

CURRICULUM

WEEK 1

DevOps Fundamentals

- Introduction to DevOps
- Linux OS & basic commands
- Shell scripting
- Git essentials
- Network essentials

WEEK 2

AWS

- Access control & billing
- AWS cloud networks
- EC2 & S3
- Lambda

WEEK 3

Application Development Essentials

- Advanced Git
- Python app
- Java app
- Javascript app

WEEK 4

Containers

- Introduction to containers
- Dockerfile
- Build application in Docker
- Docker remote repositories

WEEK 5

Container Orchestration I

- Introduction to container orchestration
- Introduction to Kubernetes
- Pods, deployments, services

WEEK 6

Container Orchestration II

- Kubernetes in the cloud
- Kubernetes & Helm

WEEK 7

Observability System

- Logging system
- Monitoring system

WEEK 8

Break, Catch-up & Review



WEEK 9

Midterm I

- Midterm I

WEEK 10

Infrastructure-as-Code I

- Infrastructure-as-Code Fundamentals
- Introduction to Terraform & Terraform fundamentals
- End-to-end infrastructure with Terraform
- AWS CloudFormation

WEEK 11

Infrastructure-as-Code II

- Configuration Management with Ansible Part I
- Configuration Management with Ansible Part II

WEEK 12

CI/CD I

- Introduction to CI/CD
- Jenkins fundamentals & freestyle
- Jenkins pipeline

CURRICULUM

WEEK 13 CI/CD II

- AWS Codebuild
- GitHub Actions
- TravisCI, CircleCI

WEEK 14 Break, Catch-up & Review



WEEK 15 Midterm II

- Midterm II

WEEK 16 Advanced Topics I

- Deployment Strategies I
- Deployment Strategies II

WEEK 17 Advanced Topics II

- Security I
- Security II

WEEK 18 Advanced Topics III

- Service Mesh
- API Gateway
- Hashicorp Packer

WEEK 19 Advanced Topics IV

- Introduction to GitOps
- Flux
- ArgoCD
- Jenkins Xt

WEEK 20 Guest Lectures & Bonus Topics

- Guest Lectures & Bonus Topics

WEEK 21 Break, Catch-up & Review



WEEK 22 Midterm III

- Midterm III

WEEK 23 Panel Discussions & Final Capstone Project Prep

- Panel Discussions
- Final Capstone Project Prep

WEEK 24 Final Capstone Project

- Final Capstone Project Presentations