                 |                                 | 11    |

| FOCUS AREAS COURSES<br>SOFTWARE DEVELOPMENT<br>INFORMATION MANAGEMENT |                         |       |
|---|-------------------------|-------|
| Course  | Title                   | Units |
| CSC 127B  | Computer Programming 2  | 4     |
| CSC 215   | Artificial Intelligence | 4     |
| CSC 252   | Computer Organization   | 3     |
| Total   |                         | 11    |

|                                    |       |  |
|------------------------------------|-------|--|
| Total AGECE Credits                | 36+   |  |
| Total Required Major Credits       | 32    |  |
| INFORMATICS AREAS OF FOCUS CREDITS | 9-11  |  |
| TOTAL CREDITS                      | 77-79 |  |



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### UNIVERSITY OF ARIZONA COURSES STARTING IN FALL

| Semester One |                                   |       |
|--------------|-----------------------------------|-------|
| Course       | Title                             | Units |
| APCV 302     | Statistics in the Information Age | 3     |
| APCV 320     | Computational Thinking and Doing  | 3     |
| CYBV 329     | Cyber Ethics                      | 3     |
| ENGV 306     | Advanced Composition              | 3     |
| Total        |                                   | 12    |

| Semester Two |  |       |
|--------------|--|-------|
| Course       | Title                                    | Units |
| CYBV 326     | Introductory Methods of Network Analysis | 3     |
| CYBV 301     | Fundamentals of Cyber Security           | 3     |
| APCV 310     | Introduction to Computing                | 3     |
| NETV 371     | Network Security Principles              | 3     |
| Total        |  | 12    |

**NOTE:** This is the advised sequence course for the B.A.S. in Applied Computing. The official degree requirements can be found in The University of Arizona catalog.

**IMPORTANT:** SIE 295. Introduction to UA, APCV 391. Preceptorship, APCV 393. Internship and APCV 499. Independent Study are highly recommended.

Second semester proficiency required in a second language for BAS degree. Can be fulfilled with 101 and 102 courses at AWC or CLEP exam.

### UNIVERSITY OF ARIZONA COURSES STARTING IN FALL

| Semester Three |  |       |
|----------------|--|-------|
| Course         | Title                                      | Units |
| NETV 370       | Intro to Network Design and Architecture   | 3     |
| NETV 379       | Cloud Computing                            | 3     |
| APCV 401       | Introduction to Human-Computer Interaction | 3     |
| Total          |  | 9     |

| Semester Four |                                       |       |
|---------------|---------------------------------------|-------|
| Course        | Title                                 | Units |
| NETV 378*     | System Administration                 | 3     |
| NETV 375      | Advanced Routing and WAN Technologies | 3     |
| APCV 498      | Senior Capstone                       | 3     |
| Total         |                                       | 9     |

\*Network Operations track students can make the following elective substitutions with the following courses: NETV 374 Routing: Theories and Applications, NETV 382 Network Defense, Incident Response & Disaster Recovery, NETV 477 Advanced Memory Forensics, NETV 479 Advanced Cloud Computing, CYBV 385 Introduction to Cyber Security, CYBV 479 Wireless Networking and Security, CYBV 496 Special Topics in Cyber Operations.

|                   |       |  |
|-------------------|-------|--|
| AGEC A            | 36+   |  |
| AA in Informatics | 77-79 |  |
| BAS Degree        | 45+   |  |



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### UNIVERSITY OF ARIZONA COURSES STARTING IN SPRING

| Semester One |                                |       |
|--------------|--------------------------------|-------|
| Course       | Title                          | Units |
| CYBV 301     | Fundamentals of Cyber Security | 3     |
| APCV 310     | Introduction to Computing      | 3     |
| CYBV 329     | Cyber Ethics                   | 3     |
| ENGV 306     | Advanced Composition           | 3     |
| Total        |                                | 12    |

| Semester Two |  |       |
|--------------|--|-------|
| Course       | Title                                    | Units |
| APCV 302     | Statistics in the Information Age        | 3     |
| CYBV 326     | Intro to Network Design and Architecture | 3     |
| APCV 320     | Computational Thinking and Doing         | 3     |
| NETV 370     | Intro to Network Design and Architecture | 3     |
| Total        |  | 12    |

**NOTE:** This is the advised sequence course for the B.A.S. in Applied Computing. The official degree requirements can be found in The University of Arizona catalog.

**IMPORTANT:** SIE 295. Introduction to UA, APCV 391. Preceptorship, APCV 393. Internship and APCV 499. Independent Study are highly recommended.

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### UNIVERSITY OF ARIZONA COURSES STARTING IN SPRING

| Semester Three |                                       |       |
|----------------|---------------------------------------|-------|
| Course         | Title                                 | Units |
| NETV 378*      | Systems Administration                | 3     |
| NETV 379       | Cloud Computing                       | 3     |
| NETV 375       | Advanced Routing and WAN Technologies | 3     |
| NETV 371       | Network Security Principles           | 3     |
| Total          |                                       | 12    |

| Semester Four |  |       |
|---------------|--|-------|
| Course        | Title                                      | Units |
| APCV 401      | Introduction to Human-Computer Interaction | 3     |
| APCV 498      | Senior Capstone                            | 3     |
| Total         |  | 6     |

\*Network Operations track students can make the following elective substitutions with the following courses: NETV 374 Routing: Theories and Applications, NETV 382 Network Defense, Incident Response & Disaster Recovery, NETV 477 Advanced Memory Forensics, NETV 479 Advanced Cloud Computing, CYBV 385 Introduction to Cyber Security, CYBV 479 Wireless Networking and Security, CYBV 496 Special Topics in Cyber Operations.

|                   |       |  |
|-------------------|-------|--|
| AGEC A            | 36+   |  |
| AA in Informatics | 77-79 |  |
| BAS Degree        | 45+   |  |