TACTICAL COMPUTER OPERATIONS GRADUATE CERTIFICATE

Banner Code: VS-CERG-TCO

Academic Advising

MSN 2B5
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Tactical Computer Operations (TCO) is a discipline involving the offensive side of computer and forensics operations. Expertise in this field includes the ability to understand and work at the operating system kernel level, understand and work with shared libraries and application program interfaces, manipulation of network traffic at the frame level, network stack redirection, anti-forensic obfuscation, penetration engineering, and reverse engineering. Mobile devices have also opened up a plethora of offensive opportunities that needs to be understood and mastered in order to better protect and serve.

The graduate certificate may only be pursued on a part-time basis.

Admissions & Policies

Admissions

Students applying to this certificate must hold a bachelor's degree in either computer science or computer engineering. Prospective students without these specific degrees will need to have a technical bachelor's degree and show academic competence in the areas of: C (C ++, C#, Objective C), Assembler, discrete mathematics, and computer networking. An undergraduate grade point average (GPA) of 3.0 or better (4.0 scale) is required. The Graduate Record Exam (GRE) is not required.

Policies

Course Prerequisites

Students must meet prerequisites for courses by either taking the appropriate undergraduate courses or through instructor permission.

Requirements

Certificate Requirements

Total credits: 15

Certificate Courses

CS 571	Operating Systems	3
ECE 511	Microprocessors	3
CFRS 761	Malware Reverse Engineering	3
Total Credits		9

Electives

Select two courses from the following:		6
CFRS 767	Penetration Testing in Computer Forensics	
CFRS 769	Anti-Forensics	
CFRS 773	Mobile Application Forensics and Analysis	
CFRS 775	Kernel Forensics and Analysis	
ECE 646	Cryptography and Computer Network Security	
ISA 564	Security Laboratory	
ISA 656	Network Security	
ISA 681	Secure Software Design	
ISA 763	Security Protocol Analysis	
Total Credits		6