

Course code	Course Name	L-T-P-Credits	Year of Introduction
AO431	ANALYSIS AND SIMULATION LAB	0-0-3-1	2016
Prerequisite : Nil			
Course objectives <ul style="list-style-type: none"> • To simulate flow encountered in aerodynamics • To do structural analysis of aircraft components 			
List of Experiments			
<ol style="list-style-type: none"> 1. Simulation of flow over a flat plate at various angles of attack. 2. Simulation of flow through a Converging duct. 3. Simulation of flow through a Diverging duct. 4. Simulation of flow through CD Nozzle. 5. Simulation of flow over symmetric airfoil. 6. Simulation of flow over unsymmetrical airfoil 7. Simulation of supersonic flow over a wing of biconvex cross section. 8. Simulation of flow over sphere, cone & cylinder 9. Simulation of flow over boat-tail configuration. 10 Simulation of flow through subsonic and supersonic diffusers. 11. Structural analysis of a tapered wing. 12. Structural analysis of a fuselage structure. 13. Analysis of a composite laminate structure. 14. Structural analysis of a landing gear. 15. Thermo structural analysis of a composite laminate structure. 			
Expected outcome The students will be able to <ol style="list-style-type: none"> i. visualize various flow conditions encountered in aerodynamics ii. do structural analysis of aircraft components 			
END SEMESTER EXAM			