

COURSE CODE: 1154EE127	COURSE TITLE: ELECTRICAL SAFETY, OPERATION & REGULATIONS	L	T	P	C							
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COURSE CATEGORY:												
University Elective												
PREAMBLE :												
This course introduces the Electrical safety operations and IEEE Standards												
PREREQUISITE COURSES:												
Basic Electrical Engineering												
RELATED COURSES:												
Power Quality, Measurement & Instrumentation												
COURSE EDUCATIONAL OBJECTIVES:												
The objectives of the course are to make the students,												
<ul style="list-style-type: none"> • Study about electrical safety and equipment required to maintain safety • Details about Protection guidelines and importance of earthing • To get knowledge about Indian electricity rules and regulations and IEEE standards for electrical safety 												
COURSE OUTCOMES :												
Upon the successful completion of the course, students will be able to:												
CO Nos.	Course Outcomes				Knowledge Level (Based on revised Bloom's Taxonomy)							
CO1	Basics of electrical safety				K2							
CO2	Protection procedures and earthing requirements				K2							
CO3	Safety requirements while doing electrical works				K2							
CO4	Safe operating procedures, energy auditing basics				K2							
CO5	Regulations and standards related to electrical safety				K2							
CORRELATION OF COs AND POs												
Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1			M					L	M			L
CO2	L		M	M				L	M			
CO3			M	L				L	M			
CO4				L				L			M	
CO5	M			H				L	M			
COURSE CONTENT:												
UNIT I	ELECTRICAL SAFETY							9				
Safety of the Self, Safety of the equipments, Safety of the public.												
UNIT II	PROTECTION PROCEDURES AND EARTHING							9				
Guidelines, General guidelines on earthing and protection												

UNIT III	SAFETY OPERATIONS	9
Sign boards, Tagging system and procedures.		
UNIT IV	SAFE OPERATING PROCEDURES	9
Safe operating procedures, Case studies and, Audit basics.		
UNIT V	REGULATIONS	9
IS, IEEE standards, Indian Electricity rules and regulations		
TOTAL: 45 PERIODS		
TEXT BOOKS:		
<ol style="list-style-type: none"> 1. HSC- A Practical guide VOL. 1 to 4, National Safety Council, India. 2. IS 5216 (Part I)- 1982, "Recommendations on safety procedures and practices in electric work" 		
REFERENCE BOOKS:		
<ol style="list-style-type: none"> 1. .SP 30 -1985 Special publication-National Electric Code, "Section-14: Electric Aspects of building services". 2. IEEE Standard 902. 3. Indian Electricity Rules; IE Rules1956. 4. Quality Control Order 2003: GO India Ministry of Commerce & Industry. 5. IS 8437: Guide on current through human body 6. Related technical papers of present interest. 7. Blake R P, Industrial Safety, Prentice, Englewood Cliffs ,1963 		