EE 516   Modern Control Systems

COURSE INFORMATION

Prerequisites	Academic Year &Level		Teaching Methods			Credit Hrs.
	Year	Semester	Lecture	Tutorial	Lab.	
EE412	5	9,10	2	2		3

COURSE AIM

More applications using MATLAB to design multivariable system controllers

COURSE WEEKLY CONTENTS

1   State space analysis for L.S (1).
2   State space analysis for L.S (2).
3   Nonlinear state space equation.
4   Decomposition of linear systems (1).
5   Decomposition of linear systems (2).
6   Dead beat response.
7   Pole assignment by using state FB (1).   +   Midterm Exam
8   Pole assignment by using state FB (2).
9   Observer and state estimation.
10 Introduction to linear optimization(1).
11 Introduction to linear optimization (2).
12 12th week Assessment + Introduction to self tuning systems.
13 Introduction to self tuning systems.
14 System estimation (1).
15 System estimation (2).

STUDENT GRADING & ASSESSMENT

Weeks	Exams		Assign.	Quizzes	Reports	Present.	Lab.	Total
1 to 7	20	Midterm	←	1 0	M A R K S		→	30
			To be freely distributed among possible assessments					
8 to 12	←			2 0	M A R K S		→	20
13 to 15	←			1 0	M A R K S		→	10
16 or 17	40	Final						40
Total	Exams		Assign.	Quizzes	Reports	Present.	Lab.	100

REFERENCES

Textbook	K. Ogata, " Modern Control Engineering " Prentice-Hall, 2012
Other	N. K. Sinha, " Control Systems ", CBS publishing, Japan .
	D.B. Miorn, "Design of feedback Control Systems ", Harcourt Brace Jovanovier Publishers.