

Program of Study (PoS): Bachelor of Science In Computer Engineering – Cybersecurity Concentration Track

Bachelors Technical CAE-CD (Total 22 KUs)

PoS Courses in KU Alignment	Foundational			Technical Core					Optional													
	CSF	CSP	ISC	BSP	BNW	NDF	BCY	OSC	ALG	BCO	CCR	CSE	DVF	IDS	MOT	NWF	NTP	PTT	PRI	ACR	DST	NSA
ELEG 4333 Communication Network Engineering	X	X	X																			
COMP 4323 Network Security	X	X	X			X				X	X	X		X		X	X	X				
ELEG 2321 Data Structure and Algorithm with Python									X												X	
ELEG 2331 Advanced Programming and Applications				X					X													
MATH 2305 Discrete Math									X													
COMP 3306 Operating Systems								X														
ELEG 4313 Broadband Communication Systems I					X	X				X							X	X				
ELEG 4323 Broadband Communication Systems II					X	X				X							X	X		X		
ELEG 4372 Computer and Network Security					X	X				X	X	X		X		X	X	X	X	X		X
ELEG 4373 Cyber Physical Systems				X		X				X			X	X								
ELEG 4374 Introduction to Cryptography																			X	X		
ELEG 4378 Mobile Edge Computing			X			X				X					X	X	X					
ELEG 4374 Introduction to Cryptography							X															
ELEG 4377 Machine Learning for Engineering Applications				X																		

 Cybersecurity Foundational KUs (3)

 Technical Core KUs (5)

 Optional KUs (14)

Foundational CDE Knowledge Units

[Cybersecurity Foundations \(CSF\)](#)
[Cybersecurity Principles \(CSP\)](#)
[IT Systems Components \(ISC\)](#)

Core Technical CDE Knowledge Units

[Basic Cryptography \(BCY\)](#)
[Basic Networking \(BNW\)](#)
[Basic Scripting and Programming \(BSP\)](#)
[Network Defense \(NDF\)](#)
[Operating Systems Concepts \(OSC\)](#)

Core Non-Technical CDE Knowledge Units

[Cyber Threats \(CTH\)](#)
[Cybersecurity Planning and Management \(CPM\)](#)
[Policy, Legal, Ethics, and Compliance \(PLE\)](#)
[Security Program Management \(SPM\)](#)
[Security Risk Analysis \(SRA\)](#)

Optional Knowledge Units

[Advanced Algorithms \(AAL\)](#)
[Advanced Cryptography \(ACR\)](#)
[Advanced Network Technology and Protocols \(ANT\)](#)
[Algorithms \(ALG\)](#)
[Analog Telecommunications \(ATC\)](#)
[Basic Cyber Operations \(BCO\)](#)
[Cloud Computing \(CCO\)](#)
[Cyber Crime \(CCR\)](#)
[Cybersecurity Ethics \(CSE\)](#)
[Data Administration \(DBA\)](#)
[Data Structures \(DST\)](#)
[Database Management Systems \(DMS\)](#)
[Databases \(DAT\)](#)
[Device Forensics \(DVF\)](#)
[Digital Communications \(DCO\)](#)
[Digital Forensics \(DFS\)](#)
[Embedded Systems \(EBS\)](#)
[Forensic Accounting \(FAC\)](#)
[Formal Methods \(FMD\)](#)

[Fraud Prevention and Management \(FPM\)](#)
[Hardware Reverse Engineering \(HRE\)](#)
[Hardware/Firmware Security \(HFS\)](#)
[Host Forensics \(HOF\)](#)
[IA Architectures \(IAA\)](#)
[IA Compliance \(IAC\)](#)
[IA Standards \(IAS\)](#)
[Independent/Directed Study/Research \(IDR\)](#)
[Industrial Control Systems \(ICS\)](#)
[Introduction to Theory of Computation \(ITC\)](#)
[Intrusion Detection/Prevention Systems \(IDS\)](#)
[Life-Cycle Security \(LCS\)](#)
[Low Level Programming \(LLP\)](#)
[Media Forensics \(MEF\)](#)
[Mobile Technologies \(MOT\)](#)
[Network Forensics \(NWF\)](#)
[Network Security Administration \(NSA\)](#)
[Network Technology and Protocols \(NTP\)](#)
[Operating Systems Administration \(OSA\)](#)

[Operating Systems Hardening \(OSH\)](#)
[Operating Systems Theory \(OST\)](#)
[Penetration Testing \(PTT\)](#)
[Privacy \(PRI\)](#)
[QA/Functional Testing \(QAT\)](#)
[Radio Frequency Principles \(RFP\)](#)
[Secure Programming Practices \(SPP\)](#)
[Software Assurance \(SAS\)](#)
[Software Reverse Engineering \(SRE\)](#)
[Software Security Analysis \(SSA\)](#)
[Supply Chain Security \(SCS\)](#)
[Systems Certification and Accreditation \(SCA\)](#)
[Systems Programming \(SPG\)](#)
[Systems Security Engineering \(SSE\)](#)
[Virtualization Technologies \(VTT\)](#)
[Vulnerability Analysis \(VLA\)](#)
[Web Application Security \(WAS\)](#)
[Wireless Sensor Networks \(WSN\)](#)