EE-879, Robust Control (3-0)

Textbook: Essentials of Robust Control by Kemin Zhou and John C. Doyle, Prentice Hall,

1997. ISBN-10: 0135258332, ISBN-13: 978-0135258330

Reference Book: Robust Control - The Parametric Approach, By S.P. Bhattacharyya, H.

Chapellat, L.H. Keel, Prentice Hall 1995.

ISBN-10: 013781576X, ISBN-13:

9780137815760 **Objective:**

The aim of this course is to educate the students about control techniques that explicitly deal with uncertainty in their approach to controller design.

Pre-Requisite:

EE 826 Linear Control Systems (or equivalent)

Course Outcome:

Students completing this course are expected to able to design robust control systems that would function properly and with stability even in the presence of bounded modeling errors.

Course Outline:

The topics covered in the course are outlines below:

Topics	Allocated Periods
Introduction to Robust Control Linear Algebra and Linear Systems H_2 and H_∞ spaces Internal Stability Performance Specifications and Limitations	45
Balanced Model Reduction Uncertainty and Robustness Linear Fractional Transformation μ and μ	

Synthesis Controller Parameterization	