

Develop Conversational Agents on Google Cloud

Conversational Agents, part of AI Applications, is an intelligent, conversational (GUI) interface. Conversational Agents uses an AI development system with access to SDKs and APIs in multiple languages. In this course, you will learn how to leverage Conversational Agents to design and build conversational agents on Google Cloud.

**DURATION**

3 days

**LEVEL**

200 - Intermediate

**FORMAT**

Instructor-led

What you'll learn

- Understand how a user's request is translated into an action and response.
- Use webhooks to access data and products that are not part of the agent.
- Handle user errors and unexpected requests.
- Use the graphical user interface (GUI) to develop an agent.
- Gain a working knowledge of the testing tools available in the GUI.
- Integrate a chatbot into external user interfaces.
- Incorporate generative AI features into your agent.
- Define and extract system, list, and regular expression entities from user inputs.
- Manipulate and pass session parameters across pages in conversational flows.
- Implement event handlers to manage transitions, user errors, and unexpected requests.
- Manage agent versions and environments for deployment and user acceptance testing.
- Configure rich, conditional, and custom fulfillment for agent responses.
- Integrate and configure conversational agents with external telephony and chat channels.
- Organize and optimize conversational flows using route groups and flow-level routing.
- Apply design guardrails and validation rules to ensure robust conversational experiences.

Overview	15 modules · 7 labs
Who this course is for	• Conversational designers, developers, and business analysts
Products	• Conversational Agents • Agent Platform • Conversational AI Platform • Dialogflow • Dialogflow Integration • Agent Studio on Gemini Enterprise Agent Platform • Agent Platform Agents
Prerequisites	• Some familiarity with a graphical user interface for Conversational Agents will ease the learning process. Understanding JSON is helpful.

Module 01 [Introduction to Conversational Agents](#)

Topics	• Google's goals for virtual agents • Virtual agent product suites
Objectives	• Describe the goals of virtual agent development and product suites.

Module 02 [Introduction to conversational design](#)

Topics	• Convergent and divergent approaches • Conversation design strategy
Objectives	• Understand virtual agent design

Module 03

Steering bot design basics

Topics

- Use cases
- Virtual agents
- Start pages
- Routes
- Pages

Objectives

- Design a basic steering bot using Conversational Agents
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Module 04

Implementing bot design

Topics

- Use case review
- Agent architecture
- Creating the virtual agent
- Creating the route
- Testing the route

Objectives

- Create an agent, a route, intents, and pages.
- Implement routes without parameters.
- Use test agent for testing.

Activities

- Lab: Conversational Agents: Bot Building Basics
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Module 05

Entities

Topics

- Introduction to entities
- System entity types
- Custom entity types
- Managing entities in an agent

Objectives

- Access entity parameters.
- Create custom regular expression (Regex) entities.
- Create custom list entities.
- Use current recommended practices for extending a system entity class.

Module 06

Parameters

Topics

- Introduction to parameters
- Parameters from intents
- Preset parameters
- Parameters from webhooks

Objectives

- Manipulate parameters using various methods.

Activities

- Lab: Conversational Agents: Parameter Manipulation
-

Module 07

Event handlers

Topics

- Definition of event handlers
- Page, flow event handler, and scope rules
- Form event handler and scope rules

Objectives

- Understand event handlers and how they are used in Conversational Agents.
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Module 08

Versions and environments

Topics

- Version management in Conversational Agents
- Environment management in Conversational Agents

Objectives

- Use version testing.
- Use environments for different audiences.

Activities

- Lab: Conversational Agents: Managing Environments
-

Module 09

Testing

Topics	• Validation • Publication • Simulation
Objectives	• Validate for static analysis. • Publish to pretest user acceptance testing (UAT). • Simulate for unit testing.
Activities	• Lab: Debugging the Agent Using Test Agent

Module 10

Fulfillment

Topics	• Introduction to fulfillment • Examples of static fulfillment
Objectives	• Use text, conditional, and custom fulfillment.

Module 11

Integrations

Topics	• Google Messenger • Conversational Phone Gateway
Objectives	• Configure Google Messenger and Conversational Phone Gateway.

Module 12

Webhooks

Topics	• Why have a webhook? • Types of webhooks • Setting up a fulfillment webhook • Modifications for a JSON response webhook
Objectives	• Recognize the different types of webhooks. • Set up a webhook with fulfillment response. • Set up a webhook JSON response.

Module 13

Route groups

Topics	• Introduction to route groups • Managing a route group
Objectives	• Set up a flow route group. • Set up a session route group.
Activities	• Lab: Configuring a Route Group for Your Virtual Agent

Module 14

Design techniques

Topics	• The concept of a flow • Steering bot designs • The concept of guardrails • Design principle
Objectives	• Use flows to speed the development of an agent. • Use guardrails to prevent problems in agent design.

Module
15

Generators and generative fallback

Topics

- Overview of generators
- Overview of generative fallback

Objectives

- Use generators and generative fallback in virtual agents.

Activities

- Lab: Conversational Agents with Generative Fallbacks