



D4.2 Specific Curriculum



AI ADVISOR-CONSULTANT EQF 6/7



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Project information

The Artificial Intelligence Skills Alliance (ARISA) fast-tracks the upskilling and reskilling of employees, job seekers, business leaders, and policymakers into AI-related professions to open Europe to new business opportunities. It is a four-year transnational project funded under the EU's Erasmus+ programme. For more information, contact info@aiskills.eu | aiskills.eu

Project Partners



List of abbreviations

AI	Artificial Intelligence
ARISA	Artificial Intelligence Skills Alliance
EQF	European Qualification Framework
EU	European Union
ICT	Information and Communications Technology

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1. General information

Name	AI Advisor-Consultant
EQF level	EQF 6/7
Goals	The programme aims to provide learners with a deeper understanding of what is involved in developing and implementing an AI strategy in an organisation. The participant will get tools to be able to advise organisations on this.
Scope	<p>It is intended for professionals already working in or are very familiar with the ICT field, who want to gain insight about what the development and implementation of an AI strategy in organisations entails, so that they can advise on this within their own organisation or advise others.</p> <p>These professionals have an undergraduate (Bachelors) degree and/or at least five years of working experience as a business or IT consultant.</p>
Entry requirements	<p>The minimum entry requirement is a Bachelors degree, preferably in a field related to IT and/or management/ business.</p> <p>Additionally, it is also strongly recommended to have at least five years of working experience as a business or IT consultant.</p> <p>Generally, participants need to be familiar with organisation processes, business practices, management fields and IT related terminology and work practices. Specifically, in relation to digital transformation, risk management and management of change.</p> <p>All participants must have competence in spoken and written English (level B2).</p>
Programme learning outcomes (PLOs)	<p>1 - AI fundamentals (EQF 6)</p> <p>2 - AI Strategy (EQF 7)</p> <p>3 - AI implementation (EQF 7)</p> <p>4 - AI Ethics advanced (EQF 7)</p> <p>5 - Impact of AI (EQF 7)</p>

2. Description of the structure

The programme is composed of four compact learning units and gradually moves from a general overview of the AI landscape to the more specific implementation issues in a business context.

Firstly, the learner will gain a general understanding of AI; next the impact AI has on the way companies and customers interact and do business is addressed; as well as ethical considerations and governance; and finally, learners will explore the ways that AI can be leveraged.

3. Overview of Learning Units

Learning unit title	Hours/ECTS	EQF level	Assessment(s)
AI Fundamentals [for Decision and Policymakers]	25 h / 1 ECTS	EQF 6	Quizzes
Understanding the AI Landscape	3 ECTS	EQF 6/7	Exam
Enhancing work with AI	3 ECTS	EQF 7	Exam
AI Guardrails & Governance	1 ECTS	EQF 6/7	Practical assignment
AI Strategy, Transformation & Implementation	6 ECTS	EQF 6/7	Practical assignment

4. Details of Learning Units

4.1. AI Fundamentals for Decision and Policymakers

Description of [learning unit title]

The learning unit AI Fundamentals for Decision and Policymakers covers common technical terms and concepts, including supervised and unsupervised machine learning, generative models, and the distinction between narrow and broad AI. Trainees learn about data representation, data clustering, dimensionality reduction, classification, evaluation of machine learning models, and intuitively understand a transition to more complex machine learning models such as deep neural networks. The utility of deep neural networks is illustrated on the analysis of images and text.

No prior knowledge of statistics or computer science is required to take this course.

Related Programme Learning Outcome(s)

1 - AI fundamentals (EQF 6)

Unit learning outcomes

- Explains common technical terms and concepts (supervised and unsupervised machine learning, generative models, narrow and broad AI).
- Explains methods for evaluating the performance and impact of AI models.
- Explains generative AI.
- Explains the need for development and use of foundation models.

Delivery method(s)

- On-site lectures with practical demonstrations of methods, tools, and cases
- Self-study assisted with pre-recorded video material and interactive lecture notes with quizzes and challenges
- On-line discussion and quizzes
- On-line forum, discussions and assistance on Discord channel

Materials

- Lecture notes with practical examples, cases, and demonstrations with the data mining tool Orange, delivered electronically to in-class participants
- Quizzes and interactive lecture notes in a mini-MOOC environment
- A set of short educational videos
- Rescha S (2024): Machine Learning Q & AI: 30 Essential Questions and Answers on Machine Learning and AI, No Starch Press (optional reading, selected chapters)
- Kneusel RT (2023): How AI Works, No Starch Press (optional reading, selected chapters)

4.2. Understanding the AI Landscape

Description of Understanding the AI Landscape

In this course, the learner will explore the full definition of AI; how it works, and when it can be used, focusing on informative use cases; identify the types of data, as well as the tools and technologies AI uses to operate.

Related Programme Learning Outcome(s)

- 1 - AI fundamentals (EQF 6)
- 2 - AI Strategy (EQF 7)

Unit learning outcomes

- Explains common technical terms and concepts (supervised and unsupervised machine learning, generative models, narrow and broad AI).
- Explains generative AI.
- Describes general concerns, opportunities, risks, and pitfalls commonly associated with AI.
- Highlights the importance of data quality and data governance in AI projects.
- Identifies and prioritizes AI use cases/ scenarios to determine when and what AI solutions are best applicable in a specific situation.

Delivery method(s)

Online lectures, videos

Materials

Course materials
Workbook

4.3. Enhancing work with AI

Description of [learning unit title]

AI's capabilities are transforming the way companies and customers interact and do business. This course explores the challenges and opportunities that this new technology brings.

Related Programme Learning Outcome(s)

2 - AI Strategy (EQF 7)

Unit learning outcomes

- Explains how AI can be used to create value and be a source of competitive advantage to a business by using structured methods and analysis techniques.

Delivery method(s)

Online lectures, videos

Materials

Course materials

Workbook

4.4. AI Guardrails & Governance

Description of [learning unit title]

In this course, the learner will gain a foundational understanding of ethical guardrails and governance as these apply to the application and use of generative AI technologies in an everyday business context

Related Programme Learning Outcome(s)

- 1 - AI fundamentals (EQF 6)
- 4 - AI Ethics advanced (EQF 7)
- 5 - Impact of AI (EQF 7)

Unit learning outcomes

- Describes general concerns, opportunities, risks, and pitfalls commonly associated with AI.
- Explains ethical issues such as fairness, bias, transparency, and accountability raised by AI.
- Highlights the importance of data quality and data governance in AI projects.
- Provides guidelines for ethical leadership and decision-making in AI.
- Identifies and describes the concepts of bias, trust, fairness, transparency, equality, accountability, and empowerment in the context of artificial intelligence.
- Analyses and assesses algorithmic rules against ethical criteria and policy.
- Applies technical and non-technical methods to monitor and evaluate the development, deployment and use of the AI system and its learning processes.
- Explains the abilities of AI-based technology and its possible applications to be misused in general, such as privacy violations, algorithmic bias, socio-economic inequalities, misinformation and deep fake technologies, lack of transparency and explainability and social surveillance.

Delivery method(s)

Online lectures, videos

Materials

Course materials
Workbook

4.5. AI Strategy, Transformation & Implementation

Description of [learning unit title]

This course addresses strategies to effectively lead organizations through the transformational impact of AI. It explores how AI can be leveraged, how to plan an AI implementation and the issues surrounding it.

Related Programme Learning Outcome(s)

- 1 - AI fundamentals (EQF 6)
- 2 - AI Strategy (EQF 7)
- 3 - AI implementation (EQF 7)

Unit learning outcomes

- Encourages collaboration between technical and non-technical teams.
- Guides the process of identifying customer needs.
- Proposes and evaluates creative ideas on the application of AI technologies, by applying idea generation and evaluation techniques.
- Identifies and prioritizes AI use cases/ scenarios to determine when and what AI solutions are best applicable in a specific situation.
- Formulates an AI strategy (or a digital strategy that incorporates AI) in a in a coherent, clear, convincing, well-argued manner, aligned with the organisation strategy, compliant with relevant laws and regulations and while considering opportunities, risks, and ethical considerations.
- Performs a risk analysis with identification and assessment of risks of possible AI solutions, considering corporate and societal values and interests.
- Explains methods and techniques to manage change and reach consensus and commitment.
- Determines enabling factors for implementing an AI solution in terms of organisation (e.g., structure, processes, governance), technology (e.g., infrastructure, data), and people (e.g., know-how, roles, functions)
- Explains the dependence upon data and how to acquire, prepare, manage, and provide and scale data for AI applications.

Delivery method(s)

Online lectures, videos

Materials

Course materials
Workbook



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