NextGen: HN unit specification

Generative AI (SCQF level 7)

Unit code: J9K4 47

SCQF level: 7 (8 SCQF credit points)

Valid from: August 2026

This unit specification provides detailed information about the unit to ensure consistent and transparent assessment year on year. It is for lecturers and assessors, and contains all the mandatory information you need to deliver and assess the unit.

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Unit purpose

This unit introduces learners to the core concepts of generative artificial intelligence (AI), including:

- how it works
- real-world applications (such as text, image and music generation)
- the tools used to create AI-generated content
- foundational topics, such as large language models (LLMs)
- ethical considerations and responsible use
- developing their technical understanding and critical awareness through practical activities, using generative AI platforms

This non-specialist unit is designed for beginners with no prior knowledge of artificial intelligence (AI) or generative AI, making it suitable for learners who want to develop their knowledge and skills in this rapidly evolving field. We recommend that learners have basic literacy skills and an interest in technology. This unit is suitable for learners with an interest in any vocational area.

When they finish the unit, learners have a clear understanding of generative AI's capabilities, limitations and societal impact. They can progress to further study in AI, data science or digital creativity, or apply their knowledge in specific vocational areas. Learners can also go on to study advanced qualifications in computer science (including AI ethics), as they will have the confidence to engage with AI in both personal and vocational contexts.

Unit outcomes

Learners who complete this unit can:

1. explain how generative AI systems create content by identifying and replicating patterns from data
2. apply prompt engineering techniques to refine and optimise generative AI outputs
3. describe common applications of generative AI across different vocational fields and their practical benefits and limitations
4. explain key ethical concerns related to generative AI and the principles of responsible use

Evidence requirements

Learners must provide knowledge evidence and product evidence.

Authentication is required when the evidence is produced in lightly-controlled conditions.

The standard of evidence should be consistent with the SCQF level of this unit.

Knowledge evidence

Knowledge evidence relates to outcomes 1, 3 and 4. Learners must evidence all knowledge, but minimal evidence can be used to infer competence. Learners can produce knowledge evidence throughout the unit, in lightly-controlled, open-book conditions.

Alternatively, you can sample knowledge evidence if you use testing. The sampling frame must include questions from outcomes 1, 3 and 4, but you do not need to equally distribute questions across these outcomes. You must carry out testing in controlled conditions in terms of location, timing and supervision. Learners must not have access to reference materials, and they are not permitted to use AI.

Product evidence

Product evidence relates to outcome 2. Learners create prompts for a variety of scenarios, which must include text and graphical output. Prompts must be clear, specific and structured to optimise outputs. The scenarios should span personal, educational and vocational contexts. Learners must reflect on their prompts through a process of continuous reflection, evaluation and refinement. Learners can create product evidence over the life of the unit, in lightly-controlled conditions.

The ‘Approaches to assessment’ section provides advice on assessment methods suitable for generating this evidence.

Knowledge and skills

Knowledge	Skills

Learners should understand:
• how generative AI compares to discriminative AI models
• how generative AI works, including:
  ○ core capabilities
  ○ high-level understanding of pattern replication from training data
• how to use key models, for example:
  ○ LLMs
  ○ diffusion models
• data foundations, for example, why training data quality and diversity matters
• how to create prompts, for example, how phrasing, context, and examples shape AI outputs
• real-world applications, including scenarios from, for example:
  ○ creative arts
  ○ science and technology
  ○ business
  ○ education
  ○ healthcare
• output reliability, common flaws and how to spot them, including:
  ○ hallucinations
  ○ outdated information
• security and privacy as they relate to generative AI
• bias and fairness, including how AI inherits biases from data such as gender stereotypes
	Learners can:
	• compose clear, structured prompts for desired outputs (for text, images, etc)
	• refine prompts iteratively, by adjusting prompts based on initial AI responses
	• produce evaluation outputs, including assessing AI-generated content for accuracy, relevance, and bias
	• navigate tools, including using AI platforms (without coding)
	• mitigate bias, including identifying and reducing biased outputs in AI responses
	• make ethical decisions, including applying guidelines for responsible AI use in projects
	• analyse use-cases, including matching AI tools to real-world problems
	• use AI collaboratively, including working in teams to critique or improve AI outputs
	• produce documentation, including recording prompt strategies and outcomes for reproducibility
	• demonstrate critical thinking, including debating AI's societal impact, such as job displacement and copyright concerns

Knowledge	Skills

Learners should understand:
• ethical risks, including:
  ○ deepfakes
  ○ plagiarism
  ○ misinformation
  ○ environmental costs of AI
• legal considerations, including intellectual property issues for AI-generated content
• human-AI collaboration, including when to trust AI compared to human judgement (for example medical diagnoses)
• future trends, including evolving debates relating to generative AI	

Meta-skills

You must give learners opportunities to develop their meta-skills throughout this unit. We have suggested how to incorporate the most relevant ones into the unit content, but you may find other opportunities.

Self-management

This includes focusing, integrity, adapting and initiative. The most relevant are:

- adapting:
    - adjusting prompts to generate the required outputs
- integrity:
    - spotting output flaws, for example, hallucinations and outdated information
    - explaining how AI inherits biases from data
    - explaining how AI can have intellectual property issues

Social intelligence

This includes communicating, feeling, collaborating and leading. The most relevant are:

- communicating:
    - describing common applications of generative AI
- collaborating:
    - debating the impact of AI on society
    - working in teams to optimise AI outputs

Innovation

This includes curiosity, creativity, sense-making and critical thinking. The most relevant are:

- creativity:
    - composing prompts
- sense-making:
    - interpreting the outputs of prompts
    - refining subsequent prompts based on these outputs
- critical thinking:
    - evaluate the outputs from AI

Learning for Sustainability

Throughout this unit, you should encourage learners to develop their skills, knowledge and understanding of sustainability.

This includes:

- a general understanding of social, economic and environmental sustainability
- a general understanding of the United Nations Sustainable Development Goals (SDGs)
- a deeper understanding of subject-specific sustainability
- the confidence to apply the skills, knowledge, understanding and values they develop in the next stage of their life

Generative AI has significant implications for sustainability, both positive and negative. It can optimise energy grids, accelerate climate modelling and reduce waste through AI-driven design (for example lightweight materials). However, its environmental cost is substantial — training large models consumes vast amounts of energy and water, potentially exacerbating carbon footprints. Additionally, AI-generated content may increase digital waste and energy use if unchecked. Balancing innovation with responsible deployment, such as using renewable energy for data centres and prioritising efficiency, will determine whether generative AI becomes a net contributor to sustainability or an ecological burden.

Delivery of unit

The notional time for delivery and assessment is 40 hours. The amount of time you allocate to each outcome is at your discretion. We suggest the following distribution of time, including assessment:

Outcome 1 — explain how generative AI systems create content by identifying and replicating patterns from data (5 hours)

Outcome 2 — apply prompt engineering techniques to refine and optimise generative AI outputs (15 hours)

Outcome 3 — describe common applications of generative AI across different vocational fields and their practical benefits and limitations (15 hours)

Outcome 4 — explain key ethical concerns related to generative AI and the principles of responsible use (5 hours)

This unit is suitable for a wide range of vocational qualifications. You can deliver the unit as a stand-alone unit or as part of a qualification.

If you deliver as a stand-alone unit, we recommend that the contexts are as wide as possible.

If you deliver as part of a qualification, we recommend it is contextualised for that vocational area. For example, if you deliver the unit as part of a Higher National Qualification in Engineering, you can contextualise the outcomes for engineering applications. You can also integrate teaching, learning and assessment with other units in that qualification.

If you are teaching this unit as part of a qualification, you should deliver this early in the programme of learning, so that learners can responsibly use generative AI for subsequent learning.

Additional guidance

The guidance in this section is not mandatory. Generative AI is a fast-moving field, and this guidance is accurate at the time of writing.

Content and context for this unit

This is an introductory unit to the field of generative AI. You do not need to cover any topic in-depth. For example, when describing what generative AI is, you only need to explain its:

- relationship to the wider field of AI
- ability to generate multi-media
- key competences, including:
    - content creation
    - data analysis
    - code generation
    - problem solving
    - creativity

Learners are **not** required to understand the data science underpinning the discipline.

Resources

The resource requirements for this unit are low. The main resource requirements relate to common generative AI tools in Outcome 2 (such as ChatGPT and Copilot). Free versions are adequate, but we recommend that learners use more advanced (paid) versions at some point in the unit. Learners can benefit from using different versions of the same products to compare features.

Approaches to delivery

You should teach learners the theory behind generative AI in outcomes 1, 3 and 4, and use AI in outcome 2. We recommend that you teach the theoretical knowledge and practical skills in parallel.

You should introduce learners to the core principles of generative AI (GenAI) in an accessible, engaging, and vocationally relevant way. The aim is not to train learners as AI developers, but to empower them with foundational understanding, practical interaction skills, and critical awareness of GenAI's use in real-world contexts. You can use a combination of lectures, demonstrations and practical lessons.

You can start by teaching learners the basic principles of how generative AI systems produce content. Teaching should demystify the concept of artificial intelligence by showing how GenAI systems, such as ChatGPT or DALL·E, generate text or images by identifying and replicating patterns learned from data.

You should introduce learners to terms like 'training data', 'model', and 'patterns', ideally using analogies, such as comparing AI to a predictive text system that has been supercharged by billions of examples. Visuals and animations can be useful for this.

Once learners grasp how GenAI works, you can move on to how humans interact with it through prompt engineering. This part of the unit should be practical and experimental. Learners try out various kinds of prompts (for example, simple, complex, vague, specific) and observe how the AI responds.

You should introduce learners to core prompting strategies, such as setting context, specifying format, or assigning a role (for example, 'Act as a job coach'). Side-by-side comparisons of different prompt outcomes help learners see how phrasing and structure influence results.

You should encourage peer collaboration — learners can share prompts and outcomes, discuss what worked, and refine together. Prompt refining exercises, where learners are challenged to improve an unsatisfactory output, are particularly effective at building skills.

You should also focus on connecting GenAI with learners' own vocational areas. You can start by considering a range of fields – business, education, healthcare – and presenting relevant examples. You can do this via short video case studies, guest speakers, or articles. You can encourage learners to explore how GenAI is or could be used in their own areas of interest. For example, business learners can look at AI-generated reports or emails, while creative arts learners can explore AI-assisted design or writing.

Your final phase of delivery should provide space for critical reflection. You should introduce learners to key ethical issues such as data bias, misinformation, consent, transparency, copyright, and the environmental impact of training large models. You can use real-world cases to demonstrate these issues; for example, AI-generated fake news or deepfakes.

You should introduce principles of responsible AI use, such as attribution, disclosure, fairness, and human oversight. Learners should understand that ethical use of AI tools are an important part of digital literacy, in any profession.

Approaches to assessment

The unit requires knowledge and product evidence.

You can use testing for the knowledge evidence, which samples knowledge and skills. We recommend a constructed, short-answer response test. For example, the test can comprise 10 short-answer questions, such as:

Give two examples of the use of generative AI in your chosen area of study.

(2 marks)

Explain why diversity is important in the training of datasets for generative AI.

(2 marks)

What is a hallucination? Explain why generative AI sometimes hallucinates.

(3 marks)

Explain two environmental costs of generative AI.

(2 marks)

You can assess using a marking scheme to award an overall score. A suitable pass mark is most likely 50% for this type of constructed-response test. The test must be carried out in controlled conditions in terms of location, supervision and time. Learners are not allowed to use AI.

For the product evidence, learners can compile a portfolio of their prompts and outputs in various contexts, throughout the life of the unit. For example, their portfolio can include their human and machine dialogue in 10 scenarios, covering personal, educational and vocational contexts. They should include an evaluation of their practice, reflecting on the effectiveness of their prompts; any refinements required and any improvements they have identified through the process.

You can assess their portfolio through a checklist, based on the defined skills statements (although not all of these are relevant). You should assess their portfolio on a pass or fail basis.

Equality and inclusion

This unit is designed to be as fair and as accessible as possible with no unnecessary barriers to learning or assessment.

You must consider the needs of individual learners when planning learning experiences, selecting assessment methods or considering alternative evidence.

Guidance on assessment arrangements for disabled learners and those with additional support needs is available on the assessment arrangements web page.

Information for learners

Generative AI (SCQF level 7)

This information explains:

- what the unit is about
- what you should know or be able to do before you start
- what you need to do during the unit
- opportunities for further learning and employment

Unit information

This unit introduces you to generative AI, which is the technology that creates text, images, music, and more. You'll discover how it uses vast amounts of data to produce human-like outputs. You also develop your own practical skills to work with AI effectively.

Before you start the unit, we recommend that you have basic digital literacy skills (like using websites and apps), and an interest in learning about technology. You don’t need any previous experience with AI. The unit is designed for beginners, with all concepts explained in clear, accessible language.

In the unit, you:

- learn the fundamental principles of how generative AI systems operate
- develop techniques to get better results from AI tools
- explore real-world applications across industries like healthcare, education and creative arts
- investigate important limitations and risks, including bias, accuracy and ethical concerns
- complete hands-on activities like crafting effective prompts and analysing AI outputs

This unit opens doors to:

- further education in AI, computer science or digital ethics
- career pathways in growing fields like content creation, marketing, and AI-assisted roles
- practical applications in your personal and professional life
- informed citizenship in our increasingly AI-driven world

By completing this unit, you'll gain the knowledge to understand this transformative technology, and the skills to use it responsibly.

Meta-skills

You develop meta-skills that are useful for your chosen sector.

Meta-skills are transferable behaviours and abilities that help you adapt and succeed in life, study and work. There are three categories of meta-skills: self-management, social intelligence and innovation.

Self-management

This includes focusing, integrity, adapting and initiative.

You learn to adapt prompts to generate the required outputs, and use your integrity to adjust any potential bias from the AI.

Social intelligence

This includes communicating, feeling, collaborating and leading.

You describe common applications of generative AI, and collaborate with your peers to produce optimal outputs, and debate ethical considerations.

Innovation

This includes curiosity, creativity, sense-making and critical thinking.

You compose creative prompts, and interpret, refine and evaluate these using critical-thinking skills.

Learning for Sustainability

Throughout this unit, you develop skills, knowledge and understanding of sustainability.

You learn about social, economic and environmental sustainability principles. You also develop an understanding of the United Nations Sustainable Development Goals.

You learn that generative AI has a big impact on sustainability, with both upsides and downsides. On the positive side, it can optimise energy grids, speed up climate modelling, and reduce waste through smart designs. However, training large models uses a lot of energy and water, which can increase carbon footprints. Plus, AI-generated content might lead to more digital waste and energy use if not managed well. The key is to balance innovation with responsible practices, like using renewable energy for data centres and focusing on efficiency. This will decide if generative AI helps sustainability or becomes an environmental challenge.

Administrative information

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Superclass: CB

History of changes

Version	Description of change	Date

Please check our website to ensure you are using the most up-to-date version of this unit.