# **CERTNEXUS**<sup>®</sup> GenAIBIZ<sup>™</sup> (GAZ-110) Exam Blueprint

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# **Introduction to CertNexus**

CertNexus is a vendor-neutral certification body, providing emerging technology certifications and micro-credentials for business, data, developer, IT, and security professionals. CertNexus' mission is to assist closing the emerging tech global skills gap while providing individuals with a path towards rewarding careers in Cybersecurity, Data Science, Data Ethics, Internet of Things, and Artificial Intelligence (AI)/ Machine Learning (ML).

We rely on our Subject Matter Experts (SMEs) to provide their industry expertise and help us develop these credentials by participating in a Job Task Analysis, Exam Item Development, and determining the Cut Score. We also depend upon practitioners in the field to participate in a survey of the Job Task Analysis and beta testing to ensure that our certifications validate knowledge and skills relevant to the industry.

# Acknowledgements

CertNexus was honored to have the following Subject Matter Experts contribute to the development of this exam blueprint.

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# Exam Information

# **Candidate Eligibility**

The GenAIBIZ assessment requires no application fee, supporting documentation, or other eligibility verification measures for you to be eligible to take it. Simply purchase an access key for the *GenAIBIZ (Exam GAZ-110): Making ChatGPT and Generative AI Work for You* course from the CertNexus Store <u>here</u>. This course includes access to the credential process directly through the CHOICE platform.

# **Exam Prerequisites**

Successful candidates should have fundamental knowledge of business processes and general business concepts, as well as domain knowledge in generative AI. It is recommended that candidates acquire domain knowledge by attending the *CertNexus® GenAIBIZ (Exam GAZ-110): Making ChatGPT and Generative AI Work for You* course prior to taking the assessment.

# **Exam Specifications**

Number of Items: 25

Passing Score: 76% or 19/25 items

Duration: Estimated 20–45 minutes; candidates may retake as many times as desired

Exam Options: Online through the CHOICE platform

Item Formats: Multiple Choice/Multiple Response

Upon successful completion candidates will earn the CertNexus GenAIBIZ credential.

# **Exam Description**

#### **Target Audience:**

The GenAIBIZ assessment is primarily designed for business leaders, consultants, product and project managers, and other decision makers who are interested in growing the business by leveraging the power of generative AI. Other business professionals who wish to explore generative AI solutions are also candidates for this assessment.

#### Exam Objective:

Upon successful completion of the GAZ-110 assessment, business professionals will demonstrate an understanding of what generative AI is, how it relates to and can benefit business functions, how to identify potential risks, and how to identify the challenges and milestones of implementing generative AI and becoming a generative AI-driven organization.

To ensure that candidates possess the aforementioned knowledge, skills, and abilities, the GAZ-110 assessment will test them on the following domains with the following weightings:

Domain	% of Examination
1.0 Identify Al Fundamentals	20%
2.0 Solve Business Problems with AI-Generated Content	35%
3.0 Identify Generative AI Challenges	25%
4.0 Implement Business Strategies for Generative AI	20%
Total	100%

The information that follows is meant to help you prepare for your certification exam. This information does not represent an exhaustive list of all the concepts and skills that you may be tested on during your exam. The exam domains, identified previously and included in the objectives listing, represent the large content areas covered in the exam. The objectives within those domains represent the specific tasks associated with the job role(s) being tested. The information beyond the domains and objectives is meant to provide examples of the types of concepts, tools, skills, and abilities that relate to the corresponding domains and objectives. All of this information represents the industry-expert analysis of the job role(s) related to the certification and does not necessarily correlate one-to-one with the content covered in your training program or on your exam. We strongly recommend that you independently study to familiarize yourself with any concept identified here that was not explicitly covered in your training program or products.

# **Domains and Objectives**

# Domain 1.0 Identify AI Fundamentals [20%]

#### **Objective 1.1** Define fundamental AI terms and concepts.

- Artificial Intelligence
  - General vs. narrow AI
  - Recent history/timeline
  - Enabling technologies
- Machine Learning
  - Algorithm vs. model
  - Datasets
  - Approaches (supervised vs. unsupervised)
- Deep Learning
  - ANN
  - Network parameters/weights
  - Hyperparameters
  - Applications
    - NLP
    - Computer vision
- Model checkpoints

#### **Objective 1.2 Define generative AI terms and concepts.**

- Generative Al
  - Key organizations
  - Key resources
- Generative AI modalities
  - Text
  - Code
  - Images
  - Video
  - Audio
  - Multimodal
- Generative AI approaches
  - GAN
  - VAE
  - GPT
  - Diffusion
  - RLFH
  - Prompting
    - Prompt engineering
    - In-context prompting
- Fine-tuning models
- API access

#### Domain 2.0 Solve Business Problems with AI-Generated Content [35%]

#### **Objective 2.1** Generate text using AI.

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- LLM
- Tokens
- Approaches
  - Text generation
  - Text completion
  - Chatbots
  - Speech to text
  - Transcription
  - Assistive AI with text outputs
- Prompt engineering for text generation
- Fine-tuning text models
- Common text generation tools
  - OpenAI GPT models
  - ChatGPT
  - Bard
  - LLaMA
  - Microsoft 365 Copilot
  - Duet Al
  - Whisper
- Business use cases
  - Customer service

- Online ordering systems
- Marketing campaigns
- Information summarization
- Information mining and inference
- Language translation
- Interviews and onboarding

#### Objective 2.2 Generate code using AI.

- Approaches
  - Code generation
  - Code completion
  - Code refactoring
  - Code testing
  - Code debugging
  - Code commenting and documentation
  - Assistive AI with code outputs
- Prompt engineering for code generation
- Fine-tuning code models
- Common code generation tools
  - OpenAl Codex
  - GitHub Copilot
  - Amazon CodeWhisperer
  - Duet Al
  - CodeT5
  - CodeGen
- Business use cases
  - Rapid/agile development
  - Project management
  - DevOps
  - Proof of concept
  - Software prototyping
  - QA
  - Performance optimization
  - Software security

#### Objective 2.3 Generate images and video using Al.

- Image approaches
  - Text to image
  - Image to image
  - Image editing and inpainting
  - Image control
  - Image upscaling
  - Assistive AI with image outputs
- Video approaches
  - Text to video
  - Image to video
  - Text + image to video
  - Video to video

- Frame interpolation
- Video customization
- Assistive AI with video outputs
- Prompt engineering for image and video generation
- Fine-tuning image and video models
- Common image generation tools
  - DALL·E
  - Craiyon
  - Midjourney
  - Stable Diffusion
  - DreamBooth
  - Imagen
- Common video generation tools
  - Synthesia
  - Rephrase Studio
  - Make-A-Video
  - Runway
- Business use cases
  - Business use cases
    - Promotional materials
    - Press releases
    - Training materials
    - Games/virtual worlds
  - Corporate branding
  - Data visualization
  - Product design and prototyping
  - Website and app styling
  - Product listings
  - Medical imaging and diagnostics

#### **Objective 2.4** Generate audio using AI.

- Approaches
  - Text to audio
  - Audio to audio
  - Audio editing and cleaning
  - Assistive AI with audio outputs
- Prompt engineering for audio generation
- Fine-tuning audio models
- Common audio generation tools
  - Jukebox
  - VALL-E
  - MusicLM
  - ElevenLabs
  - Business use cases
    - Audio assets
      - Promotional materials
      - Press releases

- Training materials
- Games/virtual worlds
- Voiced chatbots/assistants
- Accessibility
- Localization
- Language learning

# Domain 3.0 Identify Generative AI Challenges [25%]

# **Objective 3.1** Identify shortcomings of generative AI.

- Confabulation/hallucination
- Misinformation and misleading content
- Cost
  - Monetary cost of implementation
  - Training time cost
  - Output time cost
- Lack of fine-tuned control
- Limitations of training data
- Hardware requirements
- Reliance on external factors
  - Cloud services
  - Foundational models
- Industry-specific risks
- Adversarial vulnerabilities

#### **Objective 3.2** Identify ethical risks of generative AI.

- Privacy issues
- Accountability issues
- Transparency/explainability issues
- Bias/discrimination issues
- Safety/security issues

# **Objective 3.3** Identify business concerns of generative AI.

- Governance
- Employee impact
- Future of work
- Operational risks
- Data risks
- Brand reputation/consumer trust risks
- Legal issues
  - Intellectual property/copyright
  - AI laws and regulations

# Domain 4.0 Implement Business Strategies for Generative AI [20%]

# **Objective 4.1** Apply best practices for implementing generative AI in the organization.

- Project factors
  - Scope
  - Strategy
  - Objectives

- Goals
- Requirements
- Alignment with initiatives
  - Organizational initiatives
  - ESG initiatives
  - Ethics and compliance initiatives
- Acquisition
  - Resources
  - Job expertise
- Education
  - End users
  - Employees
- Selection of generative AI
  - Modalities
  - Tools
- IT strategy and infrastructure
  - Data and tools used in fine tuning
  - Tech stack for implementing generative AI
  - Cloud vs. on-premises resource allocation
- Change management
  - Change agents
  - Knowledge translators
  - Humans in the loop
- Prototyping

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#### **Objective 4.2 Evaluate the results of generative AI projects.**

- Business analyses
  - Business impact analysis
  - Comparative analysis
  - User feedback
  - Collection
  - Analysis
- Usage of generative AI systems
  - Monitoring
  - Analysis
- KPIs
- Adverse results from generative AI systems
  - Project limitations
  - Undesirable outcomes
- Long-term sustainability

# **GenAIBIZ Acronyms**

Acronym	Expanded Form
AGI	Artificial general intelligence
AI	Artificial intelligence
ANN	Artificial neural network
API	Application programming interface
DL	Deep learning
ESG	Environmental, social, and governance
GAN	Generative adversarial network
GPT	Generative pre-trained transformer
GPU	Graphics processing unit
IDE	Integrated development environment
KPI	Key performance indicator
LLaMA	Large Language Model Meta Al
LLM	Large language model
ML	Machine learning
NLP	Natural language processing
PaLM	Pathways Language Model
RLHF	Reinforcement learning from human feedback
SD	Stable Diffusion
QA	Quality assurance
VAE	Variational autoencoder



CertNexus offers personnel certifications and micro credentials in a variety of emerging technology skills including Cybersecurity, Cyber Secure Coding, the Internet of Things (IoT), IoT Security, Data Science, Artificial Intelligence, and Data Ethics. For a complete list of our credentials visit https://certnexus.com/certification/.



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