INFN45, Informatics: Business Intelligence, 7.5 credits
Informatik: Business Intelligence, 7,5 högskolepoäng
Second Cycle / Avancerad nivå

Details of approval

The syllabus is an old version, approved by The Board of the Department of Informatics on 2013-09-20 and was last revised on 2016-01-11. . The revised syllabus applied from 2016-01-18. , spring semester 2016.

General Information

The course can be taken as part of the MSc Programme in Information Systems, or as a separate course.

Language of instruction: English

Main field of studies	Depth of study relative to the degree requirements
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 students to achieve a profound understanding of BI systems in terms of its tools, current practices and impacts. The students should acquire knowledge on how to design BI solutions for different BI targets and users.

Knowledge and understanding
For a pass on the course, the student shall demonstrate knowledge of and understanding of

- key concepts and current practices of business intelligence
- the individual, organizational 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 visualization techniques
- future trends of business intelligence.

Competence and skills
For a pass on the course, students shall 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 system
- 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
For a pass on the course, students shall demonstrate the ability to

- critically evaluate the limitations and possibilities of BI technology
- evaluate BI impacts on decision-making process and on the organization.

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 will be in the form of modules, consisting of lectures, seminars and labs.

The course includes compulsory components, which are stated in the schedule.

Assessment

The assessment is based on assignments, laborations and projects.

Re-exams will be held in close proximity to the ordinary examination period.

Academic misconduct such as cheating, plagiarism, fabrication and falsification is considered a serious offence in higher education (see Chapter 8 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).

Subcourses that are part of this course can be found in an appendix at the end of this document.

Grades

Marking scale: Fail, E, D, C, B, A.

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.

F (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 students must have been awarded the grade of E or higher.

Grading rules and definitions

Grades are awarded according to a graded scale from A (highest) to F (lowest), with E as the minimum passing grade.

When the exam/assignment is not graded, the grades G (Pass) or F (Fail) will be applied.

Course grades

When calculating course grades, the graded components will be weighted according to the following formula:

The number of credits for the exam is multiplied with the exam score. The total value is then divided by the total number of credits for the exams/assignments included. The resulting average is then rounded off to the nearest whole number. The number indicates the relevant course grade in accordance with the grading definitions above.

For exams/assignments which are graded and scored, the grades A to F will be used in accordance with the grading definitions above. The exam score will be used directly in the calculation.

For exams/assignments which are graded but not scored, the grades A to F will be used and converted as follows: A = 92, B = 80, C = 70, D = 60, E = 52.

Exams/assignments which are not graded but awarded with G (Pass) or F (Fail) will not be included in the calculation of the course grade.

Entry requirements

General and completed courses: "Informatics: Introduction to Information Systems, 1-30 cr", "Informatics: Level 2, 31-60 cr" and "Informatics: Bachelor Degree Project, 15 cr" and further 15 credits informatics/information systems at Bachelor level or the equivalent. English 6/English Course B.

An exception for the general entry requirement in Swedish will be granted when the course is given in English.

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 his/her 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 opportunitie for re-examination. Please contact the study adviser for information.

Amendments

2015-12-04: Added that the course includes compulsory components and that attendance on the introduction meeting is compulsory.
2016-01-11: New grading rules from Spring term 2016.

Subcourses in INFN45, Informatics: Business Intelligence

Applies from V18

1701   Seminars, 1,0 hp
           Grading scale: Fail, Pass
1702   Assignments, 3,5 hp
           Grading scale: Fail, E, D, C, B, A
1703   Project, 3,0 hp
           Grading scale: Fail, E, D, C, B, A

Applies from V14

1301   Seminars, 1,0 hp
           Grading scale: Fail, Pass
1302   Assignments, 2,0 hp
           Grading scale: Fail, E, D, C, B, A
1303   Laborations, 1,5 hp
           Grading scale: Fail, Pass
1304   Projects, 3,0 hp
           Grading scale: Fail, E, D, C, B, A