UNIVERSITY OF BORÅS

Hybrid Managerial Decision-Making
Hybridbeslutsfattande på ledningsnivå
4 credits

Ladok Code: C2HB1C
Version: 1.0
Established by: Committee for Education in Librarianship, Information, and IT 2023-09-19
Valid from: Autumn 2023

Education Cycle: Second cycle
Main Field of Study (Progressive Specialisation): Informatics (A1N)
Disciplinary Domain: Natural sciences
Prerequisites: 120 credits
Subject Area: Informatics/Computer and Systems Sciences
Grading Scale: Fail (U) or Pass (G)

Content
The course covers the field of hybrid managerial decision-making, which combines human intelligence (HI) and artificial intelligence (AI) to make decisions in organizations. HI refers to the capability of humans to accomplish complex goals, learn, reason, and adaptively perform effective actions within an environment. AI, on the other hand, refers to machines possessing these capabilities.

The course covers theories, current research, practices, and models related to hybrid managerial decision-making within data-driven innovation, digitalization, and management. Real-life cases and experiences from participants' own organizations are discussed and analysed. Additionally, participants are expected to gain insights into how decision support systems, in the context of hybrid managerial decision-making, can be used to lead digital innovation and contribute to achieving the organization's development goal.

The course includes the following:
- Relevant terms and theories regarding managerial decision-making
- Relevant terms and theories regarding HI and AI
- Current theories of decision support systems, e.g., decision types, decision-making process, AI-based decision support systems
- State-of-the-art theories and practices for combining HI and AI to support organizational decision-making

Learning Outcomes
Upon completion of the course, the student should be able to demonstrate:

Knowledge and understanding
1.1 Explain fundamental concepts and theories within organizational decision-making, decision support systems, and hybrid decision-making.
1.2 Describe the strengths and weaknesses of human decision-making
1.3 Describe the strengths and weaknesses of using decision support systems, with special focus on AI-based decision support systems.

Competence and skills
2.1 Independently search for literature and reflect on theories regarding decision support systems.
2.2 Find and apply appropriate theoretical frameworks on how decision support systems should be used to support making better decisions in organizations.
2.3 Propose a strategy to improve decision-making in an organization by introducing hybrid decision support systems.
2.4 Plan the activities that constitute the basis for using hybrid decision support systems to drive digital innovation.

Judgment and approach
3.1 Evaluate and critically assess hybrid decision support systems in organizations.

Forms of Teaching

Instruction consists of lectures, seminars and tutoring.

The language of instruction is English.

Forms of Examination

The course will be examined through the following examination elements:

Written assignment: Design a hybrid decision support system
Learning outcomes: 1.1-1.3, 2.1-2.4 and 3.1
Credits: 3.5
Gradingscale: Fail (U) or Pass (G)

Seminar: Discussion of the written assignment
Learning outcomes: 1.1-1.3, 2.1-2.4 and 3.1
Credits: 0.5
Gradingscale: Fail (U) or Pass (G)

To receive a passing grade for the entire course, a passing grade is required for all examination components.

The examiner may decide to replace the seminar with another suitable form of examination if the student has failed or not participated in this component during the course.

If the student has received a decision/recommendation regarding special pedagogical support from the University of Borås due to disability or special needs, the examiner has the right to make accommodations when it comes to examination. The examiner must, based on the objectives of the course syllabus, determine whether the examination can be adapted in accordance with the decision/recommendation.

Student rights and obligations at examination are in accordance with guidelines and rules for
the University of Borås.

Literature and Other Teaching Materials

The course literature is mainly in English, but articles in Swedish may be added.

Cao, L., 2023. Designing Human-Centered Hybrid Decision Support Systems. PhD thesis, University of Gothenburg, pp. 32-53, 62-71. [Available electronically]

Shrestha, Y.R., Ben-Menahem, S.M. and Von Krogh, G., 2019. Organizational decision-making structures in the age of artificial intelligence. California Management Review, 61(4), pp. 66-83. [Available electronically]

Trunk, A., Birkel, H. and Hartmann, E., 2020. On the current state of combining human and artificial intelligence for strategic organizational decision making. Business Research, 13(3), pp. 875-919. [Available electronically]

van der Aalst, W.M., 2021. Hybrid Intelligence: to automate or not to automate, that is the question. International Journal of Information Systems and Project Management, 9(2), pp. 5-20. [Available electronically]

In addition to the references above, additional teacher-selected articles of a maximum of 100 pages can be provided during the course or sought out by the students themselves

Student Influence and Evaluation

The course is evaluated in accordance with current guidelines for course evaluations at the University of Borås in which students' views are to be gathered. The course evaluation report is published and returned to participating and prospective students in accordance with the above-mentioned guidelines, and will be taken into consideration in the future development of courses and education programmes. Course coordinators are responsible for ensuring that the evaluations are conducted as described above.

Miscellaneous

The course is offered as a freestanding course.

This syllabus is a translation from the Swedish original.