



DEPARTMENT OF APPLIED INFORMATION TECHNOLOGY

TIG163 Decision Support Systems, 15 credits

Beslutstödssystem, 15 högskolepoäng

First Cycle

Confirmation

This course syllabus was confirmed by Department of Applied Information Technology on 2014-03-12 and was last revised on 2020-12-01 to be valid from 2021-01-18, spring semester of 2021.

Field of education: Science 100%

Department: Department of Applied Information Technology

Position in the educational system

The course is an in-depth course in the programme specified below.

The course can be part of the following programme: 1) Information Systems: IT, Users and Organizations, Bachelor's Programme (N1SYS)

Main field of studies

Informatics

Specialization

G2F, First cycle, has at least 60 credits in first-cycle course/s as entry requirements

Entry requirements

For admission to the course:

For students admitted to the programme:

Registration on the earlier courses in the programme of which at least 60 credits are completed.

For applicant to freestanding courses:

At least 60 credits in the main field of study of Informatics or the equivalent as specific entry requirements.

Learning outcomes

On successful completion of the course the student will be able to:

Knowledge and understanding

- explain how decisions are made in organisations and how decision making can be supported with decision support systems;
- describe the functionality and architecture of the decision support systems;
- present an understanding of relationship between information retrieval and problem-solving;
- describe the complexity of the decision making;

Competence and skills

- solve assignments by means of decision technologies (for example textmining, data mining);

Judgement and approach

- demonstrate the ability to describe consequences of decision making by supporting decision technologies;
- evaluate benefits and problems at the introduction of decision support systems;
- based on relevant theory analyse and assess ethical and sustainability aspects of technology choices.

The course is sustainability-related, which means that at least one of the learning outcomes clearly shows that the course content meets at least one of the University of Gothenburg's confirmed sustainability criteria.

Course content

Decision Support Systems (DSS) are a specific class of computerized Information Systems that supports business and organizational decision-making activities. A properly designed DSS is an interactive software-based system intended to help decision makers compile useful information from raw data, documents, personal knowledge, and/or business models to identify and solve problems and make decisions. In this course, the development in Business Intelligence, Knowledge-based Systems, Neural Networks and Group Support Systems will be examined. The course has a focus in design and in development of efficient decision support systems. Real cases and different system tools are used in class to discuss, how DSS should be applied in the management of organisations.

The course consists of a theoretical part and a project. The course deepens the strategic importance of business systems and decision support systems based on ethical and sustainability aspects. The project analyzes how companies use or can use decision support systems in business processes and management of the company. As a part of the project, laboratory sessions are made with different tools for decision support.

The course gives an orientation in current research and trends in the subject area of decision support systems, above all as regards methodologies and frameworks.

Form of teaching

In the course, the course material is treated at several literature seminars with presentation and discussion.

Language of instruction: Swedish

Assessment

The course is examined through a written examination (5.5 credits), an oral group assignment (2 credits) and a written and oral group assignment (7.5 credits).

A student who has taken two exams in a course or part of a course without obtaining a pass grade is entitled to the nomination of another examiner. The student needs to contact the department for a new examiner, preferably in writing, and this should be approved by the department unless there are special reasons to the contrary (Chapter 6 Section 22 of the Higher Education Ordinance).

If a student has received a recommendation from the University of Gothenburg for special educational support, where it is compatible with the learning outcomes of the course and provided that no unreasonable resources are required, the examiner may decide to allow the student to sit an adjusted exam or alternative form of assessment.

In the event that a course has ceased or undergone major changes, students are to be guaranteed at least three examination sessions (including the ordinary examination session) over a period of at least one year, but no more than two years, after the course has ceased/been changed. The same applies to placements and professional placements (VFU), although this is restricted to just one additional examination session.

Grades

The grading scale comprises: Pass with Distinction (VG), Pass (G) and Fail (U).

The grading scale is Fail, Pass, Pass with distinction for the exam and Fail, Pass for the two group assignments.

The final grade Pass is given if all examination parts has been given at least the grade Pass. The final grade Pass with distinction is given if the examination has been given the

grade Pass with distinction and the group assignments has been given at least the grade Pass.

Course evaluation

On completion of the course, a course evaluation is carried out. The participating students are given the opportunity to participate anonymously. The result is compiled and made available for the students. Possible measures due to the results of the course evaluation are presented. The compilation of the course evaluation is also made available for new students at the start of the course the next time it is given.