

SYLLABUS :-

Prerequisite: AE21004                      3 - 0 - 0: 3 Credits  
Composite materials, smart materials and their properties, piezoelectric materials, magneto-strictive materials, electro-rheological fluids, magneto-rheological suspensions, shape memory alloys (SMA), fiber-optic sensors, actuation, sensing and control augmentation, distributed/discrete sensing and actuation, methods of analysis, finite element applications, vibration suppression, shape control, structural health monitoring and optimum locations of sensors and actuators.  
Books: M V Gandhi and B S Thompson, Smart Materials and Structures, Chapman and Hall  
L Meirovitch, Dynamics and Control of Structures, John Wiley  
H T Banks, R C Smith and Y Wang, Smart Material Structures: Modeling, Estimation and Control, John Wiley  
R L Clark, W R Saunders and G P Gibbs, Adaptive Structures, John Wiley and Sons