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:
- Questions
- Review of previous week contents (15 minutes)
  - Kahoot - Module 1
- Walk through ancillary lab with students(30 minutes)
  - Extra lab 1

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:
- Questions
- Review of previous week contents (15 minutes)
  - Kahoot - Module 2
  - Kahoot - Module 3
- Exam Review
  - Extra lab 2
  - 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)(45min)
- 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