



| Regulation 2018                                                                       |                                                                                   | One Credit course                              |     |     |     |     |     |     |     |      |      |      | Total Hours  |      | 15   |   |
|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|------|------|------|--------------|------|------|---|
| Category                                                                              | Course Code                                                                       | Course Name                                    |     |     |     |     |     |     |     |      |      |      | Hours / Week |      |      | C |
|                                                                                       |                                                                                   |                                                |     |     |     |     |     |     |     |      |      |      | L            | T    | P    |   |
| X                                                                                     | 18EEX008J                                                                         | DATA ACCESS OF INDUSTRIAL MULTI FUNCTION METER |     |     |     |     |     |     |     |      |      |      | 1            | 0    | 2    | 1 |
| <b>Prerequisite Course (s)</b>                                                        |                                                                                   |                                                |     |     |     |     |     |     |     |      |      |      |              |      |      |   |
| Transmission and Distribution                                                         |                                                                                   |                                                |     |     |     |     |     |     |     |      |      |      |              |      |      |   |
| <b>Course Objective (s):</b> The purpose of learning this course is to:               |                                                                                   |                                                |     |     |     |     |     |     |     |      |      |      |              |      |      |   |
| 1                                                                                     | Acquire a knowledge in the selection of Industrial Multi function meter.          |                                                |     |     |     |     |     |     |     |      |      |      |              |      |      |   |
| 2                                                                                     | Attain the knowledge in Communication protocols for automation applications       |                                                |     |     |     |     |     |     |     |      |      |      |              |      |      |   |
| <b>Course Outcome (s) (COs):</b> At the end of this course, learners will be able to: |                                                                                   |                                                |     |     |     |     |     |     |     |      |      |      |              |      |      |   |
| CO1                                                                                   | Understand the Industrial Multi function meter and parameter setting in industry. |                                                |     |     |     |     |     |     |     |      |      |      |              |      |      |   |
| CO2                                                                                   | Apply the communication protocols with different types of communication networks. |                                                |     |     |     |     |     |     |     |      |      |      |              |      |      |   |
| <b>CO-PO Mapping</b>                                                                  |                                                                                   |                                                |     |     |     |     |     |     |     |      |      |      |              |      |      |   |
| Cos                                                                                   | POs                                                                               |                                                |     |     |     |     |     |     |     |      |      |      | PSOs         |      |      |   |
|                                                                                       | PO1                                                                               | PO2                                            | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1         | PSO2 | PSO3 |   |
| CO1                                                                                   | 3                                                                                 | 1                                              | 1   | 1   | 3   | 1   | 1   | 1   | 2   | 1    | 3    | 3    | 3            | 2    | 2    |   |
| CO2                                                                                   | 3                                                                                 | 1                                              | 1   | 1   | 3   | 1   | 1   | 1   | 2   | 1    | 3    | 3    | 3            | 2    | 2    |   |
| CO (Avg)                                                                              | 3                                                                                 | 1                                              | 1   | 1   | 3   | 1   | 1   | 1   | 2   | 1    | 3    | 3    | 3            | 2    | 2    |   |







**M.KUMARASAMY  
COLLEGE OF ENGINEERING**

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ISO 9001:2015 Certified Institution  
Thalavapalayam, Karur, Tamilnadu.



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| <b>MODULE I</b>                                                                                                                                                                                                                                                                                                | <b>5</b> |
| Industrial Multi function meter-Introduction-MFM Terminal diagram-Meter specifications & Manuals-Configuration Meter-Basic setup of MFM-current transformer ratio setting- potential transformer ratio setting-communication parameter setting (Mode, Baud rate, CRC)-                                         |          |
| <b>MODULE II</b>                                                                                                                                                                                                                                                                                               | <b>5</b> |
| Communication protocols- Types of communication-hardware platform-Protocol (Modbus - RTU/TCP)- Communication network-Daisy chain network- Star Topology Network- Data accessing software-Modbus poll software- serial communication-MFM data access with PC- Ethernet communication - MFM data access with PC. |          |
| <b>MODULE III – PROJECT WORK</b>                                                                                                                                                                                                                                                                               | <b>5</b> |
| MFM data access with PC                                                                                                                                                                                                                                                                                        |          |
| <b>Reference (s)</b>                                                                                                                                                                                                                                                                                           |          |
| 1 Handbook for Electricity Metering. —Tenth Edition. Includes index. ISBN 0-931032-52-0                                                                                                                                                                                                                        |          |

