Faculty of Mechanical Engineering

M.E. Aerospace Technology

(R 2021) Semester - I

Course Code: AS4111 Course Title: Launch Vehicle Aerodynamics Laboratory		
Sl.No.	**Description of Equipment**	**Required members (for batch of 25 students)**
1.	Subsonic wind tunnel	1 No.
2.	Supersonic wind tunnel	1 No.
3.	3 (or) 6 Component Wind tunnel balance	1 No.
4.	Schlieren System	1 No.
5.	Pressure Transducer / Pressure scanner (1 psi)	1 No.
6.	Multitube Manometer	1 No.
7.	Pitot-Static Tube	1 No.
8.	Yaw probe	1 No.
9.	Swept wing model	1 No.
10.	Nose cone model	1 No.
11.	D model	1 No.
12.	Single Expansion Ramp Nozzle	1 No.
13.	Missile model	1 No.
14.	Backward facing step model	1 No.
15.	Sphere model	1 No.
16.	Semi-wedge model	1 No.
17.	Blunt body model	1 No.
18.	Flat plate with thermal boundary layer measurement setup	1 No.

Faculty of Mechanical Engineering

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(R 2021) Semester - I

Course Code: AS4112	**Course Title: Space Propulsion Laboratory**	
Sl.No.	**Description of Equipment**	**Required members (for batch of 25 students)**
1.	High Speed Jet Test facility	1 No.
2.	Supersonic wind tunnel	1 No.
3.	Subsonic wind tunnel	1 No.
4.	Schlieren system	1 No.
5.	Pressure Transducer/Pressure scanner (16 psi)	1 No.
6.	C-D Nozzle	1 No.
7.	Supersonic diffuser	1 No.
8.	Pitot tube	1 No.
9.	3 Axis Traverse Mechanism	1 No.
10.	Pitot Static tube	1 No.
11.	Flame holder model	1 No.
12.	Non-circular combustor	1 No.
13.	Wide angle subsonic diffusers	1 No.
14.	Multitube Manometer	1 No.
15.	Compressor cascade blade setup with provision to change incidence angle	1 No.
16.	Cavity model with injections	1 No.
17.	Spike or Ramp type supersonic inlet	1 No.
18.	C-D Nozzle with wall pressure tapings	1 No.
19.	Blower	1 No.

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(R 2021) Semester - II

Course Code: AS4211	**Course Title: AEROSPACE STRUCTURES**	
Sl.No.	**Description of Equipment**	**Required members (for batch of 25 students)**
1.	Cantilever beam with symmetric cross section	1 No.
2.	Cantilever beam with Un-symmetric cross section (Z section)	1 No.
3.	Column setup with provision for different end conditions	1 No.
4.	Experimental setup of a open section beam	1 No.
5.	Experimental setup of a closed section beam	1 No.
6.	Cantilever beam setup to find Influence Coefficients & Flexibility Matrix	1 No.
7.	Experimental setup for combined bending and torsion	1 No.
8.	Diffuser transmission type Polariscope with accessories	1 No.
9.	Experimental setup for vibration of beams	1 No.
10.	Universal Testing Machine	1 No.
11.	Acoustic Emission / Ultrasonics Equipment	1 No.
12.	Computer with FE software	1 No.
13.	Fatigue testing machine	1 No.

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AS4213 COMPUTATIONAL LABORATORY

Sl. No.	Description of Equipment	Required Numbers
1.	Desktop Computers	1 No. for 2 student
2.	FEA Software (ANSYS / NASTRAN etc.)	1 No
3.	CFD Software (ANSYS - CFX / SOLIDWORKS FLOW SIMULATION etc.)	1 No