

Los Angeles Mission College

CIS 194 Compute Engines in Amazon Web Services

This course introduces AWS (Amazon Web Services) computing related services. Students will learn about the core computing services offered by AWS. The computing services will follow the computing models: Infrastructure as a Service, Platform as a Service, Function as a Service or Micro-services and server less computing (Lambda functions). Students will set up and manage computing services, configure auto scaling and load balancing. Students will learn to code auto deployment scripts to automate the management of AWS infrastructure.

Fall 2024 Section# 16943, 16944 ONLINE

Start Date: October 20, 2024

End Date: December 15, 2024

Instructor: Javier Rios E-mail: riosj2@lamission.edu

Office Hours and Zoom Link

Office Hours
Mon, Tues, Wed, and Thurs 5:00 PM - 6:30 PM (Online via Zoom)
Join Zoom Meeting: Zoom Room

E-mail communications will receive a response within 24 to 48 hours.

Advisory: N/A

Course Materials

You will need a working computer with a reliable Internet connection. Have a backup plan. There are no textbooks required for this course. The Canvas shell for this course contains course content and videos needed to succeed in this course.

Student Learning Outcomes – SLO’s

1. The student will demonstrate an understanding of how to implement computing services in AWS and include AutoScale and load balance features.
2. The students will employ AWS Lambda Services to create Serverless tasks.

Course Topics Discussed in Class:

- Study AWS Global Infrastructure
- Introduction to AWS Computing Services
- Advantages and Disadvantages of Computing Services
- AWS Infrastructure as a Service options
- Configuration and management AWS instances
- Scaling and load balancing AWS instances
- DevOps tools in AWS
- Computing Resource Security
- AWS Platform as a Services options
- Configuring and Deploying applications in PaaS
- Function as a Service programming in AWS
- AWS Computing best practices Assignments and Grading Policies

Assignments and Grading Policies

Assignments are graded by the end of each week. The expectation is that the class starts on time, the assignments and modules are available on time, the assignments are turned in on time and they are graded on time.

- **NO EXTRA-CREDIT ASSIGNMENTS**
- **TESTS/EXAMS** are all cumulative. They may include multiple choice, matching, short answer, and timeline questions. Tests/Exams may be taken only once (1).
- No make-up exams will be given. Don’t bother asking; the answer is no.
- **Quizzes:** may be retaken as many times as needed to achieve a higher score.
- **Class conduct:** This includes your participation in class discussions and your professional/collegial behavior online.
- **Attendance** online is expected and is vital to your grade. Students will log in at the beginning of each week (Monday) and plan according to the amount of work assigned.

Assignments are weighted by group:

Group	Weight
Assignments	30%
Discussions	10%

Quizzes	30%
Final Project	15%
Mid-Term and Final Exam	15%
Total	100%

Course Schedule

Course Schedule		
Week	Topic	Exercises
Week 1	<ul style="list-style-type: none"> Introduction to AWS Computing Services 	<ul style="list-style-type: none"> Reading Discussion Syllabus Assignment Student Introduction IAM Lab 1 Lab 2 Slack Module 1 Quiz
Week 2	<ul style="list-style-type: none"> AWS Storage Volumes 	<ul style="list-style-type: none"> Reading Discussion CLI Lab EFS Console Lab Module 2 Quiz
Week 3	<ul style="list-style-type: none"> EC2: Elastic Compute Cloud 	<ul style="list-style-type: none"> Reading Discussion EC2 Lab 1 EC2 Lab 2 Module 3 Quiz
Week 4	<ul style="list-style-type: none"> Auto Scaling & Elastic Load Balancer Mid-Term Chapters 1 - 4 	<ul style="list-style-type: none"> Reading Discussion ELB Lab 1 ELB Lab 2 Module 4 Quiz Mid-Term Weeks 1 - 4
Week 5		<ul style="list-style-type: none"> Reading Discussion Docker Lab

Course Schedule		
Week	Topic	Exercises
	<ul style="list-style-type: none"> Docker and AWS ECS 	<ul style="list-style-type: none"> Module 5 Quiz
Week 6	<ul style="list-style-type: none"> Kubernetes & Amazon EKS 	<ul style="list-style-type: none"> Reading Discussion Kubernetes Lab 1 Kubernetes Lab 2 Module 6 Quiz
Week 7	<ul style="list-style-type: none"> Lambda Function 	<ul style="list-style-type: none"> Reading Discussion Lambda Lab 1 Lambda Lab 2 Module 7 Quiz
Week 8	<ul style="list-style-type: none"> Elastic Beanstalk Review and Final Exam 	<ul style="list-style-type: none"> Reading Discussion Elastic Beanstalk Lab Module 8 Quiz Final Exam

Exam Schedule	
Date	Subject
Week 4	Mid-term Weeks 1 - 4
Week 8	Final Exam - All course materials

Important Dates

Important Dates

<p>DEADLINES:</p> <p>Classes begin – 10/20/2024</p> <p>Last date to enroll with a permission number: 10/30/2024</p> <p>Last date to drop this class without a "W":</p>	<p>HOLIDAYS:</p> <p>10/28, 10/29 - Thanksgiving - Campus Closed</p>
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10/30/2024	
Last date to drop with a "W": 12/01/2024	
Last date to drop with a refund/no fee owed: 10/25/2024	

Missed or Late Work

Late submissions will not be accepted. It is the responsibility of students to meet all assignment deadlines. Exceptions will be made only for documented medical emergencies or other unforeseen and extenuating circumstances, with prior approval from the instructor.

1. **Medical Emergency:** Hospitalization or serious illness supported by medical documentation.
2. **Family Emergency:** Death or critical illness of an immediate family member.
3. **Technical Issues:** Sudden and unforeseen computer or internet failures during a critical assignment period.
4. **Natural Disaster:** Disruption due to a natural disaster, such as a hurricane, earthquake, or wildfire.
5. **College-Sanctioned Events:** Participation in college-sanctioned events with prior approval (e.g., academic conferences, athletic competitions).

Remember, students should provide appropriate documentation to support their claims of extenuating circumstances when requesting exceptions to late work policies.

Participation

As your professor for this online course, I have certain expectations regarding your online presence and participation:

1. **Weekly Login Requirement:** It is expected that you log in to the course platform at least once every week.
2. **Recommended Weekly Routine:** I strongly advise you to log in early in the week to assess your workload for the upcoming week.
3. **Navigating the Week:** Begin by reviewing the week's start page and the designated discussion topic.
4. **Reading Assignments:** Take note of the assigned readings to plan your study schedule accordingly.
5. **Participation Expectation:** You should actively engage in class discussions, ensuring you contribute a minimum of two (2) meaningful posts per week. Please post your initial contribution no later than Wednesday each week.

Consistent engagement and timely participation are essential for your success in this online course.

Regular and Effective Contact

This is an online course, and all of our interactions will occur on Canvas. Please expect frequent communication and feedback from me via private messages, announcements, assignment feedback, and discussion forums.

I typically return grades within 7 days of assessment completion, in the form of qualitative and quantitative feedback. I usually reply to messages on the Pronto App the same day they are received, but please give me up to 48 hours to respond.

Ultimately, we will regularly and substantively interact with each other many times each week, throughout the term. Your role will be to check your grades, messages, announcements, and interact with me and your peers in the discussions.

ADA/Disability Policies

If you are a student with a disability and require classroom accommodation, please see me to discuss arrangements. The sooner I am aware that you are eligible for accommodation, the quicker I will be able to provide them. If you have not done so already, you may also wish to contact the **DSP&S Office** in Instruction **Building 1018 (phone #818.364. 7732/TTD 818.364.7861)** and bring a letter stating the accommodations that are needed.

Students requesting academic accommodations should use the following procedure:

Step 1: Obtain documentation of your disability from a licensed professional. You may contact DSPS to request a Disability Verification Form.

Step 2: Make an appointment to meet with a **DSPS Specialist** to review your documentation and discuss reasonable accommodations. To schedule a meeting, please call DSPS at **(818)364-7732**.

Step 3: Bring your disability documentation to your DSPS appointment. The DSPS office is located in **room 1018** of the **Instructional Building**.

Step 4: Each semester, reach a written accommodation agreement with the DSPS Specialist and your instructor.

To be most effective, students should complete this process by the end of the 3rd week of the semester. Tests with required accommodations must be taken at the DSPS office.

Los Angeles Mission College Race, Equity, and Inclusion Statement of Affirmation

We – the Los Angeles Mission College Faculty, Classified Professional Staff, and Administration – are unified in our commitment to end institutional discrimination and racism. We pledge to address the inherent racism that is rooted in our society’s major institutions, including our very own educational system. Further, we promise to examine our personal role in creating an anti-racist academic environment, and we ask others to join us in our mission to dismantle the systemic barriers which create additional challenges for our students based on:

- race/ethnicity
- gender identity and expression
- sexuality
- national origin
- socioeconomic status
- ability or differing abilities
- language
- religion or belief system
- age
- physical appearance
- intersections of these identities

We acknowledge our presence on the traditional, ancestral, and unceded territory of native tribes and recognize the Tataviam people as the traditional land caretakers of Tovaangar (San Fernando Valley, Los Angeles Basin, and South Channel Islands).

We are committed to closing all existing equity gaps and strive to achieve equality for the success of all students.

We affirm the importance of diversity and will dedicate our efforts to creating an inclusive and supportive environment for all members of our community.

We strive to ensure respectful dialogue at all times as well as language that is responsible and sensitive to the opinions of others, in and outside the classroom.

We recognize our purpose as facilitators in helping students achieve their goals and will support and empower them on their academic paths. We respect academic freedom and promote a community that provides opportunities for collaboration and enrichment so that all voices and ideas can be heard, respected, and supported.

Student Services at LAMC

Email: lamestudentsupport@lacc.edu

Phone: [\(818\) 364-7700](tel:(818)364-7700)

At Los Angeles Mission College, we do everything we can to help our students succeed. That's why we provide a supportive learning environment that includes [Financial Aid](#), [Counseling](#), [Disabled Student Programs and Services \(DSPS\)](#), [Veterans Resources](#), and [Health Services](#).

[Associated Student Organization](#): Get involved in student government! Represent the student voice in campus government and organize clubs and events.

[CalWORKS](#): If you qualify for CalWORKs, you can get money for books/supplies and an array of support services to help you achieve self-sufficiency.

[Campus Sheriff](#): In the event of an emergency, you should call the campus sheriff; please put the number in your phone now: 818 364-7843

[Counseling](#): Do you know what classes you need to reach your educational goals? Create a roadmap to success with an academic counselor!

[Disabled Students Programs & Services](#): DSPS is committed to developing strategies that provide equal opportunity and promote academic success for students with disabilities.

[EOP&S](#): We help economically and educationally underrepresented students to achieve their educational goal(s). If you qualify, you'll receive benefits such as academic counseling, Student Educational plans, priority registration, transfer assistance, tutoring, cash & book grants, meal vouchers, and assistance with technology.

[Financial Aid & Scholarships Office](#): Find out if you qualify for financial aid (including federal and state grants, loans, work-study jobs, and scholarships) by talking to one of our financial aid specialists.

[Foster and Kinship Care/Guardian Scholars Programs](#): If you're a foster youth, or a foster/resource parent, we can help you—in English or Spanish—with training and advocacy for parents and support services for former/current foster youth students.

[Honors Program](#): Want to increase your chances of acceptance into a University? Take an Honors class!

[Learning Resource Center](#): Visit the LRC to get tutoring (both individual and group), topic-specific workshops, and review sessions -- all free of charge!

[Library](#): Gain access to a wide range of information resources -- books, eBooks, magazines, journals, and newspaper articles from LA Mission College.

[Program Mapper](#): Access the online system that helps you decide on a major, determine exactly what classes you need for the degree or certificate you desire, plan out your schedule, and more!

Pathway Coaches: A Pathway Coach supports students throughout their college experience from beginning to end, helping them with enrollment, financial aid, counseling, tutoring, and basic needs.

See the Pathway Coaches section here:

Student Portal: Update your email address, view your schedule and grades from past semesters through the portal. Go to – “students” – “My Mission student portal access” if you have not yet changed your pin it’s your birthdate (MMDD)

I look forward to having a great time on this course as we work together to learn and share new ideas. Please do not hesitate to reach out to me at any time during the course.