

# COURSE DETAIL

## INSTRUMENTATION AND MEASUREMENTS

**Country**

Spain

**Host Institution**

Carlos III University of Madrid

**Program(s)**

Carlos III University of Madrid

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Electrical Engineering

**UCEAP Course Number**

114

**UCEAP Course Suffix**

E

**UCEAP Official Title**

INSTRUMENTATION AND MEASUREMENTS

**UCEAP Transcript Title**

INSTRUMNT&MEASURMNT

**UCEAP Quarter Units**

5.00

**UCEAP Semester Units**

**Course Description**

This course discusses fundamental concepts in instrumentation and measurements. Topics include: multimeter, signal generator, and oscilloscope; vector network analyzer; lock-in amplifier; interfacing sensors and digital systems; data acquisition equipment and virtual instrumentation; sensors; analog signal conditioning circuits; noise and signal-to-noise ratio; modulation techniques and circuit components; signal sampling and processing; analog to digital and digital to analog converters; digital signal processing.

Prerequisites: Signals, Systems and Circuits; Electronic Engineering Fundamentals.

**Language(s) of Instruction**

English

**Host Institution Course Number**

18322

**Host Institution Course Title**

INSTRUMENTATION AND MEASUREMENTS

**Host Institution Campus**

Leganés

**Host Institution Faculty**

Escuela Politécnica Superior

**Host Institution Degree**

Grado en Ingeniería Física

**Host Institution Department**

Departamento de Tecnología Electrónica