IT 4990: Cloud Computing

Spring 2019 Schedule

Week 1

In class:
- Overview of course
- Module 0 Coverage (30-45 minutes)
- Login to AWS training portal
- Navigating online curriculum
- Starting labs
- AWS Free Tier Access
- AWS Educate Credits

Before Next Class:
- Review Module 0 as needed
- Complete all the materials associated with Module 1 (135 minutes)
- Work through Module 2.0.1 (70 minutes) then complete:
  - Lab 1 (45 minutes) (Introduction to EC2)
- Complete Module 2.0.2 (75 minutes) then complete:
  - Lab 2 (45 minutes) (Working with EBS)
- Complete Module 2.0.3 (40 minutes) then complete:
  - Lab 3 (45 minutes) (Build your VPC and launch a web server)

Week 2

In Class:
- Review of previous week contents (15 minutes)
- Questions
- Walk through ancillary lab with students (30 minutes)

Before Next class:
- Module 2.0.4 (55 minutes)
- Lab 4 (45 minutes) (Build your DB server and Interact)
- Module 2.0.5 (35 minutes)
- Lab 5 (45 minutes) (Scale and Load Balance your architecture)
- Module 3
- Lab 6 (45 minutes) (Intro to AWS IAM)
- Modules 4 and 5 (90 minutes)

Week 3

In Class:
- Review of previous week contents (15 minutes)
- Questions
- Exam Review
  - Pricing Review
  - Practice Exam
- How to register for real exam
  - Discount codes

Before Next Class:
- Take the real exam

Week 4

- Take the real exam sometime this week.
Week 5

In Class:
- Begin ACA curriculum
- Start in on Module 1 (30-40 minutes)
- Introduce Lab? (10 min)
- Homework tasks (3 min)

Before Next Class:
- Finish Module 1 (~100 minutes)
- Module 2 (154 minutes)
- Module 3 (120 minutes)
- Lab 1 (Making your Environment Highly Available) (45 min)

Week 6

In Class:
- Review/Questions (10 minutes)
- Exercise #1 (Improve this architecture) (30 min) (Group project)
- Exercise #2 (Improve this architecture) (30 min) (Group Project)
- Group discussion 1 (Forklifting an Existing Application) (20 min)
- Introduce Labs (10-15)
- Homework tasks (3 min)

Before Next Class:
- Complete Module 4 (124 min)
- Lab 2 (Using Auto-scaling with AWS Lambda) (45 min)
- Module 5 (110 minutes)
- Module 7 (118 minutes)
- Lab 3 (55 min, Implementing a Serverless Architecture with AWS managed services)

Week 7

In Class:
- Exercise 3 (Improve this architecture) (40)
- Group discussion #2 (Scalable Web Application) (45 min)
- Project #1 Introduction (30 min)
- Homework tasks (3 min)

Before Next Class:
- Module 8 (60)
- Module 9 (60)
- Module 10 (170)
- Module 11 (96)
- Lab 4 (Multi-region failover with route 53) (30)
- Work on project 1 (up to 10 hours)

Week 8

In class:
- Exercise #4 (Improve this Architecture) (40)
- Introduce Project #2 (30 min)
- Send students exam codes
- Homework tasks (3 min)

Before Next class:
- Module 12 (52)
- Module 13 (124)
- Module 14 (56)
- Module 15 (86)
**Week 9**

In class:

- Exercise #5 (Improve this Architecture)(40)
- Exercise #6 (Improve this Architecture)(40)
- Exam Review
- TODO: Design review and review questions
- Homework: (submitted electronically within a week)
- Project #2 (up to 10 hours)

Before next class:

Take practice exam Work on Project #2

**Week 10**

In class:

- Present project #2
- More Review

**Remaining weeks**

- Take the real exam
- Retake if necessary