

COURSE DETAIL

CONTROL ENGINEERING

Country

Japan

Host Institution

Tohoku University

Program(s)

Engineering and Science

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Electrical Engineering

UCEAP Course Number

100

UCEAP Course Suffix

BW

UCEAP Official Title

CONTROL ENGINEERING

UCEAP Transcript Title

CONTROL ENGINEERING

UCEAP Quarter Units

3.00

UCEAP Semester Units

2.00

Course Description

Following classical control theory (Control Engineering I), this course utilizes modern control theory and studies the state-space method, a method to control multivariable linear dynamic systems. The focus of modern control theory is how to analyze the characteristics of a system represented by the state equation and how to design a control system to achieve desired the representation method of a multivariable dynamic system with a state equation, the course introduces basic concepts of multivariable systems, such as stability, controllability, and observability. The class also learns specific control strategies based on concepts such as pole assignment by state feedback, state estimation by an observer, optimal regulator.

Language(s) of Instruction

English

Host Institution Course Number

N/A

Host Institution Course Title

CONTROL ENGINEERING II

Host Institution Course Details

https://uceap.sharepoint.com/:w:/s/DocumentLibrary/IQBQU_Q00Ny9QLk37YcxJIUXAY5S...

Host Institution Campus

Tohoku University

Host Institution Faculty

Host Institution Degree

Host Institution Department

International Mechanical & Aerospace Engineering (IMAC)

Course Last Reviewed

2025-2026

[Print](#)