

## SECOND YEAR

<b>Automatic Control Theory</b>	<b>COE214</b>
<b>Prerequisite : E201</b>	<b>(2-2-0-0)</b>

Introduction to Control Systems: History and basic definition of open loop system and closed loop control system. Laplace Transform: Laplace transform, Inverse Laplace transform, Properties of Laplace transform, Applications in communication systems. Transfer function: Transfer function of electrical and mechanical system. Block diagram: Block diagram reduction, Signal flow graph and Mason law. Time response: Typical test signals, poles, zeros, types of system (second order and first order) and steady state error. Stability: Routh criterion and root locus. Frequency response techniques: Bode plots, Nyquist diagram, phase margin and gain margin.