

# COURSE DETAIL

## NETWORK DYNAMICS

**Country**

Sweden

**Host Institution**

Lund University

**Program(s)**

Lund University

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Computer Science

**UCEAP Course Number**

110

**UCEAP Course Suffix****UCEAP Official Title**

NETWORK DYNAMICS

**UCEAP Transcript Title**

NETWORK DYNAMICS

**UCEAP Quarter Units**

6.00

**UCEAP Semester Units**

4.00

## Course Description

This course focuses on common principles at the heart of the functioning of modern communication networks and shows how the same notions related to connectivity, resilience and fragility, centrality and influence arise in several different domains. It introduces mathematical tools from graph theory, random graphs, dynamical systems, optimization and game theory, and covers a wide variety of applications including: opinion dynamics and learning in social networks; economic and financial networks; communication networks and the Internet; consensus and gossiping; spread and control of epidemics; dynamics and control of transportation and power networks.

## Language(s) of Instruction

English

## Host Institution Course Number

FRTN30

## Host Institution Course Title

NETWORK DYNAMICS

## Host Institution Campus

Engineering

## Host Institution Faculty

## Host Institution Degree

## Host Institution Department

Engineering- Automatic Control

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