

## Operating Systems [\[1\]](#) [\[2\]](#) [\[3\]](#) [\[4\]](#)

- Processes and Threads
- Memory Management
- File Systems
- Input/Output Management
- System Calls
- Scheduling Algorithms
- Virtualization
- Network Protocols
- Operating System Design Principles

## Programming [\[1\]](#) [\[2\]](#) [\[3\]](#) [\[4\]](#) [\[5\]](#) [\[6\]](#) [\[7\]](#) [\[8\]](#) [\[9\]](#) [\[10\]](#) [\[11\]](#) [\[12\]](#) [\[13\]](#) [\[14\]](#) [\[15\]](#)

- Algorithms
- Data Structures
- Design Patterns
- Databases
- Java, Python, C++, etc.
- Secure Coding Practices
- Memory, Pointers, and Garbage Collectors
- APIs and Web Services
- Test-Driven Development (TDD)

Network [\[1\]](#) and prepare for CCNA ;)

- Network Foundation:
  - High-level look at the network
  - MAC address
  - IPV4 / IPV6
  - Network Interface Cards
  - Switches
  - Routers
  - Wireless Access Points
  - OSI models
  - TCP / IP
- Network Services:
  - DHCP
  - DNS
  - NAT
  - NTP
  - QoS

Security [\[1\]](#) [\[2\]](#) [\[3\]](#) [\[4\]](#) [\[5\]](#) [\[6\]](#) [\[7\]](#) [\[8\]](#) [\[9\]](#) [\[10\]](#) [\[11\]](#) [\[12\]](#) [\[13\]](#) [\[14\]](#) [\[15\]](#) [\[16\]](#) [\[17\]](#) [\[18\]](#) [\[17\]](#) [\[18\]](#)

- Secure SDLC
- OWASP TOP 10
- CWE TOP 25
- Cryptography
- Security Testing Essentials
- Cloud Security
- Threat Modeling and Design Review
- Security Tools (SAST, DAST, IAST, SCA, etc.)
- Regulatory Compliance

Security [7]: is not free, but I can send you a copy of the book.

ROAD MAPs : <https://roadmap.sh/> ;)