Vak: Wiskunde 3 — credits: 3

Vakcode	ELVH17GWIS3
Naam	Wiskunde 3
Studiejaar	2022-2023
ECTS credits	3
Taal	Nederlands
Coördinator	T.W. Scholten

Werkvormen	Hoorcollege
Toetsen	Wiskunde 3 - Schriftelijk, organisatie ToetsCentrum

Leeruitkomsten

The student can:

- solve a variety of 1st and 2nd order differential equations using standard techniques such as separation of variables, use of an integrating factor, use of exactness, use of characteristic polynomial and equating coefficients;
- use Laplace transforms to solve differential equations;
- find the Laplace transform of a function using properties of and theorems about Laplace transforms, with the assistance of a table of Laplace transforms;
- find the inverse Laplace transform of a function using properties of and theorems about Laplace transforms, and algebraic techniques such as partial fractions and completing the square, with the assistance of a table of Laplace transforms.

Inhoud

Differential equations are important in engineering and other fields as mathematical models of systems involving rates of change. This study unit introduces differential equations and certain standard techniques for solving them, insofar as this is possible. It also introduces the Laplace transform, which is used in control engineering, and can also be applied to solve differential equations.

Opgenomen in opleiding(en)

Elektrotechniek Major Elektronica
Elektrotechniek Major Mechatronica

School(s)

Instituut voor Engineering

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