

### III SEMESTER B.E. Aeronautical Engineering

S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in Hours	CIE Marks	SEE Marks	Total marks	
	L	T			P							
1	BSC	MVJ20MAE31/ MAS31	Transforms & Statistical Methods	Mathematics	3	1	-	3	50	50	100	3
2	PCC	MVJ20AE32/ AS32	Aerothermodynamics	AE	3	2	-	3	50	50	100	4
3	PCC	MVJ20AE33	Elements of Aeronautics	AE	3	1	-	3	50	50	100	3
4	PCC	MVJ20AE34/ AS34	Mechanics of Materials	AE	3	1	-	3	50	50	100	3
5	PCC	MVJ20AE35/ AS35	Mechanics of Fluids	AE	3	1	-	3	50	50	100	3
6	PCC	MVJ20AE36/AS36	Aerospace Materials	AE	3	1	-	3	50	50	100	3
7	PCC	MVJ20AEL37A/ AEL37B	Measurement and Metrology Lab/ Material Testing Lab	AE	-	-	3	3	50	50	100	2
8	PCC	MVJ20AEL38	Machine Shop	AE	-	-	3	3	50	50	100	2
9	HSM C	MVJ20KAN39	Kannada	Humanities	1	-	-	3	50	50	100	1
		MVJ20CPH39	CPH		1	-	-	3	50	50		
10	BSC	MVJ20MAEDIP301 /MASDIP301	Diploma Mathematics-I	Mathematics	3	1	-	3	50	50	100	-
11	HSM C	MVJ20UHN310	Universal Human Values	Humanities	1	-	-	3	50	50	100	1
<b>Total</b>					24	8	6	33	500	500	1000	25

Note: BSC: Basic Science, PCC: Professional Core Course , HSMC: Humanity and Social Science, MVJ20MATDIP301- Mandatory non-credit course

#### IV SEMESTER B.E. Aeronautical Engineering

S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in Hours	CIE Marks	SEE Marks	Total marks	
	L	T			P							
1	BSC	MVJ20MAE41/ MAS41	Complex Variables & Numerical Methods	Mathematics	3	1	-	3	50	50	100	3
2	PCC	MVJ20AE42/ AS42	Incompressible Aerodynamics	AE	3	2	-	3	50	50	100	4
3	PCC	MVJ20AE43	Fundamentals of Aircraft Structures	AE	3	1	-	3	50	50	100	3
4	PCC	MVJ20AE44	Aircraft Propulsion	AE	3	1	-	3	50	50	100	3
5	PCC	MVJ20AE45/ AS45	Turbomachines	AE	3	1	-	3	50	50	100	3
6	PCC	MVJ20AE46/ AS46	Mechanism and Machine Theory	AE	3	1	-	3	50	50	100	3
7	PCC	MVJ20AEL47A/ AEL47B	Material Testing Lab/ Measurement and Metrology Lab	AE	-	-	3	3	50	50	100	2
8	PCC	MVJ20AEL48	Computer Aided Aircraft Drawing	AE	-	-	3	3	50	50	100	2
9	HSMC	MVJ20KAN49	Kannada	Humanities	1	-	-	3	50	50	100	1
		MVJ20CPH49	CPH		1	-	-	3	50	50		
10	BSC	MVJ20MAEDIP401 /MASDIP401	Diploma Mathematics-II	Mathematics	3	1	-	3	50	50	100	-
<b>Total</b>					23	8	6	30	500	500	1000	24

Note: BSC: Basic Science, PCC: Professional Core Course , HSMC: Humanity and Social Science, MVJ20MXXDIP401- Mandatory non-credit course

## V Semester B.E. Aeronautical Engineering

S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in Hours	CIE Marks	SEE Marks	Total marks	
	L	T			P							
1	HSMC	MVJ20TEM51	Technical Management & Entrepreneurship	AE	3	1	-	3	50	50	100	3
2	PCC	MVJ20AE52	Aircraft Systems and Instrumentation	AE	3	2	-	3	50	50	100	4
3	PCC	MVJ20AE53	Finite Element Methods	AE	3	2	-	3	50	50	100	4
4	PCC	MVJ20AE54/ AS54	Theory of Vibration	AE	3	1	-	3	50	50	100	3
5	PE	MVJ20AE55X	Professional Elective-I	AE	3	1	-	3	50	50	100	3
6	PCC	MVJ20AEL56	Aerodynamic Lab	AE	-	-	3	3	50	50	100	2
7	PCC	MVJ20AEL57	Energy Conversion Lab	AE	-	-	3	3	50	50	100	2
8	PCC	MVJ20AEL58	Fluid Mechanics Lab	AE	-	-	3	3	50	50	100	2
9	HSMC	MVJ20ENV59	Environmental Studies	Humanities	1	-	-	3	50	50	100	1
10	HSMC	MVJ20UHN510	Universal Human Values-II	Humanities	2	-	-	3	50	50	100	2
<b>Total</b>					18	7	9	27	500	500	1000	26

Note: PCC: Professional Core Course , PE: Professional Elective, HSMC: Humanity and Social Science

Professional Elective-1	
MVJ20AE551	Experimental Aerodynamics
MVJ20AE552/AS552	Composite Structures
MVJ20AE553	Heat and Mass Transfer in Aeronautical Applications

**VI SEMESTER B.E. Aeronautical Engineering**

S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in Hours	CIE Marks	SEE Marks	Total marks	
	L	T			P							
1	PCC	MVJ20AE61	Compressible Aerodynamics	AE	3	2	-	3	50	50	100	4
2	PCC	MVJ20AE62	Aircraft Structural Analysis	AE	3	2	-	3	50	50	100	4
3	PE	MVJ20AE63X	Professional Elective-II	AE	3	1	-	3	50	50	100	3
4	PE	MVJ20AE64X	Professional Elective-III	AE	3	1	-	3	50	50	100	3
5	OE	MVJ20AE65X	Open Elective-I	AE	3	1	-	3	50	50	100	3
6	PCC	MVJ20AEL66	Aircraft Propulsion Lab	AE	0	0	3	3	50	50	100	2
7	PCC	MVJ20AEL67	Aircraft Structures Lab	AE	0	0	3	3	50	50	100	2
8	Proj	MVJ20AEP68	Mini-Project	AE				3	50	50	100	2
<b>Total</b>					15	7	6	24	400	400	800	23
Note: PCC: Professional Core Course , PE: Professional Elective, OE: Open Elective, Proj: Project Work												

Professional Elective-II		Professional Elective-III	
MVJ20AE631	Helicopter Aerodynamics	MVJ20AE641	Maintenance Repair and Overhaul
MVJ20AE632/AS632	Experimental Stress Analysis	MVJ20AE642	Artificial Intelligence & Robotics
MVJ20AE633	Unmanned Aerial Vehicles	MVJ20AE643	Gas Turbine Technology

Open Elective-I	
MVJ20AE651	General Introduction to Aeronautics
MVJ20AE652	Aircraft Transport Systems
MVJ20AE653	Aircraft Systems & Instrumentation

**VII SEMESTER B.E. Aeronautical Engineering**

S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in Hours	CIE Marks	SEE Marks	Total marks	
	L	T			P							
1	PCC	MVJ20AE71	Aircraft Stability & Control	AE	3	2	-	3	50	50	100	4
2	PCC	MVJ20AE72	Aircraft Performance	AE	3	2	-	3	50	50	100	4
3	PE	MVJ20AE73X	Professional Elective-IV	AE	3	1	-	3	50	50	100	3
4	PE	MVJ20AE74X	Professional Elective-V	AE	3	1	-	3	50	50	100	3
5	OE	MVJ20AE75X	Open Elective-II	AE	3	1	-	3	50	50	100	3
6	PCC	MVJ20AEL76	Flight Simulation Lab	AE	-	-	3	3	50	50	100	2
7	PCC	MVJ20AEL77	Modeling and Analysis Lab	AE	-	-	3	3	50	50	100	2
8	Proj	MVJ20AEP78	Project Phase-1	AE				3	50	-	50	2
<b>Total</b>					15	7	6	24	400	350	750	23
Note: PCC: Professional Core Course , PE: Professional Elective, OE: Open Elective, Proj: Project Work												

Professional Elective-IV		Professional Elective-V	
MVJ20AE731	Computational Fluid Dynamics	MVJ20AE741/AS741	Avionics
MVJ20AE732	Fatigue and Fracture Mechanics	MVJ20AE742	Flight Vehicle Design
MVJ20AE733/AS733	Control Engineering	MVJ20AE743	Guidance Navigation & Control

Open Elective-II	
MVJ20AE751	Aircraft Communication & Navigation Aids
MVJ20AE752	Aircraft Armament Stores & Escape Aid Systems
MVJ20AE753	Composite Materials and Applications

### VIII Semester B.E. Aeronautical Engineering

S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in Hours	CIE Marks	SEE Marks	Total marks	
	L	T			P							
1.	Proj	MVJ20AEP83	Project Phase-2				3	50	50	100	8	
2.	Int	MVJ20AEI84	Internship				3	50	50	100	3	
3.	Sem	MVJ20AES85	Seminar				3	50	50	100	1	
4.	CRT	MVJ20AEC86	Certification	Industry/Institute							2	
<b>Total</b>						-	-	15	150	150	300	14
Note: PCC: Professional Core Course , PE: Professional Elective, OE: Open Elective, Proj: Project Work, Int.: Internship, Sem : Seminar, CRT: Certification Course (Can be carried out during the program period but same will reflect in the final semester grade card)												