

## COURSE SYLLABUS

### Managing Agentic AI, 5 credits

*Managing Agentic AI, 5 högskolepoäng*

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Course Code: T2MAAM	Education Cycle: Second-cycle level
Confirmed: Sep 01, 2025	Disciplinary domain: Technology (75%) and Social sciences (25%)
Valid From: Aug 31, 2026	Subject group: Computer Technology
	Specialised in: A1N Second cycle, has only first-cycle course/s as entry requirements
	Main field of study: Computer Science

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## Intended Learning Outcomes (ILO)

On completion of the course the student shall:

### Knowledge and understanding

- display knowledge of agentic AI (LLM-based agents) and how agentic systems differ from traditional automation and “single-shot” generative AI.
- display knowledge of common technical building blocks for agentic AI, such as tool use, planning, memory, RAG, multi-agent collaboration, and human-in-the-loop patterns.

### Skills and abilities

- demonstrate the ability to identify organizational processes where agentic AI can create value and specify suitable levels of autonomy and control.
- demonstrate the ability to outline a technical solution approach for an agentic workflow, including integration, evaluation, monitoring, and operational constraints.
- demonstrate the ability to reason about organizational readiness for deploying and scaling agentic AI (governance, data, security, roles, and change management).

### Judgement and approach

- demonstrate an understanding of security, ethics, compliance, and accountability considerations related to deploying agentic AI in organizations, including risk management and auditability.

## Content

The course is aimed at working professionals who lead, design, or operationalize AI-enabled work in organizations, such as managers, product/process owners, digitalization leaders, IT/AI leads, governance/security stakeholders. The course provides participants with a practical and balanced understanding of agentic AI from both a technical and organizational perspective, enabling them to evaluate where agentic AI fits, how to deploy it safely, and how to manage agentic workers as part of real operating models.

The course includes the following elements:

- Foundations of agentic AI: what agents are, levels of autonomy, tool use, planning, memory, and common failure modes.
- Value cases for agentic AI: identifying and scoping workflows suitable for agentic automation and augmentation.
- Designing agentic systems: architecture patterns, tool integration, evaluation approaches, monitoring, and guardrails.

- Operating agentic workers: human oversight, escalation paths, KPI/OKR design, incident handling, and continuous improvement.
- Governance and readiness for agentic AI: data management, governance structures, procurement/vendor management, and operating model design.
- Security, privacy, and ethics in agentic systems: confidentiality, access control, audit trails, and responsible deployment.

## Type of instruction

The course is given as a fully online course, supported by recorded lectures, online sessions and structured project work.

Language of instruction is English.

## Entry requirements

Passed courses of at least 40 credits in a main field of study within Engineering and Technology, Natural Science or Social Sciences, and at least 1 year of work experience (or equivalent). English proficiency is required (English 6/English level 2 or equivalent). Applicants that have at least 4 years of work experience in industry are exempt from the requirement of at least 40 credits within the stated fields.

## Examination and grades

The course is graded Pass (G) or Fail (U).

Registration of examination:

Name of the Test	Value	Grading
Assignment	2 credits	G/U
Project	3 credits	G/U

## Course literature

Please note that the course literature may be revised up to eight weeks before the start of the course.

The course literature consists of book chapters and articles, available through the university library service:

Ben-Zion, Z., Elyoseph, Z., Spiller, T., & Lazebnik, T. (2025). Inducing State Anxiety in LLM Agents Reproduces Human-Like Biases in Consumer Decision-Making. *arXiv preprint arXiv:2510.06222*.

Reed, C. (2025). Autonomy, Responsibility and Agentic AI. *Journal of Business Law*.

Patel, N., & Chauhan, H. (2025). Agentic AI and the Future of Work: Transforming Labor Markets, Economic Structures, and Workforce Development. In *The Power of Agentic AI: Redefining Human Life and Decision-Making: In Industry 6.0* (pp. 205-227). Cham: Springer Nature Switzerland.

Islam, M. A., Somu, S., & Aldaihani, F. M. F. (2025). The Rise of Agentic AI: Synthesis of Current Knowledge and Future Research Agenda. *Global Business and Organizational Excellence*.

Murugesan, S. (2025). The rise of agentic AI: implications, concerns, and the path forward. *IEEE Intelligent Systems*, 40(2), 8-14.

Ransbotham, S., Kiro, D., Khodabandeh, S., Iyer, S., & Das, A. (2025). The emerging agentic enterprise: How leaders must navigate a new age of AI. *MIT Sloan Management Review (Online)*, 0\_1-31.

Hawkins, W., & Calder, N. (2026). Embracing the Agentic Workforce. In *The Agentic AI Revolution: Leveraging Microsoft AI and Autonomous Agents to Transform Work and Business* (pp. 117-131). Berkeley, CA: Apress.

Additional material might be added.