

SEMESTER-WISE STRUCTURE OF CURRICULUM

REGULATION – 2018 – Revision 1

(Applicable to the students admitted from the Academic year 2018-19 onwards)

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.	XCP102	Programming for Problem Solving	3	0	4	5	7
3.	XGS103	English	2	0	2	3	4
4.	XAS104	Applied Chemistry for Engineers	3	1	2	5	6
5.	XWP105	Workshop Practices	1	0	4	3	5
TOTAL						20	26

SEMESTER II

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XMA201	Calculus, Ordinary Differential Equations and Complex Variables	3	1	0	4	4
2.	XES202	Environmental Sciences	3	0	0	0	3
3.	XBE203	Electrical and Electronics Engineering Systems	3	1	2	5	6
4.	XAP204	Applied Physics for Engineers	3	1	4	6	8
5.	XEG205	Engineering Graphics	1	0	4	3	5
TOTAL						18	26

SEMESTER III

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XMA301	Transforms and Partial Differential Equations	3	1	0	4	4
2.	XAS302	Material Science and Metallurgy	3	0	0	3	3
3.	XAS303	Solid Mechanics and Fluid Mechanics	3	1	0	4	4
4.	XEM304	Engineering Mechanics	3	1	0	4	4
5.	XUM305	Entrepreneurship Development	2	1	0	3	4
6.	XAS306	Engineering Thermodynamics	3	0	0	3	3
7.	XAS307	In-Plant Training-I	0	0	0	0	0
TOTAL						21	22

SEMESTER IV

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XAS401	Aerodynamics - I	3	0	2	4	5
2.	XAS402	Aircraft Structures - I	3	1	0	4	4
3.	XUM403	Human Ethics, Values, Rights and Gender Equality	1	0	0	0	1
4.	XAS404	Aircraft Propulsion	3	1	2	5	6
5.	XAS405	Elements of Satellite Technology	3	0	0	3	3
6.	XASE**	Professional Elective Course I	3	0	0	3	3
TOTAL						19	22

SEMESTER V

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XAS501	Aerodynamics - II	3	1	0	4	4
2.	XAS502	Aircraft Structures - II	3	1	2	5	6
3.	XAS503	Rocket and Spacecraft Propulsion	3	1	0	4	4
4.	XAS504	Space Mechanics	3	0	0	3	3
5.	XASE**	Professional Elective Course - II	3	1	0	4	4
6.	X**OE*	Open Elective - I	3	0	0	3	3
7.	XUM507	Essence of Indian Traditional Knowledge	3	0	0	0	3
8.	XAS508	In-Plant Training-II	0	0	2	0	4
9.	XASM01	Elements of Drone Technology	1	0	1	0	2
TOTAL						23	33

SEMESTER VI

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XAS601	Flight Dynamics	3	1	0	4	3
2.	XAS602	Finite Element Analysis	3	1	0	4	4
3.	XAS603	UAV Technologies	3	0	2	4	6
4.	XAS604	Avionics	3	0	2	4	5
5.	XASE**	Professional Elective Course – III	3	0	0	3	3
6.	X**OE**	Open Elective - II	3	0	0	3	3
7.	XUM607	Constitution of India	3	0	0	0	3
8.	XASM02	CAD Modeling	2	0	1	0	2
TOTAL						22	28

SEMESTER VII

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XAS701	Computational Fluid Dynamics	3	1	2	5	6
2.	XASE**	Professional Elective Course – IV	3	0	0	3	3
3.	XASE**	Professional Elective Course – V	3	0	0	3	3
4.	X**OE*	Open Elective - III	3	0	0	3	3
5.	XAS705	Project Phase - I	0	0	8	4	8
6.	XUM706	Cyber Security	3	0	0	0	3
7.	XAS707	In-Plant Training-III	0	0	4	2	8
8.	XASM03	Aero and Space Modeling	2	0	0	0	2
TOTAL						20	36

SEMESTER VIII

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XASE**	Professional Elective Course – VI	3	0	0	3	3
2.	X**OE*	Open Elective - IV	3	0	0	3	3
3.	X**OE*	Open Elective - V	3	0	0	3	3
4.	XAS804	Project Phase - II	0	0	20	10	20
TOTAL						19	29

TOTAL CREDITS = 161

LIST OF ELECTIVES

PROFESSIONAL ELECTIVE COURSE – I

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XASE01	Aircraft Systems and Instruments	3	0	0	3	3
2.	XASE02	Sensors and Measurements	3	0	0	3	3
3.	XASE03	Control Systems	3	0	0	3	3
4.	XASE04	Airframe Maintenance and Repair	3	0	0	3	3
5.	XASE05	Theory of Elasticity	3	0	0	3	3

PROFESSIONAL ELECTIVE COURSE – II

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XASE06	Heat Transfer	3	1	0	4	4
2.	XASE07	Mechanics of Machines	3	1	0	4	4
3.	XASE08	Wind Tunnel Techniques	3	1	0	4	4
4.	XASE09	Theory of Vibrations	3	1	0	4	4
5.	XASE10	Composite Materials	3	1	0	4	4

PROFESSIONAL ELECTIVE COURSE – III

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XASE11	Space Weapons and Warfare	3	0	0	3	3
2.	XASE12	Automation and Control Engineering	3	0	0	3	3
3.	XASE13	High Temperature Materials	3	0	0	3	3
4.	XASE14	Aircraft Rules and Regulations CAR I and II	3	0	0	3	3
5.	XASE15	Aeroelasticity	3	0	0	3	3

PROFESSIONAL ELECTIVE COURSE – IV

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XASE16	Experimental Stress Analysis	3	0	0	3	3
2.	XASE17	Aircraft Engine Maintenance	3	0	0	3	3
3.	XASE18	Navigation Systems	3	0	0	3	3
4.	XASE19	Fatigue and Fracture Mechanics	3	0	0	3	3
5.	XASE20	Helicopter Maintenance	3	0	0	3	3

PROFESSIONAL ELECTIVE COURSE – V

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XASE21	Rockets and Missiles	3	0	0	3	3
2.	XASE22	Disaster Management	3	0	0	3	3
3.	XASE23	Air Traffic Control and Aerodrome Design	3	0	0	3	3
4.	XASE24	Missile Guidance and Control	3	0	0	3	3
5.	XASE25	Air Transportation and Aircraft Maintenance	3	0	0	3	3

PROFESSIONAL ELECTIVE COURSE – VI

S. No.	COURSE CODE	COURSE NAME	L	T	P	C	H
1.	XASE26	Theory of Plates and Shells	3	0	0	3	3
2.	XASE27	Spacecraft Power Systems	3	0	0	3	3
3.	XASE28	Cryogenics	3	0	0	3	3
4.	XASE29	Hypersonic Aerodynamics	3	0	0	3	3
5.	XASE30	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	Fundamentals of Rockets and Missiles	3	0	0	3	3