



SCHOOL OF BUSINESS

# Cloud Computing for Business Leaders



EXECUTIVE PROGRAM SYLLABUS

# Overview

The goal of the Cloud Computing for Business Leaders Executive Program is to equip executives with the practical skills needed to create, implement and assess cloud strategies and technologies. The program will focus on the unique knowledge and skills that business leaders need to unlock the value of cloud computing in their organizations, or enable a more cloud-native department that leverages cloud computing to drive growth and create operational efficiencies. Among the key topics covered are how to build a business case for cloud, how to address challenges associated with people, process and culture in adoption of cloud and strategies to overcome the challenges, how to set up a governance model for cloud to enforce organizational policies while promoting business agility and how to apply novel cloud services to innovate in the business.

## Program Information



### ESTIMATED TIME TO COMPLETE

4-8 weeks at 5 hours/week



### LEVEL

Practitioner



### PREREQUISITES

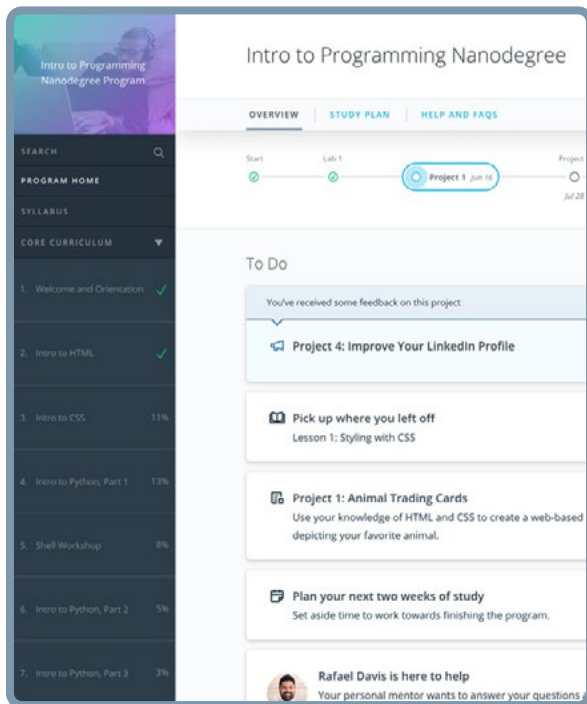
- Identify workloads (business processes, applications, etc) within their organization that can be automated or made more efficient
- Identify roles, skills, organizational silos and procedural constraints within the organization
- Understand the basics of information security
- Demonstrate familiarity with current budgeting practices
- Perform basic functions with word processors, spreadsheets and similar numerical analysis and presentation tools



### LEARN MORE ABOUT THIS PROFESSIONAL PROGRAM:

Contact us at [enterpriseNDs@udacity.com](mailto:enterpriseNDs@udacity.com)

# Our Classroom Experience



## REAL-WORLD PROJECTS

Learners build new skills through industry-relevant projects and receive personalized feedback from our network of 900+ project reviewers. Our simple user interface makes it easy to submit projects as often as needed and receive unlimited feedback.

## KNOWLEDGE

Answers to most questions can be found with Knowledge, our proprietary wiki. Learners can search questions asked by others and discover in real-time how to solve challenges.

## LEARNER HUB

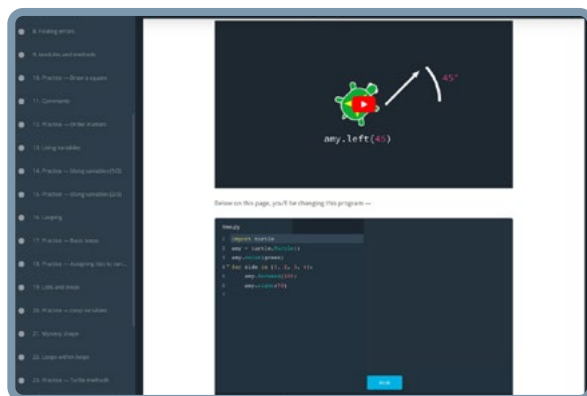
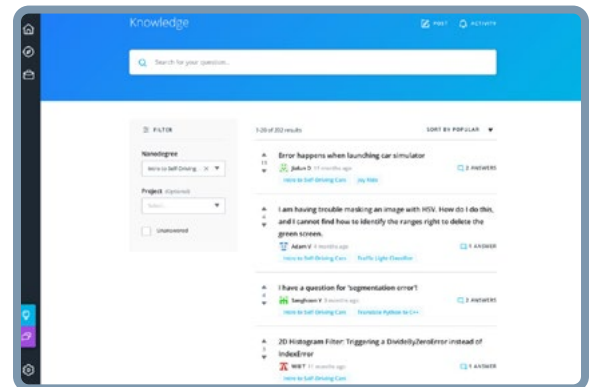
Learners leverage the power of community through a simple, yet powerful chat interface built within the classroom. Learner Hub connects learners with their technical mentor and fellow learners.

## WORKSPACES

Learners can check the output and quality of their code by testing it on interactive workspaces that are integrated into the classroom.

## QUIZZES

Understanding concepts learned during lessons is made simple with auto-graded quizzes. Learners can easily go back and brush up on concepts at anytime during the course.



## CUSTOM STUDY PLANS

Mentors create a custom study plan tailored to learners' needs. This plan keeps track of progress toward learner goals.

## PROGRESS TRACKER

Personalized milestone reminders help learners stay on track and focused as they work to complete their Nanodegree program.

# Executive Program Overview

## Learn with the Best



**Sanjay Agrawal**

FOUNDER & CEO

Sanjay has over 20 years of experience with companies such as AWS, Microsoft and Sun Microsystems building engineering teams, defining products, founding new businesses and advising CxOs of large enterprises to adopt new technology. He co-founded TropoScale LLC, a cloud consulting and advisory firm, to help enterprises innovate with cloud.

## Course: Cloud Computing for Business Leaders

Every business is either going through a digital transformation or planning to, and cloud is almost always an integral part of it. Cloud computing has already crossed the chasm and is now mainstream across all industries. However, cloud is not just a technology, it's a way of doing business. This course is designed with that in mind.

First, we study the business case for cloud. We look at transitioning existing workloads and creating new ones to maximize your ROI and minimize risks. Then we look at preparing your organization by transitioning your people, processes and culture to this new world of cloud. We discuss DevOps, DevSecOps and FinOps as cultural practices. We also discuss how to transform the overall organizational culture and mindset for cloud by setting up a Cloud Center of Excellence (CCOE).

Once we understand how to build this new mindset, we focus on the governance aspects of cloud. While cloud gives you the speed to move fast with a lot of automation, it can lead to undesirable outcomes if you don't put in a governance model. We focus on the elements of a governance model with special emphasis on security, compliance and cost management in the cloud. We also discuss approaches to operationalize governance at enterprise scale.

Once you are in the cloud, you can innovate much faster as the cost of experimentation is very low and the payoff could be very high. We'll look at several leading-edge services provided by cloud providers that companies in every industry are using to innovate in their business. Finally, we'll look at a case study of a major US company that has successfully transformed itself with cloud with the strategy we've outlined here.

# Executive Program Overview

## Capstone Project

Students will be given a fictitious company in the retail sector to analyze and propose a cloud strategy for. Students will be provided multiple artifacts such as company background, CEO email to staff highlighting business challenges and opportunities, org charts, email exchanges illustrating the culture and siloed mindset, financial information on datacenter costs, workload map to Data Centers and more.

Students will analyze these artifacts and from them begin building a cloud strategy that leverages the key learning objectives covered in the program. Students will identify business problems best addressed with cloud, prioritize workloads to maximize ROI, define the organizational model and changes in skill levels and processes, define a governance model that would mitigate risks and optimize spend, and propose a new innovative solution on the cloud that would deliver new business benefits.

### LESSON CONTENT

#### Introduction and Business Case for the Cloud

Compare and contrast public, private and on-prem hosting of services through the different deployment and service model of the cloud. Explain how traditional models for determining cloud ROI using a TCO are only minimally effective, but in addition should include crucial elements such as improved operational resilience, ability to have higher productivity, increased speed of servicing customer needs, ability to scale up and down as needed and improving quality with ability to focus on the core differentiators. Learn the major migration strategies that allow a business at any stage of technology to begin moving towards the cloud.

#### Organizational Capability Building for Cloud

Learn required changes in your staff skill set, your existing processes and practices and your organizational culture to unlock the best value from the cloud. Learn how to drive these changes effectively in your organization. The effectiveness of these shifts in culture, people skills and processes are validated by the increased speed of doing business and an increase in innovations offered to your customers. Learn to use the target state model to help determine your current state and how to use the CCoE (Cloud Center of Excellence) virtual structure as the change agent to drive cloud adoption across the enterprise. Learn how to jump start the culture in your technology teams by moving your current operating model to a DevOps or DevSecOps model. Learn a new model or a cultural practice for Cloud Financial Management, bringing together finance, procurement and engineering teams to manage cloud spend.

#### Cloud Governance Model - Strategy and Implementation

Learn how to maximize business value while minimizing risks to your organization by defining an organization wide governance model. Learn key risk areas such as security, compliance and cost management and how to put automated controls to manage risks without compromising business agility. Dive deep into each of these areas (security, compliance, cost) to understand the risks and mechanisms provided by cloud providers to help you build a governance model on top to manage the risks. Learn how the requirements of skills, processes and culture are complementary to governance mechanisms.

# Executive Program Overview

## Cloud Innovation and Futures

We will look at the increased pace of innovation and how it is driving disruption in all industries. Needless to say, you need to increase your own pace of innovation to avoid getting displaced or disrupted. How does the cloud support innovation? You can innovate anywhere. Innovation requires experimentation. Cloud providers offer almost instant access to a variety of compute, storage, network and higher value services that allow you to experiment in ways never possible. You can fail fast and learn quickly, but you can also quickly scale and expand into other markets If your experiment succeeds in the test market. Learn some fundamental cloud innovations that may help you innovate in your business. Serverless, Containers, IOT, AI, Data Analytics, Edge computing, Blockchain and Quantum computing are major cloud innovation areas today that you can adopt to innovate on top, and build your differentiators. How can organizations identify and take advantage of those innovations? We will take a look at several business cases studies of bleeding-edge innovations.

LESSON TITLE	LEARNING OUTCOME
<b>INTRODUCTION AND BUSINESS CASE FOR CLOUD COMPUTING</b>	<ul style="list-style-type: none"><li>• Distinguish the types of cloud models by service layers and deployment types</li><li>• Differentiate the full range of cloud benefits</li><li>• Describe and justify ROI of cloud-first proposal based on current infrastructure costs/capabilities</li><li>• Develop cloud migration strategies for different types of applications</li></ul>
<b>ORGANIZATIONAL CAPABILITY BUILDING FOR CLOUD</b>	<ul style="list-style-type: none"><li>• Identify and address organizational skills gaps</li><li>• Build organizational capabilities to adopt cloud</li><li>• Setup appropriate virtual structures to drive cultural and process changes</li></ul>
<b>CLOUD GOVERNANCE MODEL - STRATEGY AND IMPLEMENTATION</b>	<ul style="list-style-type: none"><li>• Analyze cloud spend and implement a cloud spend governance model</li><li>• Implement a cloud security governance model using the “shared responsibility” model</li><li>• Implement compliance governance using the “governance, risk and compliance in the cloud” model</li><li>• Implement a governance model to manage cost, security and compliance at enterprise scale</li></ul>
<b>CLOUD INNOVATION AND FUTURES</b>	<ul style="list-style-type: none"><li>• Identify and evaluate cloud innovation opportunities relevant to your business</li><li>• Design business solutions leveraging cloud innovation</li></ul>

# Our Executive Programs Include:



## Pre-Assessments

Our in-depth workforce assessments identify your team's current level of knowledge in key areas. Results are used to generate custom learning paths designed to equip your workforce with the most applicable skill sets.



## Dashboard & Progress Reports

Our interactive dashboard (enterprise management console) allows administrators to manage employee onboarding, track course progress, perform bulk enrollments and more.



## Industry Validation & Reviews

Learners' progress and subject knowledge is tested and validated by industry experts and leaders from our advisory board. These in-depth reviews ensure your teams have achieved competency.



## Real World Hands-on Projects

Through a series of rigorous, real-world projects, your employees learn and apply new techniques, analyze results and produce actionable insights. Project portfolios demonstrate learners' growing proficiency and subject mastery.

# Our Review Process

## Real-life Reviewers for Real-life Projects

Real-world projects are at the core of our Nanodegree programs because hands-on learning is the best way to master a new skill. Receiving relevant feedback from an industry expert is a critical part of that learning process and infinitely more useful than that from peers or automated grading systems. Udacity has a network of over 900 experienced project reviewers who provide personalized and timely feedback to help all learners succeed.


## All Learners Benefit From:




Line-by-line feedback for coding projects



Industry tips and best practices



Advice on additional resources to research



Unlimited submissions and feedback loops


## How it Works

Real-world projects are integrated within the classroom experience, making for a seamless review process flow.


- Go through the lessons and work on the projects that follow
- Get help from your technical mentor, if needed
- Submit your project work
- Receive personalized feedback from the reviewer
- If the submission is not satisfactory, resubmit your project
- Continue submitting and receiving feedback from the reviewer until you successfully complete your project

## About our Project Reviewers


Our expert project reviewers are evaluated against the highest standards and graded based on learners' progress. Here's how they measure up to ensure your success.



**Expert Project Reviewers**  
Are hand-picked to provide detailed feedback on your project submissions.



**Projects Reviewed**  
Our reviewers have extensive experience in guiding learners through their course projects.



**Hours Average Turnaround**  
You can resubmit your project on the same day for additional feedback.



**Average Reviewer Rating**  
Our learners love the quality of the feedback they receive from our experienced reviewers.



**Vaibhav**  
UDACITY LEARNER

*"I never felt overwhelmed while pursuing the Nanodegree program due to the valuable support of the reviewers, and now I am more confident in converting my ideas to reality."*

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Udacity Enterprise Executive Program Cloud  
Computing for Business Leaders