



School of Economics and Management

## INFN45, Informatics: Business Intelligence, 7.5 credits

*Informatik: Business Intelligence, 7,5 högskolepoäng*

Second Cycle / Avancerad nivå

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### Details of approval

The syllabus was approved by The Board of the Department of Informatics on 2013-09-20 and was last revised on 2024-09-18. The revised syllabus comes into effect 2025-03-15 and is valid from the autumn semester 2025.

### General information

The course is compulsory within the Master's Programme in Information Systems.

*Language of instruction:* English

*Main field of study* Specialisation

Informatics            A1N, Second cycle, has only first-cycle course/s as entry requirements

Information Systems    A1N, Second cycle, has only first-cycle course/s as entry requirements

### Learning outcomes

Business intelligence (BI) is a broad category of applications, technologies, and processes for gathering, storing, accessing, and analysing data to help business users make better decisions and take actions. Many companies recognise the importance of corporate data and information and decide to implement BI due to the increased competition and its significant impact on their performance. BI is one of the current "hot topics" and although the IT investments have decreased in the recent years, BI is still dominant in IT leaders' agenda and it is positioned as the most important of application and technology developments.

The BI targets differ in terms of their focus, scope, level of sponsorship, commitment, and resources required, technical architecture, impact on personnel and business processes, and benefits.

The objective of this course is for the student to achieve a profound understanding of BI systems in terms of its tools, current practices and impacts. The student should acquire knowledge on how to design BI solutions for different BI targets and users.

## **Knowledge and understanding**

To pass the course, the student must demonstrate knowledge of and understanding of

- decision-making at an organisational and individual level
- key concepts and current practices of business intelligence
- the individual, organisational and societal impacts of BI systems
- analytical techniques widely used in business intelligence systems
- integration of business intelligence into decision-making processes
- big data and analytics
- data visualisation techniques
- future trends of business intelligence

## **Competence and skills**

To pass the course, the student must demonstrate competence and skills individually or in groups to

- use BI systems and technology to support decision making
- build BI applications based on users' needs
- plan and implement BI systems
- identify business and technical requirements for a BI solution
- apply the concepts and techniques to solving real-world BI problems
- perform data analyses

## **Judgement and approach**

To pass the course, the student must demonstrate the ability to

- critically evaluate the limitations and possibilities of BI technology
- critically evaluate BI impacts on decision-making processes and on organisations

## **Course content**

In this course, BI is explored at both the micro and macro levels. At the micro level, the course concentrates on design of BI solutions. At the macro level, implementing BI enterprise-wide is investigated. Issues related to BI data management (from separate BI databases to real-time data warehousing), meta-data, data quality, BI governance, and BI benefits are addressed. Contemporary BI trends will be covered. The trends include scalability (more data, more users, and more complex queries), pervasive BI, operational BI, and the BI-based organisation (how organisations can compete on analytics).

## **Course design**

The teaching consists of lectures, seminars and labs.

## Assessment

The assessment is based on seminars, individual assignment and group project.

Re-examinations are offered in close conjunction with the first examination.

The test and course grades are determined by the course examiner. The examiner is entitled to change the grades given by the teachers on the course if this does not violate Chapter 6, Section 24 of the Higher Education Ordinance (1993:100).

*Academic misconduct* such as cheating, plagiarism, fabrication and falsification is considered a serious offence in higher education (see Chapter 10 of the Higher Education Ordinance). The disciplinary measures that may be taken as a result of such offences are caution or suspension for a limited period of time from the university (and all the faculties of the university).

### Examinations

- Seminars, 1.0 cr, grading scale: U-G, individual examination
- Individual Assignment, 3.5 cr, grading scale: U-A, individual examination
- Group Project, 3.0 cr, grading scale: U-A, group examination

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

## Grades

Grading scale includes the grades: U=Fail, E=Sufficient, D=Satisfactory, C=Good, B=Very Good, A=Excellent

**Grade** (Definition) Points or percentage out of maximum points. Characteristic.

**A** (Excellent) 85-100. A distinguished result that is excellent with regard to theoretical depth, practical relevance, analytical ability and independent thought.

**B** (Very good) 75-84. A very good result with regard to theoretical depth, practical relevance, analytical ability and independent thought.

**C** (Good) 65-74. The result is of a good standard with regard to theoretical depth, practical relevance, analytical ability and independent thought and lives up to expectations.

**D** (Satisfactory) 55-64. The result is of a satisfactory standard with regard to theoretical depth, practical relevance, analytical ability and independent thought.

**E** (Sufficient) 50-54. The result satisfies the minimum requirements with regard to theoretical depth, practical relevance, analytical ability and independent thought, but not more.

**U** (Fail) 0-49. The result does not meet the minimum requirements with regard to theoretical depth, practical relevance, analytical ability and independent thought.

To pass the course, the student must have been awarded the grade of E or higher.

## Grading rules and definitions

### Examination grades

Examinations are graded according to the grading scale U-A or the grading scale U-G (Fail-Pass).

### *Course grade*

A passing grade on all examinations is required to pass the course.

1. For each examination with the grading scale U-A, the obtained points are multiplied by the number of credits for the examination. Grades without points are converted as follows: A = 92, B = 80, C = 70, D = 60, E = 52.
2. The products of the included examinations are summed up and divided by the total number of credits of the included examinations.
3. This results in a weighted average which determines the course grade. 85–100 gives the grade A, 75-84 gives the grade B, 65-74 gives the grade C, 55–64 gives the grade D, 50–54 gives the grade E.

Examinations with the grading scale U-G are not included in the calculation of the course grade.

## **Entry requirements**

Admission to the course requires English 6 as well as the courses: "Informatics: Introduction to Information Systems, 1-30 cr", "Informatics: Information Systems and Business Development, 31-60 cr" and "Informatics: Bachelor Degree Project (Thesis), 15 cr" and further 15 cr informatics/information systems at Bachelor level or the equivalent.

## **Further information**

It is compulsory to attend the introduction meeting, where a roll call will be taken. Absence without notification means that the admitted student will lose their seat on the course.

For transitional provisions with regard to previous courses, please contact the study adviser for an individual assessment.

If the course is discontinued, there may be limited opportunities for re-examination. Please contact the study advisor for information.