COURSE DETAIL

CONTROL ENGINEERING 1
Country Ireland
Host Institution Trinity College Dublin
Program(s) Irish Universities,Trinity College Dublin
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Engineering
UCEAP Course Number 120
UCEAP Course Suffix
UCEAP Official Title CONTROL ENGINEERING 1
UCEAP Transcript Title CONTROL ENGR 1
UCEAP Quarter Units 4.00
UCEAP Semester Units 2.70

Course Description
This course introduces the technology of control systems and their applications in power electronic control devices to control motors such as AC, DC, and stepping motors. Students learn to select and design suitable control systems and are introduced to programmable logic controllers, PID and fuzzy control systems, real time control, and digital control. Further topics include transfer functions, time response of 1st and 2nd order systems, modelling in the frequency domain, block diagram algebra, stability and the Routh-Hurwitz criterion, steady state errors, root locus techniques – analysis and design of compensators, frequency response techniques (Bode plots and Nyquist criterion), and use of Matlab and Control Systems Toolbox in Analysis and Design of Control Systems.

Language(s) of Instruction
English

Host Institution Course Number
ME4B09

Host Institution Course Title
CONTROL ENGINEERING 1

Host Institution Campus
Trinity College Dublin

Host Institution Faculty

Host Institution Degree

Host Institution Department
Mechanical Engineering

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