WESTERN CATS

Cyber Operations

Cyber Engineering 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
	Arts (AGEC Ex. MUS 120)	3
CIS 175	Computer Security	3
	Focus Area	3
	Total	19

Semester Two

Course	Title	Units
ENG 102	Freshman English	3
ECN 240 or ECN 250	Intro to Macroeconomics or Intro to Microeconomics	3
CIS 170	Microcomputer Installation and Support	3
CIS 260	Introduction to Operating Systems	3
	Focus Area	3
Physical/Biological Sciences (AGEC—Ex. CHM		4
	Total	19

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

ARIZONA WESTERN COLLEGE COURSES

Semester Three

Course	Title	Units
CIS 270	Networking Fundamentals	3
CSC 127A	Programming I (Java)	4
CSC 210	Human Computer Interaction	4
Humanities (AGEC—Ex. PHI 101)		3
Additional Course (AGEC)		3
Additional Course (AGEC)		3
	Total	20

Semester Four

Course	Title	Units
CIS 180 or EGR 123	Computer Programming Logic or Introduction to Structured Programming	3
CIS 271	Network Administration	3
ECN 240 or 250	Intro to Macroeconomics or Intro to Microeconomics	3
CIS 272	Network Routing & Switching	3
Focus Area		3/4
Physical/Biological Sciences (AGEC—Ex. PHY 111)		4
	Total	19/20

Total AGEC Units	36+
Total Required Major Units	32
Focus Area Units	9-11
Total Units	77-79

WesternCATS

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ARIZONA WESTERN COLLEGE COURSES

FOCUS AREAS COURSES
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
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
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
SOFTWARE DEVELOPMENT

Course	Title	Units
CSC 127B	Computer Programming 2	4
CSC 215	Artificial Intelligence	4
CSC 252	Computer Organization	3
	Total	11

Total AGEC Units	36+
Total Required Major Units	32
Focus Area Units	9-11
Total Units	77-79

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Semester Five		
Course	**Title**	**Units**
CYBV 301	Fundamentals of Cybersecurity	3
BASV 300	Introduction to Discrete Math	3
CYBV 310	Introduction to Security Programming I	3
CYBV 311	Introduction to Security Programming II	3
300-400	General Education Individuals & Societies	3
	Total	15

Semester Six		
Course	**Title**	**Units**
CYBV 473	Violent Python	3
CYBV 385	Introduction to Cyber Operations	3
CYBV 329	Cyber Law, Ethics & Policy	3
CSCV 352	Systems Programming UNIX or C Pro-	3
CYBV 326	Introductory Methods of Network Analysis	3
	Total	15

Semester Seven		
Course	**Title**	**Units**
CYBV 454	Malware Threats & Analysis	3
BASV 376	Mathematics for Applied Technology	3
CSCV 452	Operating Systems Theory	3
CYBV 471	Assembly Language Programming for Security Professionals	3
NETV 379	Cloud Computing	3
	Total	15

Semester Eight		
Course	**Title**	**Units**
ENGV 306	Advanced Composition	3
CYBV 400	Active Cyber Defense	3
CYBV 388	Cyber Investigations & Forensics	3
CYBV 480	Cyber Warfare	3
CYBV 479	Wireless Networking & Security	3
CYBV 498	Senior Capstone	3
	Total	18

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

NOTE: This is the advised sequence course for the B.A.S. in Cyber Operations—Engineering Emphasis. The official degree requirements can be found in The University of Arizona catalog.

AA in Informatics Units Required	**77-79**
Cyber Operations—Engineering Emphasis Degree Units Required	**60+**