

SANS

SEC301: Introduction to Cyber Security

AND/OR

SEC401: Security Essentials - Network,
Endpoint, and Cloud

Cyber Security Expertise – Where Should You Begin?

Choosing the right starting point based on your Prior Knowledge.

Keith Palmgren

- 37+ Years in Cyber Security
- Air Force, AT&T, Sprint, NetIP
- Senior SANS Instructor
- CISSP, GCIF, GSEC, GCED, GCIH, GSLC, CEH, Security+, Network+, A+, CTT+
- Author: 24 courses including SEC301, numerous articles, awareness training videos, etc.

Bryan Simon

- 31+ Years in IT/Cyber Security
- Education, Environmental, Financial, Government Sectors
- GIAC: GSEC, GCWN, GCIH, GCFA, GPEN, GWAPT, GAWN, GISP, GCIA, GCED, GCUX, GISF, GMON, CISSP
- Technical Editor / Author: numerous books and courses

Both Have Deep Cyber Security Prior Knowledge!

SEC301 & SEC401 – The Students



New To Security



The Manager



Law Enforcement
(Cyber focused or not)

The difference – What is their Prior Knowledge?

If you have **basic computer skills**:

- No formal IT training beyond
 - Send / Receive email & attachments
 - Create and print documents
 - Internet searches – Google, etc.
 - Make purchases from an ecommerce site
- Know basic computer terminology

If you already have **basic IT skills**:

- Convert binary & hexadecimal
- Know basic networking
 - Default gateway
 - LAN, WLAN
 - WiFi and Bluetooth
- Basic virtualization skills
- Know basic cyber security terminology

If you know none of these:

- SEC301 Defines & Explains all of them and more

If you know the basics of these:

- SEC401 Assumes they are Prior Knowledge



SEC301

Lecture Topics

SEC401

Cyber Management – Core Principles, Risk, & Policy

Authentication / Authorization / Accountability

Computer Function and Networking

Introduction to Cryptography

Wireless / Mobile / IoT

Common Attacks & Malware

Cyber Security Technologies

Browser Security

System Security - Virtual/Cloud/Backup/Patching

Defensible Network Architecture & Packet Analysis

Wireless & Wired Network Security Measures

Cloud Security (AWS & Azure)

Applying Cryptography

Identity, Access, & Password Management

Advanced Attacks and Malware

Red, Purple, & Blue Team

Data Loss Prevention & Incident Response

Windows, Linux, Mac, Mobile, Virtual, Containers

SEC301 – 9 Labs

Lab Topics

SEC401 – 19 Labs

Lab and Resource Familiarity

Real-World Passwords

Converting Number Systems

Decoding Network Traffic - Wireshark Intro

Performing Cryptography

Visual Cryptography

Configuring Wireless

Anti-Malware Scanning

Building Firewalls

Application Control via Allow-Listing

Cracking Passwords (Windows & Linux)

Network Scanning

Network Traffic Analysis – Wireshark & tcpdump

Cryptography Tools

Intrusion Detection

Cracking Wireless

Malicious Software

Windows Security Tools & PowerShell

Five years from today, I want to do “X”.

Tell us what your “X” is!

**We will help you choose YOUR best entry point
on the path to that expertise.**

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