

III SEMESTER

Sl. No.	Course		Course Title	BOS	Teaching Hours/Week				Examination				Credits
					Theory/lecture	Tutorials	Practical/Drawing	Self-Study Components	Duration in Hours	CIE Marks	SEE Marks	Total Marks	
	Type	Code			L	T	P	S					
1	BSC	MVJ21MAT31A	Transforms and Statistical Methods	MA	3	2	-	-	3	50	50	100	4
2	PCC	MVJ21AS32	Thermodynamics	AS	3	2	-	-	3	50	50	100	4
3	PCC	MVJ21AS33	Elements of Aerospace Technologies	AS	3	-	-	-	3	50	50	100	3
4	IPCC	MVJ21AS34	Mechanics of Material	AS	3	-	2	Y	3	100	100	200	4
5	IPCC	MVJ21AS35	Mechanics of Fluids	AS	3	-	2	-	3	100	100	200	4
6	HSMC	MVJ21XX36	Kannada/ Constitution of India and Professional Ethics and Cyber law	HSMC	1				2	50	50	100	1
7	AEC	MVJ21ASA37	Aerospace Materials	AS	1		-		2	50	50	100	2
8	BSC	MVJ21MATDIP-I	Additional Mathematics-I	MA	1	2			3	50	50	100	-
Total					16/17	4/6	4		19/22	450/500	450/500	900/1000	22

Note: BSC: Basic Science Course, PCC: Professional Core Course, IPCC: Integrated Professional Core Course, HSMC: Humanity and Social Science & Management Course, AEC: Ability Enhancement Course, L: Lecture, T: Tutorial, P: Practical, S: Self Study, CIE: Continuous Internal Evaluation, SEE: Semester End Evaluation.

Additional Mathematics-I: The course is a non-credit mandatory course (NCMC) prescribed for III semester lateral entry diploma holders admitted to BE programs. The successful completion of the program is mandatory for the award of the degree.

IV SEMESTER

Sl. No.	Course		Course Title	BOS	Teaching Hours/Week				Examination				Credits	
					Theory lecture	Tutorials	Practical/ Drawing	Self-Study Components	Duration in Hours	CIE Marks	SEE Marks	Total Marks		
	Type	Code			L	T	P	S						
1	BSC	MVJ21MAT41A	Complex Variables and Numerical Methods	MA	2	2	-	-	3	50	50	100	3	
2	PCC	MVJ21AS42	Incompressible Aerodynamics	AS	3	-	-	-	3	50	50	100	3	
3	PCC	MVJ21AS43	Finite Element Methods	AS	2	2	-	-	3	50	50	100	3	
4	IPCC	MVJ21AS44	Mechanism and Machine Theory	AS	3		2	Y	3	100	100	200	4	
5	IPCC	MVJ21AS45	Fundamentals of Aerospace Structures	AS	3		2	Y	3	100	100	200	4	
6	HSMC	MVJ21XX46	Kannada/ Constitution of India and Professional Ethics and Cyber law	KAN	1	-			2	50	50	100	1	
7	AEC	MVJ21ASA47	Turbomachines	AS	1	-	-		2	50	50	100	2	
8	INT	MVJ21INT48	Summer Internship I	Should be completed during the intervening period of II and III semesters. Intra-College Internship							-	-	-	2
9	BSC	MVJ21MATDIP-II	Additional Mathematics II	MA	1	2	-	-	3	50	50	100	-	
Total					16/17	2/4	6/6		19/22	450/550	450/550	900/1000	22	

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Additional Mathematics-I: The course is a non-credit mandatory course (NCCM) prescribed for III semester lateral entry diploma holders admitted to BE programs. The successful completion of the program is mandatory for the award of the degree.

Summer Internship-I: Viva voice will be conducted for the 03 weeks inter/intra institutional summer internship activities carried out during the intervening period of II and III semesters. The internship will be considered as a head of passing and will be considered for the award of degree. Those, who do not take up / complete the internship will be declared fail and will have to complete during subsequent examination after satisfying the internship requirements.

V SEMESTER

Sl. No.	Course		Course Title	BOS	Teaching Hours/Week				Examination				Credits
					Theory lecture	Tutorials	Practical/ Drawing	Self-Study Components	Duration in Hours	CIE Marks	SEE Marks	Total Marks	
	L	T			P	S							
1	HSMC	MVJ21AS51	Aviation Management	AS	3	-	-	-	3	50	50	100	3
2	PCC	MVJ21AS52	Computational Fluid Dynamics	AS	3	-	-	-	3	50	50	100	3
3	IPCC	MVJ21AS53	Compressible Aerodynamics	AS	3	-	2	Y	3	100	100	200	4
4	IPCC	MVJ21AS54	Aerospace Propulsion	AS	3	-	2	Y	3	100	100	200	4
5	PEC	MVJ21AS55X	Professional Elective – I	AS	3	-	-	-	3	50	50	100	3
6	HSMC	MVJ21XX56	Environmental Studies	CV	1	-	-	-	2	50	50	100	1
7	AEC	MVJ21RMI7	Research Methodology & IPR	AS	1	2	-	-	2	50	50	100	2
8	UHV	MVJ21UHV58	Universal Human Values	CV	2	-	-	-	2	50	50	100	2
Total					19	2	4	-	21	500	500	1000	22

Note: HSMC: Humanity and Social Science & Management Course, PCC: Professional Core Course, IPCC: Integrated Professional Core Course, PEC: Professional Elective Course, AEC: Ability Enhancement Course, UHV: Universal Human Values, L: Lecture, T: Tutorial, P: Practical, S: Self Study, CIE: Continuous Internal Evaluation, SEE: Semester End Evaluation.

Course Code	Professional Elective – I
MVJ21AS551	Heat and Mass Transfer in Aerospace Applications
MVJ21AS552	Theory of Vibration
MVJ21AS554	Optimisation Techniques and Probability Theory
MVJ21AS555	Astrophysics and Space Environment

VI SEMESTER

Sl. No.	Course		Course Title	BOS	Teaching Hours/Week				Examination			Credits	
					Theory lecture	Tutorials	Practical/ Drawing	Self-Study Components	Duration in Hours	CIE Marks	SEE Marks		Total Marks
	Type	Code			L	T	P	S					
1	HSMC	MVJ21AS61	Aerospace Systems and Avionics	AS	2	2	-	-	3	50	50	100	3
2	IPCC	MVJ21AS62	Aerospace Structural Analysis	AS	3	-	2	Y	3	100	100	200	4
3	IPCC	MVJ21AS63	Aerospace Vehicle Design	AS	3	-	2	-	3	100	100	200	4
4	OEC	MVJ21AS64X	Open Elective-I	AS	3	-	-	-	3	50	50	100	3
5	OEC	MVJ21AS65	MOOC Courses (Open Elective-II)	AS									3
6	AEC	MVJ21ASA66	Introduction to Spacecraft & Satellite Technologies	AS	2	-	-	-	2	50	50	100	1
7	PRJ	MVJ21ASMP67	Mini project	AS	-	-	4	-	3	50	50	100	2
8	INT	MVJ21INT68I	Summer Internship II	AS	Completed during the intervening period of IV and V semesters					50	50	100	2
Total					13	2	8	-	17	450	450	900	22

Note: HSMC: Humanity and Social Science & Management Course, IPCC: Integrated Professional Core Course, OEC: Open Elective Course, AEC: Ability Enhancement Course, PRJ: Project, INT: Internship, L: Lecture, T: Tutorial, P: Practical, S: Self Study, CIE: Continuous Internal Evaluation, SEE: Semester End Evaluation.

Summer Internship-II: Viva voice will be conducted for the 04 weeks Industrial/Govt./ NGO/ MSME/Rural Internship/Innovation/Entrepreneurship summer internship activities carried out during the intervening period of IV and V semesters. The internship will be considered as a head of passing and will be considered for the award of degree. Those, who do not take up / complete the internship will be declared fail and will have to complete during subsequent examination after satisfying the internship requirements.

Course Code	Open Elective-I
MVJ21AS641	Introduction to Aerospace History
MVJ21AS642	Introduction to Missiles and Launch Vehicles
MVJ21XX643	Introduction to Spacecraft & Satellite Technologies
MVJ21AS745	Avionics

VII SEMESTER

Sl. No.	Course		Course Title	BOS	Teaching Hours/Week				Examination				Credits
					Theory lecture	Tutorials	Practical/ Drawing	Self-Study Components	Duration in Hours	CIE Marks	SEE Marks	Total Marks	
	Type	Code			L	T	P	S					
1	IPCC	MVJ21AS71	Space Flight Mechanics	AS	3	-	2	Y	3	100	100	200	4
2	PEC	MVJ21AS72X	Professional Elective-II	AS	3	-	-	-	3	50	50	100	3
3	PEC	MVJ21AS73X	Professional Elective-III	AS	3	-	-	-	3	50	50	100	3
4	OEC	MVJ21AS74X	Open Elective-III	AS	3	-	-	-	3	50	50	100	3
5	PRJ	MVJ21ASP75	Project Phase I	AS	-	-	4		3	50	50	100	2
6	AEC	MVJ21ASA76	Ability Enhancement Course-4	AS	A four-week course should be selected from online platforms								1
Total					13	-	6			350	350	700	16

Note: IPCC: Integrated Professional Core Course, PEC: Professional Elective Course, OEC: Open Elective Course, PRJ: Project, AEC: Ability Enhancement Course, L: Lecture, T: Tutorial, P: Practical, S: Self Study, CIE: Continuous Internal Evaluation, SEE: Semester End Evaluation.

Course Code	Professional Elective-II	Course Code	Professional Elective-III	Course Code	Open Elective-II
MVJ21AS721	Hypersonic Flows	MVJ21AS731	Atmospheric Flight Mechanics	MVJ21AS741	Spacecraft Navigation and Control
MVJ21AS722	Composite Structures	MVJ21AS732	Reusable Launch Vehicles	MVJ21AS742	Spacecraft Launch Vehicles
MVJ21AS723	Cryogenics	MVJ21AS733	Artificial Intelligence and Robotics	MVJ21AS743	Rockets & Missiles
MVJ21AS724	Spacecraft Launch Vehicles	MVJ21AS734	Satellite Design and Systems	MVJ21AS744	Aerospace Systems and Instrumentation

VIII SEMESTER

Sl. No.	Course		Course Title	BOS	Teaching Hours/Week				Examination			Credits	
	Type	Code			Theory lecture	Tutorials	Practical/ Drawing	Self-Study Components	Duration in Hours	CIE Marks	SEE Marks		Total Marks
					L	T	P	S					
1	PRJ	MVJ21ASP81	Project Phase II	AS	-	-	-	-	3	50	50	100	10
2	INT	MVJ21INT82	Research / Industrial Internship	AS	Should be completed in 24 weeks, beginning after the sixth semester, and continuing through the seventh and eighth semesters.				50	50	100	05	
3	Seminar	MVJ21ASS83	Seminar	AS	-	-	-	-	3	100	-	100	01
Total					-	-		-		200	100	300	16

Note: PRJ: Project, INT: Internship, SEM: Seminar, CIE: Continuous Internal Evaluation, SEE: Semester End Evaluation.

Research/Industrial Internship: Viva voice will be conducted for the 24 weeks Research/Industrial/Rural Internship activities carried out during beginning after the sixth semester test and continuing through the seventh and eighth semesters. The internship will be considered as a head of passing and will be considered for the award of degree. Those, who do not take up / complete the internship will be declared fail and will have to complete during subsequent examination after satisfying the internship requirements.

HOD

Dean Academics