Control Fundamentals Theory and Practice (3-day Course) Agenda

Day 1: Linear Systems Models

08.45 *REGISTRATION*
09.00 Introduction to the Course - "The Need for Control"
09.45 Transfer Functions Representations of Linear Systems
10.30 *TEA/COFFEE*
10.45 State-space Representations of Linear Systems
11.15 Frequency Response Analysis (Bode, Nichols and Nyquist)
12.15 *LUNCH*
13.00 Hands-On Session: Introduction to Matlab/Simulink and Linear System Representation
14.30 Fundamentals of Modelling, System Identification and Simulation
15.30 *TEA/COFFEE*
15.45 Hands-On Session: Modelling for Controller Design
17.00 *CLOSE*

Day 2: Classical Control Design

09.00 Fundamentals of Feedback Control Design (Performance, Stability & Disturbance Rejection)
09.45 *TEA/COFFEE*
10.00 Hands-On Session: Control Fundamentals
11.00 Introduction to PID Controller and Tuning Methods
12.15 *LUNCH*
13.00 Introduction to PID Controller and Tuning Methods (continued)
13.30 Hands-On Session: PID Controller Tuning
14.45 *TEA/COFFEE*
15.00 Implementation Issues and Time Delay Compensation
15.45 Hands-On Session: Practical Aspects in Control
17.00 *CLOSE*

Day 3 Practical Aspects in Control

09.00 Frequency Domain Control Design - Lead-Lag Compensation
10.15 *TEA/COFFEE*
10.30 Hands-On Session: Frequency Domain Control Design
11.30 Feedback Control Design using Root Locus with demonstration
12.30 *LUNCH*
13.15 Control System Strategies – Feedforward/Feedback control, Cascade, etc
14.15 Discrete-Time Modelling and Control Representation
15.15 *TEA/COFFEE*
15.30 Hands-On Session: Discrete Time Systems
16.15 Nonlinear Systems and their Control – incl. Linearization
17:30 *CLOSE*

ISC Limited
50 George Street
Glasgow G1 1QE
Scotland UK

t +44 (0) 141 553 1111
f +44 (0) 141 553 1232
e actcmail@actc-control.com
w www.actc-control.com