

Cisco Certified DevNet Associate

Course Outline

Module 1: Software Development & Design

- Fundamental Python programming
- Python Data structures
- GitHub
- Software design patterns and principles
- Modern Software Development
- Development methodologies (Agile, lean, and Waterfall)

Module 2: Understanding and Using APIs

- API styles (REST, RPC, Synchronous & Asynchronous)
- Common HTTP response codes correspond to REST APIs
- Create a REST API request to complete the task given the API documentation

Module 3: Cisco Platforms & Development

- Cisco platforms (IOS, NX-OS, etc.)
- Cisco APIs which include Cisco IOS XE RESTCONF API, Cisco ASA REST API, Cisco IOS XE NETCONF API, Cisco Nexus NX-OS APIs
- Cisco's security platforms capabilities and APIs (ISE, Firepower, XDR, Umbrella, Secure Malware Analytics, Secure Endpoint)

Module 4: Application Deployment and Security

- Application deployment models (on-prem, cloud, etc.)
- Edge computing benefits
- Security considerations for application deployment
- Containerization (Docker, etc.)
- Orchestration (Kubernetes, etc.)
- Top OWASP threats (CSRF, XSS, and SQL injections)

Module 5: Infrastructure & Automation

- Network fundamentals (TCP/IP, etc.)
- Network automation (Ansible, etc.)
- Infrastructure as Code (IaC)
- CI/CD pipeline in infrastructure automation
- Basic YANG model Interpretation
- Automation tools' capabilities, including Ansible, Puppet, Chef, and Cisco NSO