

Reconciled Topics for CCA (11-4-14)

Index	Category	Fundamental
	Basic Concepts	
1		confidentiality
2		authentication
3		integrity
4		assured operations
5		trust, including rooting trust in hardware
	Adversarial Thinking	
6		adversarial modelling
7		assess vulnerabilities
8		analyze threats
9		manage risks
10		perform security assessments
11		attention to detail
12		healthy skepticism and paranoia
	Attack & Defense	
13		well-known attacks, including man-in-the-middle, replay, traffic analysis, denial of service
14		social engineering
15		insider threat
16		incident analysis
17		countermeasures, including physical security, defense-in-depth
18		forensics
	Cryptography	
19		apply symmetric and asymmetric encryption
20		select and apply appropriate cryptographic primitives
21		manage keys, including with public-key infrastructure
22		design secure protocols
23		0-knowledge protocols
24		applications of homomorphic encryption and private information retrieval
	Computer & Network Security	
25		operating system security
26		access control
27		wireless security
28		design & analyze secure networks
29		penetration testing
30		design & analyze secure web applications
31		virtualization and cloud security
32		cyberphysical systems
	Software	
33		malware analysis
34		software vulnerability analysis
35		secure coding, designing secure code
36		scripting languages, systems programming, low-level programming
	System Design & Operations	
37		response & recovery
38		operational security
39		secure development lifecycle
40		auditing
41		formulate and evaluate security policies
42		usable security
	Big Picture	
43		legal aspects
44		economic aspects of cybersecurity
45		international aspects of cybersecurity
46		balance competing objectives (e.g., anonymity vs. accountability, privacy vs. national security)
47		privacy
	Professional Skills	
48		ethics
49		communication skills
50		ability and desire to keep up-to-date
51		collaboration skills
52		ability to identify and use modern tools
53		ability to identify and apply best practices