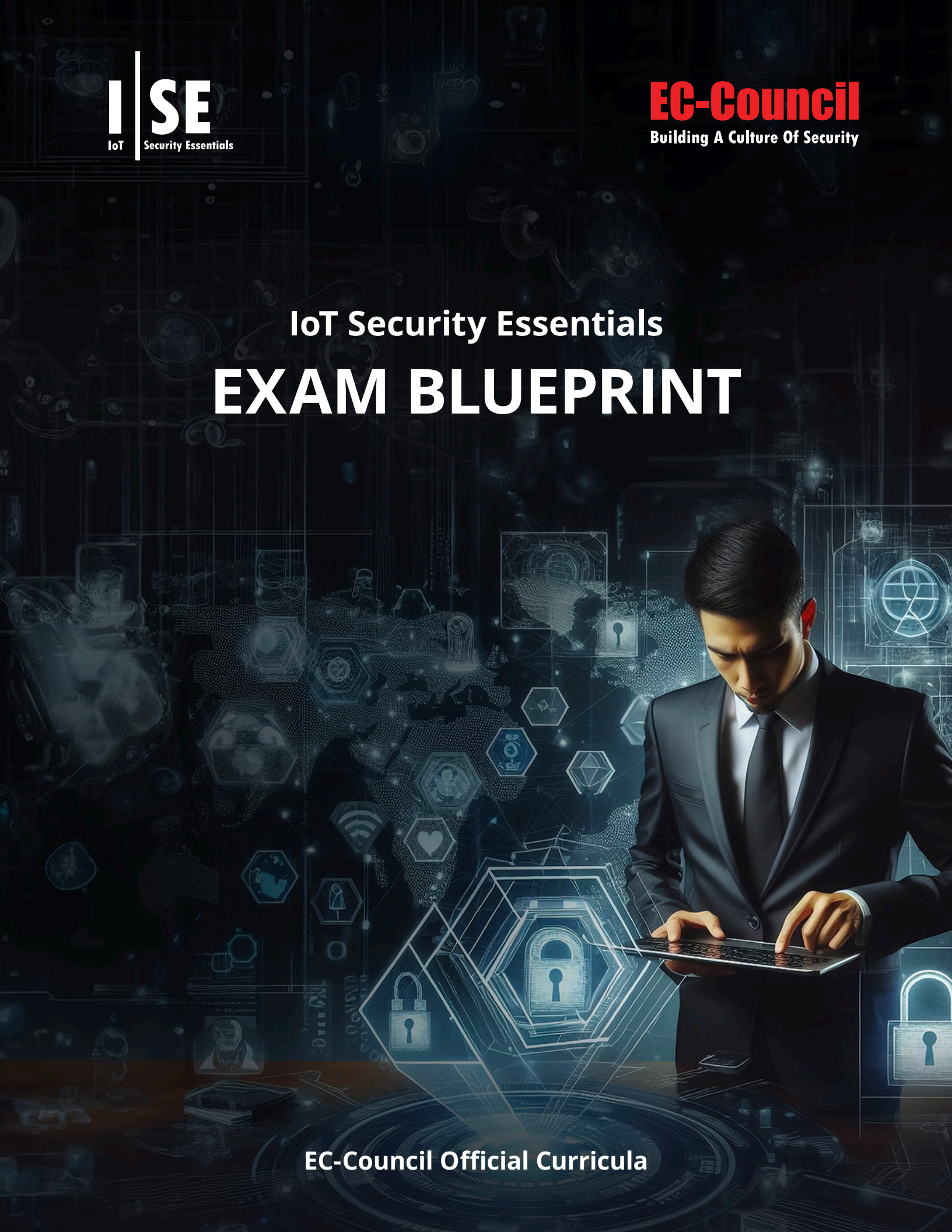
IoT | SE
IoT Security Essentials

EC-Council
Building A Culture Of Security

IoT Security Essentials
EXAM BLUEPRINT



EC-Council Official Curricula

IoT Security Essentials (ISE)

Exam Blueprint

S. No.	Domains	Sub Domains	Domain %
1	**IoT Fundamentals**	IoT Beginnings and IoT Paradigm	**10**
		IoT in Power Grids and Home	
		IoT Architecture, Technologies, Protocols, Application Areas, and Devices	
		Industrial IoT and SCADA basics	
		IoT Platforms	
		The Future of IoT	
2	**IoT Networking and Communication**	Network Concepts	**13**
		OSI and TCP Model	
		IP Addresses, Subnet Masks, Subnetting, and IP Address Services	
		IoT Protocols	
		Bluetooth and Cellular Networks	
		IEEE Standards	
3	**IoT Processors and Operating Systems**	CPU Internal Structure	**12**
		Operating Systems	
		Features of the OS in Embedded Systems	
		Operating System Kernel and Firmware	
		Real-Time Operating System (RTOS)	

		The Contiki OS, TinyOS, MagnetOS, FreeRTOS, and BeRTOS	
		Basics of Linux OS and Android OS	
4	**Cloud and IoT**	Cloud Computing and Types of Cloud Computing Services	**7**
		Cloud Deployment	
		Virtualization and Virtual Systems	
		IoT Cloud Commercial Solutions	
		AWS IoT and Oracle Cloud	
		Grid and Fog Computing	
		Future Trends	
5	**IoT Advanced Topics**	IoT Software, Web, and Mobile Applications	**7**
		IoT Identity Management and IoT Protocols	
		IoT and Machine Learning	
		Supervised vs. Unsupervised Learning	
		Classification and Neural Networks	
		Block Chain IoT	
		Consensus Algorithms	
6	**IoT Threats**	Common IoT Attacks	**12**
		IoT Expands Security Needs	
		OWASP IoT Top 10	
		IoT Attack Surface	
		IoT Hacking	
		IoT Privacy Issues	
		Metasploit and IoT	
7	**Basic Security**	The CIA Triangle	**13**
		Best Practices for Protecting Embedded OSs	
		WLAN Security	
		Open System Authentication	
		Zigbee and RuBee Security	
		IoT Checklist, Security Measures, and Security Tools	

		Firmware Security Testing Methodology	
		Encryption and Digital Signature Basics	
		Basics of Defending SCADA/ICS	
		Industrial IoT Security Framework	
8	**Cloud Security**	State of Cloud Security	**8**
		Cloud Vulnerabilities	
		Data Segregation	
		Cloud Security Alliance	
		Cloud Computing Attacks	
		Security Issues	
		Virtualization Security Guidance	
		Cloud Security Policies, Procedures, Standards, and Guidelines	
		Forensic Issues	
9	**Threat Intelligence**	National Vulnerability Database	**8**
		Risk Assessment Standards	
		PCI Penetration Testing standard	
		Cyber Kill Chain	
		Nmap	
10	**IoT Incident Response**	Standards, Processes, and Procedures	**5**
		Impact	
		Indicators of Compromise	
		Tools	
		Forensic Tools	
11	**IoT Security Engineering**	Methodologies	**5**
		12 Practices	
		Threat Modeling	
		Dread	
		Stride	