The Hong Kong University of Science and Technology

UG Course Syllabus Template (Simplified version uploading to SENG website)

Title: Process Dynamics and Control

Code: CENG 3110

No. of Credits: 3

[Any pre-/co-requisites]: No

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Course Description

This course will cover the basic principles of process dynamics, feedback control design and synthesis. Advanced control methods such as delay compensation, cascade control, feedforward control, ratio control, and decoupling will be introduced. It is expected that students will have in depth understanding of the basic principle and good understanding of the advanced methods. The course will be delivered through lecture, Matlab/Simulink is used to assist the learning.

Assessments:

Assessment Task	Contribution to Overall Course grade (%)
Assignments	25%
Mid-Term	30%
Final examination	45%

Required Texts and Materials

Text: "Process Dynamics and control" by Dale E. Seborg, Thomas F. Edgar, Duncan A. Mellichamp, Francis J. Doyle III, 4th Edition, Wiley

References:

"Process Control: Design Processes and Control Systems for Dynamic Performance", by T.E. Marlin, McGraw Hill, (1995)

"Principles and Practice of Automatic Process Control", By C.A. Smith and A.B. Corripio, John Wiley Inc., 2nd (1997)

Matlab/Simulink software (available from ITSC and Library)