

# COURSE DETAIL

## CONTROL

**Country**

Australia

**Host Institution**

University of Sydney

**Program(s)**

University of Sydney

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Electrical Engineering

**UCEAP Course Number**

129

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

CONTROL

**UCEAP Transcript Title**

CONTROL

**UCEAP Quarter Units**

6.00

**UCEAP Semester Units**

4.00

## Course Description

This course examines the application of feedback control to continuous-time, linear time-invariant systems. It covers modelling of physical systems using state space, differential equations, and transfer functions, dynamic response of linear time invariant systems and the role of system poles and zeros on it, simplification of complex systems, stability of feedback systems and their steady state performance, Routh-Hurwitz stability criterion, sketching of root locus and controller design using the root locus, Proportional, integral and derivative control, lead and lag compensators, frequency response techniques, Nyquist stability criterion, gain and phase margins, compensator design in the frequency domain, state space design for single input single-output systems, and pole placement state variable feedback control and observer design.

## Language(s) of Instruction

English

## Host Institution Course Number

ELEC3304

## Host Institution Course Title

CONTROL

## Host Institution Course Details

<https://www.sydney.edu.au/units/ELEC3304.html>

## Host Institution Campus

## Host Institution Faculty

## Host Institution Degree

## Host Institution Department

Electrical and Information Engineering

## Course Last Reviewed

2023-2024

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