



# AI-3003: Build a Natural Language Processing Solution with Azure AI Services

Course ID #: 7000-900-ZZ-Z

Hours: 7

## Course Content

### Course Description:

Natural language processing (NLP) solutions use language models to interpret the semantic meaning of written or spoken language. You can use the Language Understanding service to build language models for your applications.

### Prerequisites:

Familiarity with Azure and the Azure portal.  
Experience programming with C# or Python.

### Target Audience:

AI Engineer

### Topics:

#### Analyze text with Azure AI Language

- Introduction
- Provision an Azure AI Language resource
- Detect language
- Extract key phrases
- Analyze sentiment
- Extract entities
- Extract linked entities
- Exercise - Analyze text
- Knowledge check
- Summary

#### Create question answering solutions with Azure AI Language

- Introduction
- Understand question answering
- Compare question answering to Azure AI Language understanding
- Create a knowledge base
- Implement multi-turn conversation
- Test and publish a knowledge base
- Use a knowledge base
- Improve question answering performance

- Exercise - Create a question answering solution
- Knowledge check
- Summary

#### Build a conversational language understanding model

- Introduction
- Understand prebuilt capabilities of the Azure AI Language service
- Understand resources for building a conversational language understanding model
- Define intents, utterances, and entities
- Use patterns to differentiate similar utterances
- Use pre-built entity components
- Train, test, publish, and review a conversational language understanding model
- Exercise - Build an Azure AI services conversational language understanding model
- Knowledge check
- Summary



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## Create a custom text classification solution

- Introduction
- Understand types of classification projects
- Understand how to build text classification projects
- Exercise - Classify text
- Knowledge check
- Summary

## Custom named entity recognition

- Introduction
- Understand custom named entity recognition
- Label your data
- Train and evaluate your model
- Exercise - Extract custom entities
- Knowledge check
- Summary

## Translate text with Azure AI Translator service

- Introduction
- Provision an Azure AI Translator resource
- Understand language detection, translation, and transliteration
- Specify translation options
- Define custom translations
- Exercise - Translate text with the Azure AI Translator service
- Knowledge check
- Summary

## Create speech-enabled apps with Azure AI services

- Introduction
- Provision an Azure resource for speech
- Use the Azure AI Speech to Text API
- Use the text to speech API
- Configure audio format and voices
- Use Speech Synthesis Markup Language
- Exercise - Create a speech-enabled app
- Knowledge check
- Summary

## Translate speech with the Azure AI Speech service

- Introduction
- Provision an Azure resource for speech translation
- Translate speech to text
- Synthesize translations
- Exercise - Translate speech
- Knowledge check
- Summary

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## NASBA Information

**Level:** Intermediate

**Attendance Requirement:** To be awarded the full credit hours, you must sign in and attend the entire course.

**Fields:** Computer Software & Applications

**CPEs:** 7.8

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