Vak: Mathematics 2 credits: 4

Vakcode	ELVP18AMATH2	**Werkvormen**	Hoorcollege
Naam	Mathematics 2	**Toetsen**	Mathematics 2 - Opdracht
Studiejaar	2020-2021		
ECTS credits	4		
Taal	Engels		
Coördinator	J.M. Wilson		

Leeruitkomsten

The student:

- explains, understands and uses the basic concepts of derivatives and differentiation, such as the geometric interpretation of the derivative as the slope of the curve at a point, and also as the rate of change of a function at a point;
- calculates derivatives of common functions (powers of x, exponentials, logarithms and trigonometric) using a table, and can differentiate combinations of common functions using linearity, the product rule, the quotient rule, and the chain rule. The same methods can also be applied to finding higher order derivatives;
- finds the maxima, minima and points of inflexion (if any) of a function using the first and second derivatives;
- calculates integrals of common functions (powers of x, exponentials, logarithms and trigonometric) using a table;
- integrates combinations of common functions using linearity, integration by parts, and by substitution;
- calculates definite integrals, applies them to calculate the area of a region under a curve and bounded areas under curves and between curves.

Inhoud

Analysis of engineering problems is one of the most important functions of an engineer. Mathematics, in particular calculus, is arguably the most important and most commonly used tool in order to analyse problems. In this course, the basic tools of calculus are developed that are often required in engineering.

Opgenomen in opleiding(en)

Elektrotechniek Major Sensor Technology

School(s)

Instituut voor Engineering

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