Summary
The course covers control theory and design for linear time-invariant systems: (i) Mathematical descriptions of systems (ii) Multivariables realizations; (iii) Stability; (iv) Controllability and Observability; (v) Minimal realizations and coprime fractions; (vi) Pole placement and model matching.

Content
The course contents include the following main chapters:
- Mathematical description of linear systems
- State-space solutions and realizations
- Stability
- Controllability and observability
- Minimal realizations and coprime fractions
- State feedback and state estimation

Keywords
Linear dynamic models, Linear systems, Stability, State feedback, State estimation.

Learning Prerequisites
Recommended courses
- Linear Algebra
- Differential Equations
- Automatic Control

Assessment methods
Written exam and oral presentation.