

## Modern Control Theory

Course Workload		Assessment form (examination/ graded test/ ungraded test)
ECTS	Hours	
3	108	Ungraded test

The Modern Theory of Control Systems course is dedicated to teaching modern methods of stability analysis, parameter identification, and observer design for dynamic systems.

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### **Course structure:**

#### 1. Introduction. Gradient method

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- 1.1. Introduction to parametric identification and synthesis of the observer
- 1.2. Gradient method

#### 2. The method of dynamic regressor extension and mixing (DREM)

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- 2.1. Theoretical foundations
- 2.2. Applications

#### 3. Observer based on parameter estimation

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- 3.1. Theoretical foundations
- 3.2. Applications

#### 4. DREM-based observer

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- 4.1. Theoretical foundations
  - 4.2. Applications
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