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| **DEPARTMENT OF ELECTRICAL ENGINEERING** |
| COURSE NAME: Workshop Practice | TERM: Spring 2020 | NO. OF EXPERIMENTS: 14 |
| COURSE CODE:EE  | SEMESTER: II | TOTAL MARKS: 25 |
| RESOURCE PERSON: Ms. Rimsha Musharraf | SESSION: 2019-2023 | RELEVANT PROJECT: |

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| **CLO statement****CLO 1**: Acquire the basic knowledge of Electric circuit, its components. Electrical Power System, process of Electrical power Generation, Transmission and Distribution.**CLO 2**: To Explain Electrification System, how to get Electric supply both single and three phase from the Transformer, its protection.**CLO 3**: Acquire the basic knowledge about Electric Shocks, types and its effects on the human body. First Aid procedures.**CLO 4**: To Solve simple electric wiring circuits for electrification of buildings, Selection of different components. |

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| Sr. No. | Statement | Taxonomy level | CLO | PLO |
|  | Introduction to Different Tools Used in Workshop | C2 | 1 | 1 |
|  | Study of Different Power Tools | P2 | 1 | 1 |
|  | Introduction to Breadboard  | P3 |  | 1 |
|  | Introduction to Veroboard, Soldering, De-soldering and Re-soldering of components on Veroboard | P3 | 1 | 1 |
|  | Soldering of a simple polarity tester on Vero board | P4 | 1 | 2 |
|  | Introduction to Drill Press | P2 | 1 | 2 |
|  | Introduction to Software Proteus (ISIS & ARES) | P2 | 1 | 2 |
|  | PCB Manufacturing: Etching of PCB layout, Drilling holes and soldering of components | P2 | 1 | 2 |
|  | Study of different Electrical terms, electrical hazards, electrical shocks and Treatment, Safety Regulations, Earthing concept and types of Wires | P2 | 3 | 2 |
|  | Study of different symbols for electrical wiring schematics e.g switches, lamps, sockets, etc. and Electrical Accessories including Switches, plugs, Circuit Breakers, Fuses etc | P2 | 2 | 2 |
|  | Control of single lamp with one switch on 220V single phase electricity source | P3 | 4 | 2 |
|  | Use of dimmer to control the light intensity of single incandescent bulb 220V single phase electricity source. | P3 | 4 | 2 |
|  | Control of multiple lamps in series combination on 220V single phase electricity supplied | P3 | 4 | 2 |
|  | Control of multiple lamps in parallel combination on 220V single phase electricity supplied | P3 | 4 | 2 |
|  | Term Project  |  |  |  |