

Service Design Based on Data Analytics 3 credits

Tjänstedesign baserad på dataanalys 3 hp

Second cycle

Main field: Informatics, Second cycle, has only first-cycle course/s as entry requirements (AIN)

Syllabus is adopted by the Research and Education Board (2022-09-22) and is valid for students admitted for the spring semester 2023.

Placement in the Academic System

The course is given as a single subject course.

Prerequisites and Conditions of Admission

Degree of Bachelor or Degree of Bachelor of Science in Engineering or the equivalent of 180 Swedish credit points or 180 ECTS credits at an accredited university. Applicants must have written and verbal command of the English language equivalent to English course 6 in Swedish Upper-Secondary School.

Course Objectives

The aim of the course is for the student to understand how data and algorithms can affect business strategy and service design. By allowing the student to experience business-level problem formulations, analysis of available data, algorithm application, and evaluation of impact, the student will get a deeper understanding of both the possibilities and limitations with data-driven service design and innovation.

Following successful completion of the course the student should be able to:

Knowledge and understanding

- describe the basic features of digital technology and the underlying logic of digitized, digitalized and digitally transformed services
- identify possibilities and limitations with data-driven services and their relationship to business strategy and decisions

Skills and ability

- formulate requirements for data-driven services
- practical application of service design tools such as journey maps and impact maps for data-driven services.

Judgement and approach

- critically analyze and evaluate the underlying structure of data-driven services and analyze a service's impact from several perspectives, including ethics, business, sustainability, and personal integrity

Primary Contents

The course looks at the underlying digital technology that digital service innovation is dependent on. In particular, the relationship between service-dominant logic, algorithmic and data-driven services, and business strategy is analyzed from a number of cases and examples. The central concepts of the course (e.g. service-dominant logic, business and societal impact of data-driven services, and human-centered service design) are inspected from several perspectives, including ethics, business strategy, sustainability, and personal integrity.

Teaching Formats

The teaching consists of lectures and case studies, as well as practical exercises with supervision.

Examination

The overall grades of Fail or Pass will be awarded for the course.

The course is examined by a written assignment.

Name of the test		Grading
Written Assignment	3 credits	U/G

If there are special reasons, the examiner may make exceptions from the specified examination format and allow a student to be examined in another way. Special reasons can e.g. be a decision on learning support.

For elite sports students according to Riktlinjer för kombinationen studier och elitidrott vid Högskolan i Halmstad, DNR: L 2018/177, the examiner has the right to decide on an adapted examination component or let the student complete the examination in an alternative way.

Course Evaluation

Course evaluation is part of the course. This evaluation should offer guidance in the future development and planning of the course. Course evaluations should be documented and made available to the students.

Course Literature and Other Study Resources

Aragon, C. et al. *Human-Centered Data Science*. MIT Press, 2022

Chen, H., Chiang RHL. VC., & Storey . *Business Intelligence and Analytics: From Big Data To Big Impact*. MIS Quarterly 36(4), pp. 1165-1188. 2012

Edvardsson, B., & Tronvoll, B. *A new conceptualization of service innovation grounded in SD logic and service systems*. International Journal of Quality and Service Sciences, 5(1), pp. 19-31. 2013

Huang, M., Rust, R. T. *Artificial Intelligence in Service*. Journal of Service Research, Vol. 21(2), s. 155-172. 2018

Witell, L., Snyder, H., Gustafsson, A., Fombelle, P., & Kristensson, P. *Defining service innovation: A review and synthesis*. Journal of Business Research, 69(8), pp. 2863-2872. 2016

Reference literature

O'Neill, C. *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy*. Broadway Books. 2017

Penin, L. *An Introduction to Service Design: Designing the Invisible*. Bloomsbury Visual Arts. 2018

Provost, F., & Fawcett, T. *Data Science for Business: What You Need to Know about Data Mining and Data Analytics Thinking*. O'Reilly Media Inc, California, USA. 2013

Vargo, S. L., & Lusch, R. F. *Institutions and axioms: an extension and update of service-dominant logic*. Journal of the Academy of Marketing Science, 44(1), pp. 5-23. 2016