

Course: Calculus

credits: 5

Course code CCVP23WISKUNDE
Name Calculus
Study year 2026-2027
ECTS credits 5
Language Dutch, with parts in English
Coordinator J. van Assen

Modes of delivery Lecture
Assessments Basic skills - Written, organised by STAD examinations
 Calculus - Written, organised by STAD examinations

Learning outcomes

You calculate with the rules for precedence, for fractions, powers, summations and products.

You solve (systems of) first-degree, second-degree, simple higher-order and logarithmic equations.

You differentiate simple functions using the sum, product, chain and quotient rule.

You primitiveise and integrate simple functions to a given variable using the sum, substitution and fraction splitting rules.

You solve simple differential equations.

You can do matrix arithmetic (scalar product, matrix product, transposed, determinant, inverse matrix, dot product).

DAS competencies

Competency Level (I-IV)
 Research I
 Experimentation
 Development
 Management
 Advise
 Instruction
 Leadership
 Self-management I

Content

This theory module first repeats the basic skills (as taught at HAVO and VWO) of mathematics, adding (natural) logarithms and summations. Then differentiation, primitivity, integration and matrix arithmetic are discussed in detail and these methods are illustrated with practical examples. Calculating with second-degree equations and logarithms is applied to the subject Chemical Equilibria.

Included in programme(s)

Chemistry
 Chemical Engineering

School(s)

Engineering, Life Sciences & ICT