



FACULTY OF SCIENCE

COURSE STRUCTURE & SYLLABUS

<<M.Sc. INSTRUMENTATION AND CONTROL >>

Effective from Academic Year: 2022-23



Faculty Name:

Science

Programme Name:

M.Sc. Instrumentation and Control

Programme Structure Summary

SEMESTER 1											
Course Group	Course Name	Cr	Teaching Scheme				INT(T) Max./ Passing	EXT(T) Max./ Passing	INT(P) Max./ Passing	EXT(P) Max./ Passing	Grand Total Max./ Passing
			T	P	Tu	Cont. Hrs					
Core	Transducers	4.0	4.0			4	50/20	50/20			100/40
Core	Microprocessor & Microcontroller Systems	4.0	4.0			4	50/20	50/20			100/40
Core	Principles of Control Systems	4.0	4.0			4	50/20	50/20			100/40
Core	Transducers and Microprocessor Lab	4.0		8.0		8			50/20	50/20	100/40
Core	Project Work	4.0		8.0		8			50/20	50/20	100/40
Core	Comprehensive Viva	1.0							50/20	50/20	100/40
Elective	Instrumentation of Processing Circuits	4.0	4.0			4	50/20	50/20			100/40
Elective	Network Analysis	4.0	4.0			4	50/20	50/20			100/40
Elective	Optoelectronics	4.0	4.0			4	50/20	50/20			100/40

SEMESTER 2											
Course Group	Course Name	Cr	Teaching Scheme				INT(T) Max./ Passing	EXT(T) Max./ Passing	INT(P) Max./ Passing	EXT(P) Max./ Passing	Grand Total Max./ Passing
			T	P	Tu	Cont. Hrs					
Core	Analytical Instrumentation	4.0	4.0			4	50/20	50/20			100/40
Core	Advanced Microprocessor & Microcontrollers	4.0	4.0			4	50/20	50/20			100/40
Core	Computer Aided Process Control	4.0	4.0			4	50/20	50/20			100/40
Core	Control Systems and Electronics Lab	4.0		8.0		8			50/20	50/20	100/40
Core	Project Work	4.0		8.0		8			50/20	50/20	100/40
Core	Comprehensive Viva	1.0							50/20	50/20	100/40
Elective	Power Electronics	4.0	4.0			4	50/20	50/20			100/40
Elective	Boiler Instrumentation	4.0	4.0			4	50/20	50/20			100/40
Elective	Meteorological Instrumentation	4.0	4.0			4	50/20	50/20			100/40



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SEMESTER 3											
Course Group	Course Name	Cr	Teaching Scheme				INT(T) Max./ Passing	EXT(T) Max./ Passing	INT(P) Max./ Passing	EXT(P) Max./ Passing	Grand Total Max./ Passing
			T	P	Tu	Cont. Hrs					
Core	Biomedical Instrumentation	4.0	4.0			4	50/20	50/20			100/40
Core	Industrial Communication Techniques	4.0	4.0			4	50/20	50/20			100/40
Core	PLC - DCS - SCADA	4.0	4.0			4	50/20	50/20			100/40
Core	Automation and Communication Lab	4.0		8.0		8			50/20	50/20	100/40
Core	Project Work	4.0		8.0		8			50/20	50/20	100/40
Core	Comprehensive Viva	1.0							50/20	50/20	100/40
Elective	Satcom Instrumentation	4.0	4.0			4	50/20	50/20			100/40
Elective	Digital Signal Processing	4.0	4.0			4	50/20	50/20			100/40
Elective	CNC Machine and Programming Concept	4.0	4.0			4	50/20	50/20			100/40

SEMESTER 4											
Course Group	Course Name	Cr	Teaching Scheme				INT(T) Max./ Passing	EXT(T) Max./ Passing	INT(P) Max./ Passing	EXT(P) Max./ Passing	Grand Total Max./ Passing
			T	P	Tu	Cont. Hrs					
Core	Medical Imaging Systems & Therapeutic Equipments	4.0	4.0			4	50/20	50/20			100/40
Core	Fabrication & Characterization Techniques	4.0	4.0			4	50/20	50/20			100/40
Core	Robotics & Fuzzy Logic	4.0	4.0			4	50/20	50/20			100/40
Core	Instrumentation and Programming Lab	4.0		8.0		8			50/20	50/20	100/40
Core	Project Work	4.0		8.0		8			50/20	50/20	100/40
Core	Industrial Training Viva	1.0							50/20	50/20	100/40
Elective	Programming in C	4.0	4.0			4	50/20	50/20			100/40
Elective	Artificial Intelligence & Neural Networks	4.0	4.0			4	50/20	50/20			100/40
Elective	Nanoelectronics	4.0	4.0			4	50/20	50/20			100/40