

Vak: Introduction to Smart Systems Engineering

credits: 5

Vakcode	SEVM19SSE	Werkvormen	Hoorcollege
Naam	Introduction to Smart Systems Engineering		Projectonderwijs
Studiejaar	2026-2027	Toetsen	Introduction to SSE - Opdracht
ECTS credits	5		
Taal	Engels		
Coördinator	S.S. Ahmed		

Leeruitkomsten

At the end of this module the student is able to:

- manipulate matrices to solve a linear system of equations.
- analyse a dynamical system using determinants to find eigenvalues and eigenvectors.
- solve least squares problems.
- apply singular value decomposition to problems in data analysis and signal Processing.
- manipulate and visualize numerical data using typical Python packages, such as Numpy and Matplotlib.
- calculate and apply discrete Fourier transform.
- apply sampling theorem of Shannon, the Nyquist frequency, the concepts of aliasing and windowing.

Inhoud

The course covers the following topics:

the aim of this course is to introduce or refresh your knowledge on digital signal processing, basic software development and linear algebra. This should prepare you for the technical courses taught throughout the rest of the master.

Opgenomen in opleiding(en)

Smart Systems Engineering

School(s)

Engineering, Life Sciences & ICT