



SYMBIOSIS INTERNATIONAL (DEEMED UNIVERSITY)

(Established under section 3 of the UGC Act 1956)

Re - accredited by NAAC with 'A' Grade

Founder: Prof. Dr. S. B. Mujumdar, MSc., Ph.D. (Awarded Padma Bhushan and Padma Shri by President of India)

Course Name : Smart Industries and Digital Trends
Course Code : T3671
Faculty : Computer Studies
Course Credit : 3
Course Level : 4

Sub-Committee (Specialization) : Emerging Trends in IT

Learning Objectives :

- Explain the potential benefits of Industrial Internet of Things (IIoT) and models with use-cases.
- Evaluate the technical issues required to build an IIoT network.
- Compare different techniques in deploying and delivering an IIoT network.

Books Recommended :

Book	Author	Publisher
The Industrial Internet of Things: Industry 4.0	Alasdair Gilchrist	Apress; 1st ed. edition

Course Outline :

Sr. No.	Topic	Actual Teaching Hours	Contact Hours Equivalence
1	Introduction to Industrial Internet ,Power of I Important Industrial Internet technologies, The purpose of Industrial Internet , Digital & human workforce	4	4
2	Industrial Internet of Things (IIoT) Use Cases,Healthcare, Oil & Gas, Retail, Logistics,,Smart Office	4	4
3	Technical & Business Enablers of Industrial Internet1. Miniaturization2. Wireless Technology3. IP Mobility4. Cyber Physical Systems5. Network Functionality Virtualization (NFV)6. Network Virtualization (NV)7. Smartphones8. Cloud & Fog9. Big Data & Analytics10. Artificial Intelligence (AI)11. Augmented Reality (AR)12. 3D Printing13. Man v/s Machine	10	10
4	Industrial Internet of Things (IIoT) Reference Architecture,Industrial Internet Reference Architecture by Industrial Internet Consortium (IIC),Industrial Internet Architecture Framework,Architectural Topology, The 3 Tier Topology, Implementation Viewpoint, Connectivity, Important System Characteristics, Data Management	10	10
5	Industry 4.0,Purpose of Industry 4.0, Characteristics of Industry 4.0, The Value Chain, The Design Principles of Industry 4.0, Building Blocks of Industry 4.0	7	7
6	Smart Factories ,Evolution of Smart Factory , Importance of Smart Manufacturing , Real life cases of smart factories	5	5
7	Digital Transformation,Customer Experience, Transforming Operational Processes, Transforming Business Models, Amplifying Operational Efficiency, Embracing smart architecture & topologies, Human & Automation	5	5
Total		45	45

Pre Requisites :

Management Concepts
Intermediate level Computer Literacy

Evaluation :

Assignment
case studies
Class test
Quiz

Pedagogy :

Case Analysis
Quizzes
Industrial visit

Expert :

Mr. Satyajit Wale, Consultant, Veridical Consultancy