

# Syllabus

for course at advanced level

**Business Analytics**  
**Affärsanalys**

**7.5 Higher Education**  
**Credits**  
**7.5 ECTS credits**

<b>Course code:</b>	ML436N
<b>Valid from:</b>	Autumn 2018
<b>Date of approval:</b>	2018-03-26
<b>Department</b>	Department of Computer and Systems Sciences
<b>Main field:</b>	Computer and Systems Sciences
<b>Specialisation:</b>	A1F - Second cycle, has second-cycle course/s as entry requirements

## Decision

This syllabus was approved by the Head of the Department 2018-03-26.

## Prerequisites and special admittance requirements

At least 15 ECTS in courses in Decision Support and Risk Analysis and at least 7.5 ECTS in Logic, all at second cycle. Or equivalent knowledge.

## Course structure

Examination code	Name	Higher Education Credits
436I	Business Analytics, assignment	3.5
436T	Business Analytics, written exam	4

## Course content

- Linear programming (LP) and its applications in business
- Network models
- Integer programming (IP) and its business applications
- Multi-period planning
- Multi-criteria decision making
- Simulation methods
- Project management.

## Learning outcomes

Upon successful completion of the course, the student should be able to:

- Develop mathematical models to calculate complex decision-making problems in business.
- Implement mathematical models in appropriate software tools in order to solve business cases.
- Assess the reliability of the model's assumptions by performing sensitivity analysis and interpreting the findings.

## Education

The teaching activities are distance-based and take place online. The course material is available on the learning platform. The teacher schedules weekly drop-in sessions via the distance-based platform.

## Forms of examination

- The course is examined through assignments and a distance-based written examination.

b. The final grading of the course is based on the following grading scale related to the learning outcomes of the course: A = Excellent, B = Very Good, C = Good, D = Satisfactory, E = Sufficient, Fx = Fail, F = Fail.

c. The grading criteria are communicated to the students at the start of the course.

d. In order to complete the whole course segment the student must obtain at least grade E (or P with Pass/Fail grades) in all course components/examinations.

e. In addition the following regulations also apply:

- Students who obtain grade Fx in a written examination task are allowed to complete a supplementary assignment in order to elevate the grade to E.

The examiner informs the concerned students when the results of the written examination are published. The supplementary assignment has to be submitted within a given deadline and can only be utilized to elevate the grade of the actual examination task.

- Students who obtained grade E in an examination task are not allowed to re-write the examination or resubmit the assignment in order to obtain a higher grade.

- Students who have failed the same examination task twice are allowed to have another examiner appointed, unless there are special reasons to the contrary.

### **Interim**

When a course is discontinued, or its contents are substantially altered, the following applies:

- Failed examination tasks are replaced with other similar examination tasks according to a specific plan.

- If no similar examination tasks can be provided, at least three examination opportunities per examination task should be offered during a period of at least three terms from the date of the decision. After this period, no examinations should be carried out on the course.

### **Limitations**

This course may not be included in a degree together with a course, taken in Sweden or elsewhere, of identical or partially similar content.

### **Required reading**

Information about course literature is available on the department's website - [www.dsv.su.se](http://www.dsv.su.se) - at least two months before the start of the course.