- **Threatscape overview**

    1. DOS
    2. DDOS
    3. Spoofing
    4. Social Engineering
    5. Reconnaissance
    6. MITM

- **Threats defense Technologies Overview**
  Firewall
  IPS
  ESA
  WSA
  VPN

- **Security policy and basic security Architectures**
- **Cryptographic Technologies**
- **Understanding AAA**
- **Management protocol and systems**
- **Understanding Plane**
- **Understanding layer 2 and layer 3 security**
    1. DHCP snooping
    2. DAI
    3. ACL
    4. URPF

- **Firewall Technologies**

- **Describe and configure Cisco ASA firewall CLI**
1. ACL
2. NAT
3. Inspection
4. Deep Inspection

Explain the concept of next Gen firewall

1. AVC
2. URL Filtering
3. IPS
4. AMP
5. Security Intelligence
6. Geolocation

Understanding IOS zone Based firewall

Explain and configure VPN technologies

1. IPSEC
2. SVTI
3. GRE
4. DMVPN
5. RAVPN

Automation and Programmability

Explain how automation impacts network management
Compare traditional networks with controller-based networking
Describe controller-based and software defined architectures (overlay, underlay, and fabric)

- Separation of control plane and data plane
- North-bound and south-bound APIs

Compare traditional campus device management with Cisco DNA Center enabled device management
Describe characteristics of REST-based APIs (CRUD, HTTP verbs, and data encoding)