Course Structure and Curriculum
Choice Based Credit System
(Effective from Academic Year 2021-22)
Structure of M. Sc. (Electronics)

Semester I (Core and Foundation Courses)				
Course	**Course Title**	**Teaching time/week**	**Marks**	**Credits**
ELET-111	Electronic Devices	4 hours	100	4
ELET-112	Industrial Electronics	4 hours	100	4
ELET-113	Sensor Fundamentals	4 hours	100	4
ELET-114	Network Analysis and Synthesis	4 hours	100	4
ELET-115	Research Methodology	2 hours	50	2
COM-100	***Constitution of India***	***2 hours***	***50***	***2***
ELEL-121	Lab course 1 (based on ELET-111 and ELET-112)	6 hours	100	3
ELEL-122	Lab course 2 (based on ELET-113 and ELET-114)	6 hours	100	3
ELER-131	Research Project - Part I (Review of literature and Formulation of Topic for Research Project)	6 hours	100	3
Total Credits of **Semester I: 29** (Theory: 20; Laboratory: 06; Research Project: 03)				
Semester II (Foundation and Generic Elective Courses)				
ELET-211	8086 Microprocessor and Interfacing	4 hours	100	4
ELET-212	Embedded System and Interfacing	4 hours	100	4
ELET-213	Generic Elective - I i. Properties of Electronic Materials ii. Control Systems iii. Signal Conditioning Circuits	4 hours	100	4
ELET-214	Generic Elective - II i. Advanced Sensor Technology ii. Process Control Fundamentals iii. Biomedical Instrumentation - I	4 hours	100	4
ELEL-221	Lab course 3 (based on ELET-211 and ELET-212)	6 hours	100	3
ELEL-222	Lab course 4 (based on ELET-213 and ELET-214)	6 hours	100	3
ELER-231	Research Project - Part II (Experimental Work)	6 hours	100	3
Total Credits for **Semester II: 25** (Theory: 16; Laboratory: 06; Research Project: 03)				

Semester III (Foundation and Generic Elective Courses)				
ELET-311	Programmable Logic Controllers	4 hours	100	4
ELET-312	Internet of Things	4 hours	100	4
ELET-313	Generic Elective - III i. Fabrication Techniques for Electronic Devices ii. Instrumentation in Process Control iii. Smart Fusion Technology based System Design	4 hours	100	4
ELET-314	Generic Elective - IV i. Characterization Techniques for Electronic Devices ii. Automated Process Control iii. Biomedical Instrumentation - II	4 hours	100	4
ELEL-321	Lab course 5 (based on ELET-311 and ELET-312)	6 hours	100	3
ELEL-322	Lab course 6 (based on ELET-313 and ELET-314)	6 hours	100	3
ELER-331	Research Project - Part III (Experimental Work along with Analysis and Interpretation Results)	6 hours	100	3
Total Credits for **Semester III: 25** (Theory: 16; Laboratory: 06; Research Project: 03)				
Semester IV (Foundation, Generic and Open Elective Courses)				
ELET-411	Advance Communication Systems	4 hours	100	4
ELET-412	Generic Elective - V i. Electrochemical Energy Storage Systems ii. Micro-electromechanical System and Applications iii. Solar Photovoltaic Systems iv. PC Based Instrumentation	4 hours	100	4
ELET-413	Generic Elective - VI i. Optoelectronics and Optical Fiber Communication ii. HMI, SCADA basics and Databases iii. Electronics and Automation in Agriculture	4 hours	100	4
ELET-414	Open Elective (Service Course) from Other Department	4 hours	100	4
ELEL-421	Lab course 7 (based on ELET-411 and ELET-412)	6 hours	50	3
ELEL-422	Lab course 8 (based on ELET-413)	6 hours	50	3
ELER-431	Research Project - Part IV (Experimental Work along with Analysis, Interpretation Results, Drafting of Manuscript for Publication and Dissertation)	6 hours	50	3
Total Credits for **Semester IV : 25** (Theory: 16; Laboratory: 06; Research Project: 03)				
Total Credits :104 (Sem I: 29 + Sem II: 25 + Sem III: 25 + Sem IV: 25)				