

DEPARTMENT OF AEROSPACE ENGINEERING, IIT MADRAS
Dual Degree Curriculum

(First 6 semesters same as B.Tech. Curriculum)

SEMESTER VII

No	Title	L	T	P	C	Cat
AS5220	Structural Design	1	0	5	4	PMT
DPE4	Department Elective 4	3	0	0	3	PMT
DPE5	Department Elective 5	3	0	0	3	PMT
DPE6	Department Elective 6	3	0	0	3	PMT
FRE1	Free Elective 1	3	0	0	3	
HSE3	Humanities Elective 3	3	0	0	3	HSS
MNS3	Minor Elective 3	3	0	0	3	MNS
	TOTAL	16	0	5	22	

SEMESTER VIII

No	Title	L	T	P	C	Cat
AS5190*	Project I	0	0	0	3*	PMP
HS3050	Professional Ethics	2	0	0	2	HSS
AS	M.Tech. Elective 1	3	0	0	3	PMT
AS	M.Tech. Elective 2	3	0	0	3	PMT
FRE2	Free Elective 2	3	0	0	3	
	TOTAL				11	

SEMESTER IX

No	Title	L	T	P	C	Cat
AS5190*	Project II	0	0	0	8*	PMP
AS	M.Tech. Elective 3	3	0	0	3	PMT
AS	M.Tech. Elective 4	3	0	0	3	PMT
	TOTAL				6	

SEMESTER X

No	Title	L	T	P	C	Cat
AS5200	Project III	0	0	0	23	PMP
	TOTAL				23	

* Grade will be assigned at the end of 10th Semester.

Total : 28 + 22 + 25 + 24 + 25 + 28 + 22 + 11 + 6 + 23 = 214

Notes :

- 1) Electives 1 – 6 should be AS Electives or equivalents from other departments.
- 2) A minimum of 2 M.Tech. electives should be taken from AS electives or their equivalents. The other 2 M.Tech. electives may be AS electives or any other M.Tech. level courses with the consent of Faculty Advisor.
- 3) For DD (Honours), a student should take an additional 12 PMT credits (3 extra credits for project + 2 AS electives + 1 Maths elective)

Dual Degree – Course Contents

AS 5220 Structural Design

1053

Structural design requirements, V-n diagram, Determination of loads acting on major airplane components such as wing, fuselage, tails etc. Buckling of semi-monocoque structures, master-column chart, stress and margin of safety Detailed design procedure of major structural components – Splice Design

Detailed structural design of the major components of an airplane including load calculations.

