# Linnæus University

# Course syllabus

Faculty of Technology

Department of Computer Science and Media Technology

4DV662 Artificiell intelligens för chefer och ledare, 7.5 credits
Artificial Intelligence for Managers

**Main field of study**
Computer Science

**Subject Group**
Informatics/Computer and Systems Sciences

**Level of classification**
Second Level

**Progression**
A1N

**Date of Ratification**
Approved by Faculty of Technology 2021-12-13
The course syllabus is valid from spring semester 2022

**Prerequisites**
BS degree comprising 180 credits at university level including a final thesis of 15
credits or equivalent skills and competences.

## Objectives
Students are able to:

- Describe the principal concept of Artificial Intelligence (AI), its strengths, and shortcomings
- Understand opportunities, myths, and pitfalls of AI
- Identify problem areas in industry, society, and in management where AI could be utilized
- Analyze how AI can be applied in a particular problem area
- Manage an AI strategy and get started: implement a strategy and a roadmap to apply AI in a particular problem area
- Understand how to integrate AI with IT development
- Assess the maturity of AI utilization in an organization
- Reflect on applications of AI from an ethical and legal perspective as well as the future challenges (technical, organizational, social, etc.)

## Content

The course covers the following areas:

1. Introduction to AI
2. Practical cases from that can be addressed with AI
3. What managers need to know about AI technology?
4. How to set up an AI Strategy and Roadmap?
5. How to get started with AI Projects? AI Canvas
6. How to integrate AI and IT development? ML Operations
7. How to (self-) evaluate AI in use? AI Due Diligence
8. Ethical and legal aspects
9. Practical cases from the participants and how they are addressed with AI.

## Type of Instruction

Pre-recorded and online lectures, online guest lectures, reading materials, and scientific articles.

## Examination

The course is assessed with the grades A, B, C, D, E, Fx or F.

The grade A constitutes the highest grade on the scale and the remaining grades follow in descending order where the grade E is the lowest grade on the scale that will result in a pass. The grade F means that the student's performance is assessed as fail (i.e. received the grade F).

The course is assessed through 5 mandatory assignments and a final presentation, 2 mandatory seminars, discussions forum and workshops.

- 4 Assignments, 4 credits (A-F)
- Final assignment and presentation/discussion, 3.5 credits (A-F)

The final grade is a weighted average of the assessment methods.

Repeat examination is offered in accordance with Local regulations for courses and examination at the first and second-cycle level at Linnaeus University.If the university has decided that a student is entitled to special pedagogical support due to a disability, the examiner has the right to give a customised exam or to have the student conduct the exam in an alternative way.

## Course Evaluation

During the implementation of the course or in close conjunction with the course, a course evaluation is to be carried out. Results and analysis of the course evaluation are to be promptly presented as feedback to the students who have completed the course. Students who participate during the next course instance receive feedback at the start of the course. The course evaluation is to be carried out anonymously.

## Other

Grade criteria for the A–F scale are communicated to the student through a special document. The student is to be informed about the grade criteria for the course by the start of the course at the latest.

## Required Reading and Additional Study Material

Alan Pelz-Sharpe, Kashyap Kompella: Practical Artificial Intelligence: An Enterprise

Playbook, 2019 (150 pages)

White paper including but not limited to

- Reliable and scalable AI with MLOps—How enterprises can become truly AI-driven. White Paper Silo AI, 2021. (25 pages)
- The essential AI handbook for leaders. White Paper Peltarion, 2018. (115 pages)

Web based articles including but not limited to

- Kolbjornsrud, V., Amico, R., & Thomas, R. J. (2016) How Artificial Intelligence Will Redefine Management. Harvard Business Review: https://hbr.org/2016/11/how-artificial-intelligence-will-redefine-management
- Chamorro-Premuzic, T., Wade, M. & Jordan, J. (2018) As AI makes more decisions, the nature of leadership will change. Harvard Business Review: https://hbr.org/2018/01/as-ai-makes-more-decisions-the-nature-of-leadership-will-change
- Heukamp, F. and Canals, J. (2018) 10 Ways Artificial Intelligence Is Transforming Management. IESE: https://www.iese.edu/stories/10-ways-artificial-intelligence-is-transforming-management
- Ajay Agrawal, Joshua Gans, and Avi Goldfarb (2018) A Simple Tool to Start Making Decisions with the Help of AI Harvard Business Review: https://hbr.org/2018/04/a-simple-tool-to-start-making-decisions-with-the-help-of-ai

Masters' Theses including but not limited to

- Artificial Intelligence's Impact on Management, Malin Eriksson and Camran Djoweini (2020) KTH
- What impact will artificial intelligence have on the future leadership role, Björkman and Johansson (2018) University of Lund

Current scientific articles covering specific topics. (ca. 100 pages)