Vak: Mathematics 4 credits: 4

Vakcode	ELVH17AMATH4
Naam	Mathematics 4
Studiejaar	2020-2021
ECTS credits	4
Taal	Engels
Coördinator	J.M. Wilson
Werkvormen	Hoorcollege
Toetsen	Mathematics 4 - Schriftelijk, eigen organisatie

Leeruitkomsten

The student can:

- use partial derivatives to solve problems in error analysis and optimisation
- solve a linear system of equations using row operations and matrix inversion, including finding approximate solutions
- use homogeneous coordinates to perform combined affine transformations of vectors
- analyse a dynamical system using determinants to find eigenvalues and eigenvectors
- fit a low degree polynomial to data using the normal equations, thus finding a least squares solution.
- apply the singular value decomposition to a collection of vector valued data points to find the subspace containing most of the variance.

Inhoud

This course presents linear algebra and partial derivatives including some applications important to sensor engineers.

Opgenomen in opleiding(en)

Elektrotechniek Major Sensor Technology

School(s)

Instituut voor Engineering