

Aerospace department Curriculum

B.Tech Aerospace Engineering

S.No	Batch	Regulation	Revision
1.	2020-2024 (IV year)	2018	1
2.	2021-2025 (III year)	2021	NIL
3.	2022-2026 (II Year)		
4.	2023-2027 (I Year)		

**SEMESTER WISE STRUCTURE OF CURRICULUM
REGULATION – 2021
B.TECH. AEROSPACE ENGINEERING**

SEMESTER I

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XMA101	Calculus and Linear Algebra	3	1	0	4	4
2.	XBE102	Electrical and Electronic Engineering Systems	3	1	0	4	4
3.	XAP103	Applied Physics for Engineers	3	1	0	4	4
4.	XEG104	Engineering Graphics and Design	1	0	2	3	5
5.	XGS105	Speech Communication	0	1	2	3	5
6.	XUM106	Constitution of India	0	0	0	0	3
7.	XBE107	Electrical and Electronic Engineering Systems Lab	0	0	1	1	2
8.	XAP108	Applied Physics for Engineers Lab	0	0	1	1	2
TOTAL						20	29

SEMESTER II

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XMA201	Calculus, Ordinary Differential Equations and Complex Variable	3	1	0	4	4
2.	XCP202	Programming for Problem Solving	3	0	0	3	3
3.	XAC203	Applied Chemistry for Engineers	3	1	0	4	4
4.	XGS204	Technical Communication	2	0	0	2	2
5.	XWP205	Workshop Practices	1	0	2	3	5
6.	XEM206	Engineering Mechanics	3	0	0	3	3
7.	XCP207	Programming for Problem Solving Lab	0	0	1	1	2
8.	XAC208	Applied Chemistry for Engineers Lab	0	0	1	1	2
TOTAL						21	25

SEMESTER III

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XMA301	Transforms and Partial Differential Equations	3	0	0	3	3
2.	XAS302	Introduction to Aerospace Engineering	3	0	0	3	3
3.	XAS303	Strength of Materials	3	0	0	3	3
4.	XAS304	Fluid Mechanics	3	1	0	4	4
5.	XAS305	Aero Engineering Thermodynamics	3	1	0	4	4
6.	XUM306	Entrepreneurship Development	2	0	0	2	2
7.	HSMC (H-102)	Universal Human Values 2: Understanding Harmony	2	1	0	3	3
8.	XAS308	Strength of Materials Lab	0	0	1	1	2
9.	XAS309	Fluid Mechanics Lab	0	0	1	1	2
10.	XAS310	In-Plant Training-I	0	0	0	1	0
TOTAL						25	29

SEMESTER IV

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XPS401	Probability and Statistics	3	0	0	3	3
2.	XAS402	Aerodynamics – I	3	0	0	3	3
3.	XAS403	Aircraft Structures -I	3	1	0	4	4
4.	XAS404	Air-Breathing Propulsion	3	0	0	3	3
5.	XUM405	Economics for Engineers	3	0	0	3	3
6.	XUM406	Disaster Management	0	0	0	0	3
7.	XAS407	Aerodynamics Lab	0	0	1	1	2
8.	XAS408	Thermal and Propulsion Lab	0	0	1	1	2
9.	XAS409	CAD Lab	0	0	1	1	2
TOTAL						19	25

SEMESTER V

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XAS501	Aerodynamics – II	3	0	0	3	3
2.	XAS502	Aircraft Structures – II	3	1	0	4	4
3.	XAS503	Aerospace Propulsion	3	0	0	3	3
4.	XAS504	Elements of Satellite Technology	3	0	0	3	3
5.	XAS**	Professional Elective Course-I	3	0	0	3	3
6.	XOE*	Open Elective Course-I	3	0	0	3	3
7.	XAS507	Aircraft Structures Lab	0	0	1	1	2
8.	XAS508	Aircraft Design Project	0	0	1	1	2
9.	XAS509	In-Plant Training-II	0	0	0	1	0
TOTAL						22	23

SEMESTER VI

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XAS601	Finite Element Analysis	3	1	0	4	4
2.	XAS602	Flight Dynamics	3	1	0	4	4
3.	XAS**	Professional Elective Course-II	3	0	0	3	3
4.	XOE*	Open Elective Course-II	3	0	0	3	3
5.	XGS605	Professional Skills	1	0	2	3	5
6.	XUM606	Cyber Security	0	0	0	0	3
7.	XAS607	Machine Dynamics Lab	0	0	1	1	2
8.	XAS608	Aeromodelling Lab	0	0	1	1	2
TOTAL						19	26

SEMESTER VII

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XAS701	Computational Fluid Dynamics	3	1	0	4	4
2.	XAS702	Avionics	3	0	0	3	3
3.	XAS**	Professional Elective Course-III	3	0	0	3	3
4.	XOE*	Open Elective Course-III	3	0	0	3	3
5.	XUM705	Environmental Studies	0	0	0	0	3
6.	XAS706	Computational Fluid Dynamics Lab	0	0	1	1	2
7.	XAS707	Avionics Lab	0	0	1	1	2
8.	XAS708	Project Work (Phase-I)	0	0	2	2	4
9.	XAS709	In-Plant Training-III	0	0	0	2	0
TOTAL						19	24

SEMESTER VIII

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XAS**	Professional Elective Course-IV	3	0	0	3	3
2.	XOE*	Open Elective Course-IV	3	0	0	3	3
3.	XOE*	Open Elective Course-V	3	0	0	3	3
4.	XAS804	Project Work (Phase-II)	0	0	9	9	18
TOTAL						18	27

TOTAL CREDITS = 163

LIST OF ELECTIVES

PROFESSIONAL ELECTIVE COURSE – I

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XAS505A	Aerospace Materials	3	0	0	3	3
2.	XAS505B	Airframe Maintenance and Repair	3	0	0	3	3
3.	XAS505C	Navigation Systems	3	0	0	3	3

PROFESSIONAL ELECTIVE COURSE – II

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XAS603A	UAV Technologies	3	0	0	3	3
2.	XAS603B	Aero Engine Repair and Maintenance	3	0	0	3	3
3.	XAS603C	Space Mechanics	3	0	0	3	3

PROFESSIONAL ELECTIVE COURSE – III

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XAS703A	Vibration and Structural Dynamics	3	0	0	3	3
2.	XAS703B	Helicopter Maintenance	3	0	0	3	3
3.	XAS703C	Rockets and Missiles	3	0	0	3	3

PROFESSIONAL ELECTIVE COURSE – IV

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XAS801A	Wind Tunnel Techniques	3	0	0	3	3
2.	XAS801B	Experimental Aerodynamics	3	0	0	3	3
3.	XAS801C	Computer Integrated Manufacturing	3	0	0	3	3

OPEN ELECTIVE COURSE (Offered to other Department)

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XASOE1	Elements of Aeronautics	3	0	0	3	3
2.	XASOE2	Air Transportation and Aircraft Maintenance Management	3	0	0	3	3