Programme Code: **AMA**

Master of Technology in Engineering Analysis and Design

Department of Applied Mechanics

The overall credits structure

Category	PC	PE	OC	Total
Credits	34	12	6	52

Program Core (PC)

APL700	Experimental Methods for Solids and Fluids	2	0	2	3
APL701	Continuum Mechanics	3	0	0	3
APL703	Engineering Mathematic and Computation	3	0	2	4
APL753	Properties and Selection of Engg. Materials	3	0	0	3
APL775	Design Methods	3	0	0	3

Product Design (Program Electives)

APL710	Computer Aided Design	3	0	2	4
APL767	Engineering Failure Analysis and Prevention	3	0	0	3
APL771	Design Optimization and Decision Theory	3	0	0	3
APL774	Modeling & Analysis of Mechanical Systems	3	0	0	3
APL776	Product Design and Feasibility Study (Stream Core)	2	0	4	4
APL871	Product Reliability	3	0	0	3
MCL741	Control Engineering	3	0	2	4
MCL749	Mechatronics Product Design	3	0	2	4

Engineering Mechanics (Program Electives)

APL705	Finite Element Method	3	0	2	4
APL711	Advanced Fluid Mechanics	3	0	0	3
APL713	Turbulence and its Modeling	3	0	0	3
APL715	Physics of Turbulent Flows	3	0	0	3
APL716	Fluid Transportation Systems	3	0	0	3
APL720	Computational Fluid Dynamics	3	0	2	4
APL734	Advanced Dynamics	3	0	0	3
APL765	Fracture Mechanics	3	0	0	3
APL796	Advanced Solid Mechanics	3	0	0	3
APL831	Theory of Plates and Shells	3	0	0	3
APL835	Mechanics of Composite Materials	3	0	0	3

Materials (Program Electives)

APL750	Modern Engineering Materials	3	0	0	3
APL756	Microstructural Characterization of Materials	3	0	2	4
APL759	Phase Transformations	3	0	0	3
APL763	Micro & Nanoscale Mechanical Behaviour of Materials	3	0	2	4
APL764	Mechanical Behaviour of Biomaterials	3	0	0	3
APL765	Fracture Mechanics	3	0	0	3
APL767	Engineering Failure Analysis and Prevention	3	0	0	3
APLXX	Selected Topics in Material Engineering	3	0	0	3

Semester wise course breakup for three streams

Sem.	Courses (Number, Abbreviated Title, L-T-P, credits)							Lecture courses	Contact h/week				Credits
									L	T	P	Total	
I	APL775 Design Methods (3-0-0) 3	APL753 Properties & Selection of Engg. Materials (3-0-0) 3	APL703 Engineering Mathematics & Computation (3-0-2) 4	APL701 Continuum Mechanics (3-0-0) 3	APL700 Experimental Methods for Solids & Fluids (2-0-2) 3			5	14	0	4	18	16
Summer													
II	PE-1	PE-2	PE-3	OE-1				4	12	0	0	12	12
III	OE2	AMD811	PE-4					2	6	0	12	18	12
IV	AMD812							0	0	0	24	24	12

Total = 52