Preparation Guide

Edition 202505

Content

1. Overview

EXIN BCS Artificial Intelligence Foundation (AIF.EN)

Scope

The EXIN BCS Artificial Intelligence Foundation certification confirms that the professional understands Artificial Intelligence (AI) principles, with a specific focus on ethical and sustainable practices, and knows the benefits and risks of AI / machine learning.

This certification includes the following topics:

- Introduction to AI and historical development
- Ethical and legal considerations
- Enablers of AI
- Finding and using data in AI
- Using AI in your organization
- Future planning and impact – human plus machine

Summary

Artificial Intelligence (AI) has recently surged in popularity, becoming part of everyday thinking, transforming industries, and reshaping the future of technology. It revolutionizes how systems learn from experience and mimic human intelligence.

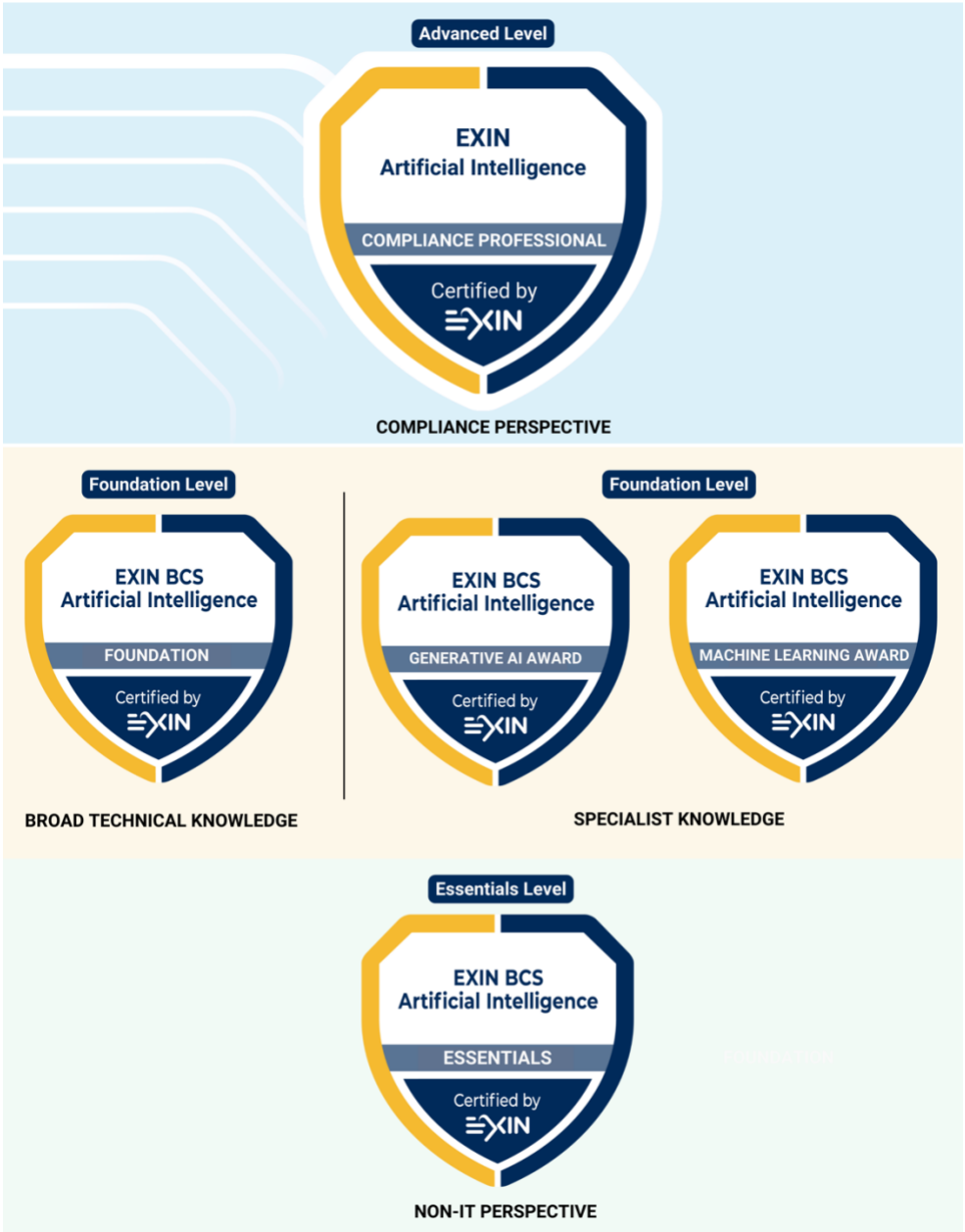
The EXIN BCS Artificial Intelligence Foundation equips candidates with knowledge of key AI techniques, their use in the real world and their impact on our lives.

This certification explores the historical journey of AI, the advantages and challenges of ethical and sustainable AI, the key enablers of AI including data, and the future interplay between AI and human roles in the workplace.

Building on the foundational concepts introduced in the EXIN BCS Artificial Intelligence Essentials, this certification offers a comprehensive understanding crucial for navigating the rapidly evolving AI landscape.

Context

The EXIN BCS Artificial Intelligence Foundation certification is part of the EXIN Artificial Intelligence qualification program.



Target group

The EXIN BCS Artificial Intelligence Foundation is suitable for individuals with an interest in exploring the functions and abilities of AI, and how these can be used in an organization.

The following roles could be interested:

- developers
- project managers
- product managers
- chief information officers
- chief finance officers
- change practitioners
- business consultants
- leaders of people

Requirements for certification

- Successful completion of the EXIN BCS Artificial Intelligence Foundation exam.

Knowledge of AI terminology, for instance through the EXIN BCS Artificial Intelligence Essentials exam or a BCS Artificial Intelligence Award exam, is strongly recommended.

Examination details

Examination type:	Multiple-choice questions
Number of questions:	40
Pass mark:	65%
Open book:	No
Notes:	No
Electronic equipment/aides permitted:	No
Exam duration:	60 minutes

The Rules and Regulations for EXIN's examinations apply to this exam.

Bloom level

The EXIN BCS Artificial Intelligence Foundation certification tests candidates at Bloom levels 1 and 2 according to Bloom's revised taxonomy:

- Bloom level 1: Remembering – relies on recall of information. Candidates will need to absorb, remember, recognize and recall.
- Bloom level 2: Understanding – a step beyond remembering. Understanding shows that candidates comprehend what is presented and can evaluate how the learning material may be applied in their own environment. This type of questions aims to demonstrate that the candidate is able to organize, compare, interpret and choose the correct description of facts and ideas.

Training

Contact hours

The recommended number of contact hours for this training course is 18. This includes group assignments, exam preparation and short breaks. This number of hours does not include lunch breaks, homework and the exam.

Indication study effort

56 hours (2 ECTS), depending on existing knowledge.

Training organization

You can find a list of our Accredited Training Organizations at www.exin.com.

2. Exam requirements

The exam requirements are specified in the exam specifications. The following table lists the topics of the module (exam requirements) and the subtopics (exam specifications).

Exam requirements	Exam specifications	Weight
1. An introduction to AI and historical development		**15%**
	1.1 Identify the key definitions of key AI terms	
	1.2 Describe key milestones in the development of AI	
	1.3 Describe different types of AI	
	1.4 Explain the impact of AI on society	
	1.5 Describe sustainability measures to help reduce the environmental impact of AI	
2. Ethical and legal considerations		**15%**
	2.1 Describe ethical concerns, including bias and privacy, in AI	
	2.2 Describe the importance of guiding principles in ethical AI development	
	2.3 Explain strategies for addressing ethical challenges in AI projects	
	2.4 Explain the role of regulation in AI	
	2.5 Explain the process of risk management in AI	
3. Enablers of AI		**15%**
	3.1 List common examples of AI	
	3.2 Describe the role of robotics in AI	
	3.3 Describe machine learning	
	3.4 Identify common machine learning concepts	
	3.5 Describe supervised and unsupervised learning	
4. Finding and using data in AI		**20%**
	4.1 Describe key data terms	
	4.2 Describe the characteristics of data quality and why it is important in AI	
	4.3 Explain the risks associated with handling data in AI and how to minimize them	
	4.4 Describe the purpose and use of big data	
	4.5 Explain data visualization techniques and tools	
	4.6 Describe key generative AI terms	
	4.7 Describe the purpose and use of generative AI including large language models (LLMs)	
	4.8 Describe how data is used to train AI in the machine learning process	
5. Using AI in your organization		**20%**
	5.1 Identify opportunities for AI in your organization	
	5.2 List the contents and structure of a business case	
	5.3 Identify and categorize stakeholders relevant to an AI project	
	5.4 Describe project management approaches	
	5.5 Identify the risks, costs and benefits associated with a proposed solution	
	5.6 Describe the ongoing governance activities required when implementing AI	

6. Future planning and impact – human plus machine		**15%**
	6.1 Describe the roles and career opportunities presented by AI	
	6.2 Identify AI uses in the real world	
	6.3 Explain AI's impact on society, and the future of AI	
	6.4 Describe consciousness and its impact on ethical AI	
	Total	**100%**

Exam specifications

1 An introduction to AI and historical development

The candidate can…

1.1 identify the key definitions of key AI terms.

Indicative content

a. Human intelligence – "The mental quality that consists of the abilities to learn from experience, adapt to new situations, understand and handle abstract concepts, and use knowledge to manipulate one's environment."
b. Artificial Intelligence – "Intelligence demonstrated by machines, in contrast to the natural intelligence displayed by humans and other animals."
c. Machine learning – "The study of computer algorithms that allow computer programs to automatically improve through experience".
d. Scientific method – "An empirical method for acquiring knowledge that has characterized the development of science."

Guidance

To build their understanding of AI, it is essential for candidates to be able to know the definitions of the key AI terms listed.

1.2 describe key milestones in the development of AI.

Indicative content

a. Asilomar principles
b. Dartmouth conference of 1956
c. AI winters
d. Big data and the Internet of Things (IoT)
e. Large language models (LLMs)

Guidance

Candidates will be able to describe the events that took place to create these key milestones in the evolution of AI.

Asilomar principles are a set of guidelines for responsible AI development. The Dartmouth conference which took place in 1956, is considered to be the starting point of AI as a field of practice. Candidates should understand the concept of AI winters (from 1974-1980 and from 1987-1993) as well as the rise of big data and the development of generative AI.

Big data refers to the access to enormous amounts of data from a wide variety of sources, including social media, sensors, and other connected devices. Candidates should understand the widespread use of LLMs in 2022, which made AI a matter of public interest like never before.

1.3 describe different types of AI.

Indicative content

a. Narrow/weak AI.
b. General/strong AI.

Guidance

Candidates will be able to describe the differences between narrow AI (weak AI) and general AI (strong AI).

They will be able to provide real-world examples to illustrate each type and explain their strengths and weaknesses for example, spam filtering, image recognition in medical diagnostics, generative AI.

Narrow AI (ANI), also known as weak AI, is task-specific and operates within well-defined domains. Examples include:
- Image recognition: Identifying objects or patterns in images.
- Speech recognition: Converting spoken language into text.
- Language translation: Translating text from one language to another.
- Virtual assistants like Siri or Alexa.

General AI (AGI) also known as strong AI aims to replicate human intelligence. It is the hypothetical intelligence of a machine that has the capacity to understand or learn any intellectual task that a human being can understand or learn.

1.4 explain the impact of AI on society.

Indicative content

a. Ethical principles
b. Social impact
c. Economic impact
d. Environmental impact
e. UN 17 Sustainable Development Goals (SDGs)
f. EU AI Act (2024)

Guidance

Candidates should understand different sources of basic principles which guard AI development and use, such as;
- Floridi & Cowls' principles of beneficence, non- maleficence, autonomy, justice, and explicability.
- AI UK principles of safety, security and robustness, transparency and explainability, fairness, accountability and governance, and contestability and redress.

Candidates should understand these guiding principles and be able to explain their impact in the ethical development and use of AI.

The world of AI is constantly changing, and the social, economic, and environmental impact is of growing concern.

Candidates will be able to outline some key aspects of the impact e.g. energy consumption (the AI industry, particularly generative AI systems, consumes vast amounts of energy), water usage (generative AI systems necessitate substantial water resources for cooling their processors and generating electricity), and job security, ways of working and need to develop new skills.

1.5 describe sustainability measures to help reduce the environmental impact of AI.

Indicative content

a. Green IT initiatives
b. Data center energy and efficiency
c. Sustainable supply chain
d. Choice of algorithm
e. Low-code/no-code programming
f. Monitoring and reporting environmental impact

Guidance

The development and running of AI can require significant computational power and consume substantial amounts of energy. Candidates should understand the environmental considerations of AI and the different measures that can be taken throughout the AI lifecycle to reduce its environmental impact.

2 Ethical and legal considerations

The candidate can…

2.1 describe ethical concerns, including bias and privacy, in AI.

Indicative content

a. What is ethics?
b. Differences between ethics and law
c. Ethical concerns:
- Potential for bias, unfairness, and discrimination
- Data privacy and protection
- Impact on employment and the economy
- Autonomous weapons
- Autonomous vehicles and liability framework

Guidance

AI offers huge opportunities however there are also commonly held ethical concerns about its increasingly widespread use.

Ethics relate to the moral principles that govern a person's behavior or the conducting of an activity.

Candidates will be able to state the general definition of ethics, describe the differences between ethics and law, and describe the different areas of concern.

2.2 describe the importance of guiding principles in ethical AI development.

Indicative content

a. UK AI principles and other relevant legislation
- Safety, security and robustness
- Transparency and explainability
- Fairness
- Accountability and governance
- Contestability and redress

b. What is ethics?

Guidance

Guiding principles in ethical AI development work to ensure that AI technologies are designed and implemented responsibly.

AI governance is a set of practices to keep AI systems under control so that they remain safe and ethical e.g. policies and standards to adhere to in organizations, AI steering committees.

Candidates should understand these guiding principles and be able to describe their impact in the ethical development and use of AI.

2.3 explain strategies for addressing ethical challenges in AI projects.

Indicative content

a. Challenges:

- Self-interest
- Self-review
- Conflict of interest
- Intimidation
- Advocacy

b. Strategies:

- Dealing with bias
- Openness
- Transparency
- Trustworthiness
- Explainability

Guidance

Addressing ethical challenges in AI projects is crucial for ensuring responsible and trustworthy deployment. Ethical considerations should be integrated into every stage of AI development, from data collection to deployment with the use of guidelines and frameworks that address ethical concerns e.g. ethical risk framework.

Candidates will be able to identify the challenges to ethical behavior and the ways in which they can be minimized.

2.4 explain the role of regulation in AI.

Indicative content

a. The need for regulation
b. The AI regulation landscape, e.g. WCAG
c. Data Protection Act 2018 and UK GDPR
d. International Standards Organization (ISO, NIST)
e. The consequences of unregulated AI

Guidance

Regulation has an important role to play in the development and use of AI technology. It ensures there is clear legal accountability that governs its effective management.

Candidates will be able to explain the need for regulation, professional standards (ethical, accountable, competent, inclusive). They will understand the current and proposed regulations that will influence the continued development and use of AI in the UK and the EU.

2.5 explain the process of risk management in AI.

Indicative content

a. Risk:
- Risk – "A person or thing regarded as a threat or likely source of danger."
- Risk management refers to a processor series of processes which allow risk to be understood and minimized proactively.

b. Techniques:
- Risk analysis
- SWOT analysis
- PESTLE
- Cynefin

c. Navigate AI-related regulations and standards:
- UK AI principles

d. Risk mitigation strategies:
- Ownership and accountability
- Stakeholder involvement
- Subject matter experts

Guidance

Candidates will be able to identify risks, risk management techniques and risk mitigation strategies including the importance of minimizing risk, in relation to AI adoption.

They will be able to explain AI-related regulations and standards.

3 Enablers of AI

The candidate can…

3.1 list common examples of AI.

Indicative content

a. Human compatible
b. Wearable
c. Edge
d. Internet of Things (IoT)
e. Personal care
f. Self-driving vehicles
g. Generative AI tools

Guidance

There are countless examples of AI in everyday life, and candidates should be able to recognize examples of and describe those listed.

3.2 describe the role of robotics in AI.

Indicative content

a. Robotics – "A machine that can carry out a complex series of tasks automatically, either with or without intelligence."
b. Intelligent or non-intelligent.
c. Types of robots:
- Industrial
- Personal
- Autonomous
- Nanobots
- Humanoids

d. Robotic process automation (RPA)

Guidance

Candidates should be able to state the definition of robots as stated and differentiate between intelligent and non-intelligent robots. They should explain that RPA refers to a machine that can carry out a complex series of tasks automatically, either with or without intelligence, usually with a goal of improving processes.

Various types of robots exist, and candidates should be familiar with each of these and what they are used for.

3.3 describe machine learning.

Indicative content

a. Machine learning – "The field of machine learning is concerned with the question of how to construct computer programs that automatically improve with experience." (Tom Mitchell)
b. Neural networks – "A machine learning program, or model, that makes decisions in a manner similar to the human brain, by using processes that mimic the way biological neurons work together to identify phenomena, weigh options and arrive at conclusions."
c. Deep learning – "Deep learning is a multi- layered neural network."
d. Large language models (LLMs) – "LLMs are deep learning algorithms that can recognize, summarize, translate, predict, and generate content using very large datasets." (IBM)

Guidance

Candidates should understand that machine learning is a subset of AI.

AI itself is not a new concept; machine learning is another step in the evolution of AI. Machine learning is used within data science and is the application of algorithms to derive insight from data and big data.

3.4 identify common machine learning concepts.

Indicative content

a. Prediction
b. Object recognition
c. Classification including random decision forests
d. Clustering
e. Recommendations (e.g. Netflix, Spotify)

Guidance

Machine learning can be used in several contexts to complete different types of tasks. Candidates should be encouraged to explore different examples and applications of machine learning.

3.5 describe supervised and unsupervised learning.

Indicative content

a. Supervised learning
b. Unsupervised learning
c. Semi-supervised learning

Guidance

It is useful for candidates to have a basic understanding of the different types of approaches to machine learning to understand how it can be used to work with different types of data and where different algorithms are best used.

Supervised learning involves the application of an algorithm to labeled data to solve a problem, for example, classification, where we know what the output will be.

Unsupervised learning involves the application of an algorithm to unlabeled data to solve a problem, for example, clustering (grouping data based on similarities).

Semi-supervised learning involves the application of an algorithm where during the training of the algorithm we begin with a small amount of labeled data and then introduce a larger amount of unlabeled data.

4 Finding and using data in AI

The candidate can…

4.1 describe key data terms.

Indicative content

a. Big data – "Extremely large data sets that may be analyzed computationally to reveal patterns, trends, and associations." (Dialogic.com)
b. Data visualization – "The representation of data through use of common graphics, such as charts, plots, infographics and even animations." (IBM)
c. Structured data is data files organized sequentially or organized serially in a tabular format.
d. Semi-structured data is data that does not follow the tabular structure of a relational database but does have some defining or organizational properties that allow it to be analyzed.
e. Unstructured data is data that does not follow any pre-defined order or structure.

Guidance

Candidates should be able to identify and describe the key terminology listed.

4.2 describe the characteristics of data quality and why it is important in AI.

Indicative content

a. Five data quality characteristics:
- Accuracy - is it correct?
- Completeness - is it all there?
- Uniqueness - is it free from duplication?
- Consistency - is it free from conflict?
- Timeliness - is it current and available?

b. Data is money.

c. Data provides insight and supports decision making.

d. Implications of poor-quality data can be:
- Errors and inaccuracies
- Bias
- Loss of trust
- Financial penalties

Guidance

Candidates should be able to describe the five characteristics of good-quality data and explain the importance of each. Good-quality data, which demonstrates all five of these characteristics, provides accurate information about its subject, and in turn, this helps to inform good decision making and reliable business intelligence. When poor-quality data is used to train AI, it can have a negative impact on the performance of the AI model, affecting user confidence.

4.3 explain the risks associated with handling data in AI and how to minimize them.

Indicative content

a. Bias:
- Multiple sources
- Diversity in people handling data and training AI
- Fairness metrics

b. Misinformation:
- Checking the reliability of sources
- Checks from subject matter experts

c. Processing restrictions:
- Organizational requirements
- Frameworks and regulations

d. Legal restrictions:
- UK GDPR
- DPA 2018
- Staying abreast of new requirements

e. The scientific method

Guidance

Throughout the data lifecycle, there are various risks to consider, including how data is legally gathered and stored, to ensuring it is processed in line with its intended use, and is free from bias or misinformation.

Candidates should be aware of these risks and explain the use of mitigation measures listed. Risks are useful in helping AI to learn, using the scientific method of learning from experience. Candidates should have an awareness of the scientific method and how it relates to AI.

4.4 describe the purpose and use of big data.

Indicative content

a. Storage and use
b. Understanding the user
c. Improving process
d. Improving experience

Guidance

Big data is used to drive insight and improvement. Candidates should understand that through harnessing big data, organizations have huge insight into customer or user behavior and preferences, this can allow for targeted marketing and personalized experiences. Organizing and analyzing big data also supports in business decision making and process improvement, by helping organizations to understand more of the bigger picture.

4.5 explain data visualization techniques and tools.

Indicative content

a. Written
b. Verbal
c. Pictoral
d. Sounds
e. Dashboards and infographics
f. Virtual and augmented reality

Guidance

Data visualization is required to format data in a manner which is meaningful and digestible to the intended audience. Good data visualization means that data can be consumed, analyzed, summarized, and used easily, which supports decision making.

4.6 describe key generative AI terms.

Indicative content

a. Generative AI – "Refers to deep-learning models that can generate high-quality text, images, and other content based on the data they were trained on." (IBM)
b. Large language models (LLMs) – "Deep learning algorithms that can recognize, summarize, translate, predict, and generate content using very large datasets." (IBM)

Guidance

Candidates should be able to describe the terms generative AI and large language model and identify them in use.

4.7 describe the purpose and use of generative AI including large language models (LLMs).

Indicative content

a. Trained on huge volumes of data
b. Uses training to predict next word in text
c. Generates coherent and human-sounding language
d. Prompt engineering
e. Natural language processing (NLP)
f. Image generation

Guidance

Generative AI models output text or images in response to a user prompt, or request.

LLMs are a generative AI tool, designed to generate a written response to a user query, in a way which mimics a human response. Candidates should understand that these models are trained using enormous volumes of data, which it uses to predict the most suitable word – chain of words – to respond to a user query. By using prompt engineering (designing a more specific, detailed request and building on it), a more specific or robust response can be generated.

4.8 describe how data is used to train AI in the machine learning process.

Indicative content

a. Stages of the machine learning process:

- Analyze the problem
- Data selection
- Data pre-processing.
- Data visualization.
- Select a machine learning model (algorithm)
  - Train the model
  - Test the model
  - Repeat (learning from experience to improve results)
- Review

Guidance

The machine learning process allows us to define the solution based on the problem that has been identified through the process of data selection, pre-processing, visualization and testing of data with specific algorithms.

There is no de facto method within machine learning, learning through experience is vitally important. Testing involves creating the correct test data, creating bodies of data to learn from and parameters for what you wish to test.

5 Using AI in your organization

The candidate can…

5.1 identify opportunities for AI in your organization.

Indicative content

a. Opportunities for automation
b. Repetitive tasks
c. Content creation – generative AI

Guidance

Candidates should be able to identify simple opportunities for AI in an organization, such as an opportunity to automate a process, or minimize the human input into a repetitive task.

5.2 list the contents and structure of a business case.

Indicative content

a. Introduction
b. Management or executive summary
c. Description of current state
d. Options considered
- Option described
- Analysis of costs and benefits
- Impact assessment
- Risk assessment

e. Recommendations
f. Appendices/supporting information

Guidance

A business case would be required to provide insight and justification for undertaking a project and is used to secure funding.

A business case should contain each of these elements, providing decision makers with enough detail to evaluate the proposed recommendations.

Candidates should be familiar with this structure and the type of information which would be included in each section.

5.3 identify and categorize stakeholders relevant to an AI project.

Indicative content

a. Stakeholder definition
b. Stakeholder categorization
- Power/interest grid
- Stakeholder wheel

Guidance

Identifying stakeholders is a key first step in stakeholder management, and the stakeholder wheel and PI grid can be used to appropriately categorize them. This is necessary to understand who has influence and input into a project and to ensure they have the appropriate level of management.

Candidates should be able to identify descriptions of stakeholders and the relevant categories.

5.4 describe project management approaches.

Indicative content

a. Agile
b. Waterfall
c. Hybrid

Guidance

Candidates should be able to describe the key characteristics of these project management approaches, their suitability for a given project and recognize them in use.

5.5 identify the risks, costs and benefits associated with a proposed solution.

Indicative content

a. Risk analysis
- Risk assessment
- Risk owners

b. Risk appetite

c. Risk management strategies
- Accept
- Mitigate (including sharing, contingency planning)
- Avoid
- Transfer

d. Financial costs and benefits
- Forecasting
- Margin for error

e. Socio-economic benefits

f. Triple bottom line

Guidance

Candidates should be able to identify basic risks, costs and benefits of implementing an AI project or solution. It is necessary to identify and assess potential risks, to ensure suitable mitigation and owners are assigned, and to ensure the risks align with the organizations risk strategy.

A cost-benefit analysis is a systematic process that businesses use to analyze which decisions to make and which to forgo. The cost-benefit analysis sums the potential rewards expected from a situation or action and then subtracts the total costs associated with that action.

5.6 describe the ongoing governance activities required when implementing AI.

Indicative content

a. Compliance

b. Risk management

c. Lifecycle governance
- Manage
- Monitor
- Govern

Guidance

The three areas that governance must address are:
- Compliance to satisfy regulations
- Risk management to proactively detect and mitigate risk
- Lifecycle governance to manage, monitor and govern AI models.

(10 things governments should know about responsible AI, IBM 2024)

6 Future planning and impact – human plus machine

The candidate can…

6.1 describe the roles and career opportunities presented by AI.

Indicative content

a. AI-specific roles including: machine learning engineer, data scientist, AI research scientist, computer vision engineer, natural language processing (NLP) engineer, robotics engineer, AI ethics specialist, AI anthropologist.

b. Opportunities for existing roles.

- Additional training and knowledge
- Improved efficiency
- Automation

Guidance

AI is a rapidly evolving field, and new roles emerge regularly.

Candidates will be able to describe the various career opportunities evolving in this field – they will not be assessed on the names or duties of specific job roles.

6.2 identify AI uses in the real world.

Indicative content

a. Marketing
b. Healthcare
c. Finance
d. Transportation
e. Education
f. Manufacturing
g. Entertainment
h. IT

Guidance

AI tools and services are now part of the real world.

Candidates will be able to describe practical examples of AI applications in different sectors e.g. AI-powered recommendation algorithms in entertainment, instantly converting a web page from a foreign language to your own, banks leveraging AI models to detect fraud, conduct audits and evaluate customers for loans, self-driving cars, chatbots, AI-powered digital assistants etc.

6.3 explain AI's impact on society, and the future of AI.

Indicative content

a. Benefits of AI
b. Challenges of AI
c. Potential problems of AI
d. Societal impact
e. Environmental impact – sustainability, climate change and environmental issues
f. Economic impact – job losses, retraining for new AI roles
g. Potential future advancements and direction of AI

Guidance

AI is evolving rapidly. This rapid technological advancement comes with benefits and challenges at societal level. Candidates should be able to explain these benefits and challenges and the impact on society. They should also be able to discuss the potential future of AI.

Benefits include reducing human error through task automation, processing and analyzing vast amounts of data for informed decisions (AI algorithms) and AI-powered tools in assistance in in medical diagnosis.

Challenges include ethical concerns about algorithm bias and privacy, job loss, lack of creativity and empathy, security risks from hacking, socio-economic inequality, market volatility because of AI-driven trading algorithms and AI systems rapid self-improvement.

Potential future advancements and direction of AI e.g. increased computing power, availability of more data, better algorithms, improved tools.

6.4 describe consciousness and its impact on ethical AI.

Indicative content

a. What is human consciousness? (sentience)
b. What is AI consciousness?
c. Kurzweil Singularity - a future period characterized by rapid technological growth that will irreversibly transform human life.
d. Seth's theory of human consciousness – predictive processing and perception, the nature of self and consciousness.
e. Functional capabilities versus human consciousness.
f. AI projects in light of ethical considerations and consciousness.
g. Ethical challenges associated with artificial consciousness.

Guidance

Artificial consciousness is consciousness hypothesized to be possible in artificial intelligence. Can AI have autonomous intentions and make conscious decisions, and how would this ability affect their ethical behavior?

Candidates should be able to describe the concept of consciousness and explain the difference between functional capabilities which may mimic consciousness, and genuine human consciousness. They should consider the impact and potential ethical implications of artificial consciousness being used in AI. Should people feel like they are interacting with a human when they are not?

3. Levels of Knowledge / SFIA Levels

This certification provides candidates with the level of knowledge highlighted within the table, enabling them to develop the skills to operate at the levels of responsibility indicated.

Level	Levels of Knowledge	Levels of Skills and Responsibility (SFIA)
K7		Set strategy, inspire and mobilize
K6	Evaluate	Initiate and influence
K5	Synthesize	Ensure and advise
K4	Analyze	Enable
K3	Apply	Apply
K2	Understand	Assist
K1	Remember	Follow

SFIA Plus

This syllabus has been linked to the SFIA knowledge, skills and behaviors required at level 2 and 3 for an individual working in the subject areas.

KSCA8	Knowledge and understanding of the development of intelligent agents, able to mimic cognitive functions, react to stimuli, and improve automatically through experience and the use of data.
KSD21	Methods and techniques for the assessment and management of business risk including safety-related risk.
DENG2WA0928	Adheres to information handling procedures and follows relevant standards, policies and legislation in handling data.
KSCA5	The ability to harvest, clean, curate, manage, process and manipulate data in a variety of formats.
BINT2WA0937	Assists in the application of appropriate safeguards to the handling of data and any analysis results.

Further detail around the SFIA Levels can be found at www.bcs.org/levels.

4. e-CF mapping

All e-Competence Framework competences related to the EXIN BCS Artificial Intelligence Foundation certification can be found below. Also indicated is the level of the competence and whether the competence is covered entirely, partially or superficially. For more information about the e-CF, please visit https://itprofessionalism.org/ or contact EXIN.

Competence is covered | Partial coverage | Superficial coverage

e-Competence Level		1	2	3	4	5
A.10.	User Experience					
B.6.	Systems Engineering					
D.7.	Data Science & Analytics					
E.3.	Risk Management					
E.7.	Business Change Management					

5. Literature

Exam literature

The knowledge required for the exam is covered in the following literature:

A. Andrew Lowe and Steve Lawless
Artificial Intelligence Foundations: Learning from experience
BCS (November 2024)
ISBN: 978 1780 1767 34

B. Mark Pesce
Getting Started with ChatGPT and AI Chatbots: An introduction to generative AI tools
BCS (December 2023)
ISBN: 978 1780 1764 13

Contact EXIN

www.exin.com