

Structure of 2-year 4-semester M. Tech. course in Astronomical Instrumentation					
SEMESTER – 1					
MAI T11	Mathematical Techniques	3	1	0	4
MAI T12	Fundamentals of wave optics	3	1	0	4
MAI T13	Image Science	3	0	0	3
MAI T14	Astrophysical Concepts	3	0	0	3
MAI P11	Optical Testing and Metrology	0	0	6	6
MAI P12	Sensors (include lab-view, detectors, CCD characterization)	0	0	6	6
MAI S1	Seminar I	0	0	2	2
		12	2	14	28
SEMESTER – 2					
MAI T21	Optical and Photonic Systems, Components and Devices	3	1	0	4
MAI T22	Lasers, Optical Fiber and thin film technology	3	0	0	3
MAI T23	Digital Image Processing and Numerical analysis	3	0	0	3
MAI T24	Optical Instrumentation	3	1	0	4
MAI P21	Lens Design and Thin film	0	0	6	6
MAI P22	Analog & Digital Image Processing, Digital holography	0	0	6	6
MAI S2	Seminar II	0	0	2	2
		12	2	14	28
SEMESTER – 3					
MAI T31	Optional paper a. Stellar interferometry b. Radio Interferometry c. Photon-detection techniques in Radio, X-ray and γ -ray astronomy. d. Adaptive Optics and Polarimetry e. Embedded Systems, FPGAs, Digital I/O cards and PCB designing f. Spectrographs	0	5	0	5
MAI INT	Internship at Indian Institute of Astrophysics	0	0	10	10
MAI DP	Dissertation (Preliminary)	0	0	5	5
		0	5	15	20
SEMESTER – 4					
MAI DF	Dissertation (Final)	0	0	20	20
MAI GV	General Viva Voce	0	0	4	4
		0	0	24	24
GRAND TOTAL		24	4	72	100