

Global Learning Semesters

Course Syllabus

Course: EENG-430 Digital Control Systems

Department: Engineering

Host Institution: Intercollege, Nicosia, Cyprus



Course Summary		
Course Code	Course Title	Recommended Credit Hours
EENG-430	Digital Control Systems	3
Semester Offered	Contact Hours	Prerequisites
Fall	42	EENG-295 Control Systems. Analysis and design of linear control systems using classical methods.
Department	Level of Course	Language of Instruction
Engineering	Upper Division	English

Course Description

Fundamentals of sampled linear systems from a control perspective, encompassing both transform techniques and state-space strategies. Topics covered include linear difference equations, the z-transform, sampled-data systems, A/D and D/A conversion, the discrete transfer function, design of digital control systems using transform techniques and state-space methods.

Instructor

Ms. Maria Vraka

Course Aims and Objectives

To educate students in the principles of modeling, analysis and design of control systems using real-time computing.

Teaching Methods

The course is delivered through lectures.

Course Teaching Hours

The course is 42 hours long and is delivered in 14 weeks (3 hours/week).

Evaluation and Grading

Homework/Attendance:	10%
Test I:	25%
Test II:	25%
Final Exam:	40%

Readings and Resources

Required Textbook

Gene F. Franklin, J. David Powell and Michael L. Workman, Digital Control of Dynamic Systems, Third Edition, Addison-Wesley, 1998

Recommended Reading

Katsuhiko Ogata, Discrete-Time Control Systems, Second Edition, Prentice Hall, 1995