WESTERN CATS

Computer Science

2019—2020

Year One

Summer

Course	Title	Units	Complete
MAT 187	Pre Calculus*	4	
ENG 101	Freshman Composition I	3	
	Total	7	

Semester One

Course	Title	Units	Complete
ENG 102	Freshman Composition II	3	
CHM 151	General Chemistry I	4	
MAT 220	Calculus I	5	
PHI 103	Intro to Logic	3	
AGEC-S	Art	3	
	Total	18	

Semester Two

Course	Title	Units	Complete
ECN 250	Microeconomics	3	
MAT 230	Calculus II w/ Geometry	5	
EGR 123	Intro to Structured Programming[1]	3	
PHY 121	Mechanics	4	
AGEC-S	Social Science	3	
	Total	18	

Total Year 1 Credits	**43**	

Year Two

Semester Three

Course	Title	Units	Complete
MAT 241	Calculus III	4	
PHY 131	Electricity & Mag	4	
CSC 127a	Intro to Comp. Science I	4	
MAT 262	Intro to Ordinary Differential Equations	3	
CSC 210	Human Computer Interaction	3	
	Total	18	

Semester Four

Course	Title	Units	Complete
CSC 127b	Intro to Comp. Science II	4	
MAT 227	Discrete Mathematics	3	
CSC 252	Computer Organization	3	
AGEC-S	Humanities— WI	4	
Arts/Humanities (AGEC) - Ex. MUS 120 for art		3	
	Total	17	

Total Year 2 Credits	**35**	

[1]**Prerequisites include MAT 187 or MAT 151 & 183 or placement testing**

***Courses serve as pre-requisite, completion not required for degree**

Computer Science

Start UA Fall   OR   Start UA Spring

Year Three

Fall - Semester Five

Course	Title	Units	Complete
ASM 195	Introduction to UA	1	
CSCV 352	Systems Programming & UNIX	3	
CSCV 372	Comparative Programming Languages	3	
AEDV 310	Transitional Resiliency	3	
Focus Area		3	
	Total	13	

Spring- Semester Six

Course	Title	Units	Complete
CSCV 335	Object Oriented Programming	3	
CSCV 345	Discrete Structures	3	
CSCV 452	Principles of Operating Systems	3	
ETCV 391	Preceptorship	3	
Focus Area		3	
	Total	15	

Year Four

Fall - Semester Seven

Course	Title	Units	Complete
CSCV 453	Compilers & Systems Software	3	
CSCV 381	Mobile Device Programming	3	
INFV 393	Internship	3	
Focus Area		3	
	Total	12	

Spring - Semester Eight

Course	Title	Units	Complete
CSCV 460	Database Design	3	
CSCV 473	Automata, Grammars, & Languages	3	
INFV 498	Senior Capstone	3	
	Focus Area	3	
	Total	12	

Year Three

Spring- Semester Five

Course	Title	Units	Complete
ASM 195	Introduction to UA	1	
CSCV 335	Object Oriented Programming	3	
CSCV 345	Discrete Structures	3	
AEDV 310	Transitional Resiliency	3	
Focus Area		6	
	Total	16	

Fall - Semester Six

Course	Title	Units	Complete
CSCV 352	Systems Programming & UNIX	3	
CSCV 372	Comparative Programming Languages	3	
Focus Area		3	
ETCV 391	Preceptorship	3	
	Total	12	

Year Four

Spring - Semester Seven

Course	Title	Units	Complete
CSCV 452	Principles of Operating Systems	3	
CSCV 460	Database Design	3	
CSCV 473	Automata, Grammars, & Languages	3	
INFV 498	Senior Capstone	3	
	Total	12	

Fall - Semester Eight

Course	Title	Units	Complete
CSCV 453	Compilers & Systems Software	3	
CSCV 381	Mobile Device Programming	3	
Focus Area		3	
INFV 393	Internship	3	
	Total	12	

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Focus Area

Math

Course	Title	Units	Complete
MAT 262	Intro to Ordinary Differential Equations	3	AWC
MATV 402	Mathematical Logic	3	UA
MATV 313	Introduction to Linear Algebra	3	UA
MATV 443	Theory of Graph and Networks		
MATV 445, 475A/B	Mathematical Principles of Numerical Analysis		
	Total	9	

Cyber Operations Certificate

Course	Title	Units	Complete
CYBV 301	Fundamentals of Cybersecurity	3	UA
INFV 320	Computational Thinking and Doing	3	UA
CYBV 435	Cyber Threat Intelligence	3	UA
CYBV 400	Active Cyber Defense	3	UA
CYBV 385	Introduction to Cyber Operations	3	UA
	Total	15	

Intelligence

Course	Title	Units	Complete
GPSV 372	The History of American Intelligence Policy	3	
GPSV 365	The Individual, Society, and the Law	3	
GPSV 313	The American Judicial System	3	
GPSV 314	National Security Policy		
GPSV 471	National Security and Intelligence	3	
AGEC-S	Social Science	3	
	Total	15	

Total Year 1 Credits	**39**	

Focus Area

Informatics

Course	Title	Units	Complete
INFV 320	Computational Thinking and Doing	3	
INFV 302	Statistics in the Information Age	3	
INFV 310	Introduction to Informatics	3	
MAT 262	Intro to Ordinary Differential Equations	3	
AGEC-S	Humanities- WI	3	
	Total	15	

Engineering Management

Course	Title	Units	Complete
SIE 265	Engineering Management I	3	
SIE 305	Introduction to Engineering Probability and Statistics	3	
SIE 406	Quality Engineering	3	
SIE 408	Reliability Engineering	3	
SIE 414	Law of Engineering and Scientists		
SIE 457	Project Management		
Arts/Humanities (AGEC) - Ex. MUS 120 for art		3	
	Total	15	

Total Year 2 Credits	**30**	

[1]**Prerequisites include MAT 187 or MAT 151 & 183 or placement testing**

*Courses serve as pre-requisite, completion not required for degree