



**AARUPADAI VEEDU  
INSTITUTE OF TECHNOLOGY**  
OMR, PAIYANOR, CHENNAI - 603104



**VINAYAKA MISSION'S  
RESEARCH FOUNDATION**  
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## DEPARTMENT OF MECHANICAL ENGINEERING

THRUST AREA RESEACH GROUP CAD / CAM &  
ENGINEERING DESIGN AND COLLEGIATE CLUB (EDCC)

### FIVE DAYS VALUE ADDED COURSE ON “INDUSTRY 4.0” (30 Hours) 23.09.2019 to 26.09.2019 & 03.10.2019 - TVS TRAINING

Department of Mechanical Engineering, Engineering Design Collegiate Club (EDCC) - Thrust Area Research Group - CAD / CAM organised a “Five Days Value added course on “**INDUSTRY 4.0**” from 23.09.2019 to 26.09.2019 (at AVIT Campus) & 03.10.2019 (at TVS Training Services, Ambattur).

Around 141 Third year students from Department of Mechanical Engineering had participated in the value added course. The Expert speaker, **Mr. Arun Prasad, Principal Consultant, TVS Training & Services, Founder & CEO 1 – Enterprise, Co-Founder Caerus Infosystems,** The chief guest was welcomed and the program was inaugurated by **Prof. L. Prabhu, HOD / Mech.** The value added training program introduction was given by **Mr. Praveen. R, Asst. Prof – II / Mech.**

### WORKSHOP CONTENT

Date/ Time	Faculty	Session - 1 (11.00 - 1.00)	subjects covered	Faculty	Session - 2 (14.00 to 16.00)	subjects covered
Day 1 23.09.2019	Mr. Arun(P) - Management Consultant  Mr.Ramesh(S)- Technical training Consultant	Introduction Evolution of Ind 4.0 concept of digital enterprises	Interactive Session between Faculty & Students	Mr. Arun(P) - Management Consultant  Mr.Ramesh(S)- Technical training Consultant	Introduction to Industry 4.0	Fundamental pillars of I 4.0 Impact of I 4.0 Skills required for I 4.0 Challenges of I 4.0 Benefits of I 4.0
Day 2 24.09.2019	Mr.Venkat(P) - Management Consultant  Ms. Sivaranjani(S)- Sr.Executive - Trainer	IoT  M2M	IOT Introduction,IOT evolution, IOT architecture,IOT gate ways, Sensors, standard devices,network and construction,internet connection, Applications of IOT  M2M understanding Applications of M2M Key features of M2M,Architecture of M2M,Components of M2M,Requirements of M2M,Issues and concerns in M2M,Standardisation, Applications of M2M concept.	Mr. Arun(P) - Management Consultant  Mr.Ramesh(S)- Technical training Consultant  Mr.Srinath - Executive -trainer	Cloud Computing  Big Data Cyber Security	1. Fog computing , cloud computing,mobile cloud computing, definition,benefits of cloud computing, Cloud characteristics,Data collection points,Importance of cloud computing ,working models , Fog computing, mobile cloud computing, MCC working process,key requirements, advantages.  2. data and big data understanding ,types of data ,generation points of big data, analysis of big data ,characteristics of big data,big data processing, softwares used for processing.  3. Understanding the need of cyber security, benefits of CS,Disadvantages of CS.

<p>Day3 25.09.2019</p>	<p>Mr.Venkat(P) - Management Consultant  Mr.Ramesh(S)- Technical training Consultant</p>	<p>Cognitive Computing Artificial Intelligence</p>	<p>1. Evolution of cognitive computing,CC understanding,features of CC,Scope and need of CC,Goal of CC, How CC operating ? Architecture&gt;About IBM Watson,CC Application areas,Advantage and limitations.  2. Definition of AI,Categories of AI,Types of AI,Subsets of AI,Elements of AI,m/c learning,NLP, ANW,Deep learning,AI, applications.</p>	<p>Mr. Arun(P) - Management Consultant  Mr.Vishnu C(S)- Executive</p>	<p>Augmented &amp; Virtual Reality System Integration Additive Manufacturing Robotics</p>	<p>Applications of AR,virtual reality, how its different from AI, Digital twin.  Need of system integraion understanding, horizontal and vertical integration, system integration layers ,means of integration, understanding digital enterprises.  Evolutuon of AM ,Need of AM ,Working of AM , Technologies of AM,MATERIALS USED IN am, AM methods of approach,Applications of AM, Limitation of AM.  Understanding development of robotics,general applications and industry specific, robo system parts, knowledge requirement of robotics, software understanding, classification of robo, specifications relating bto robo, hazards associated with robo, robo programming and training.</p>
<p>Day 4 26.09.2019</p>	<p>Mr.Venkat(P) - Management Consultant  Mr.Ramesh(S)- Technical training Consultant</p>	<p>Connected Enterprise Customer Engagement</p>	<p>Connected Enterprise Customer Engagement</p>	<p>Mr. Arun(P) - Management Consultant</p>	<p>Design Thinking Business Analytics</p>	<p>Design Thinking Business Analytics</p>
<p>Day 5 03.10.2019</p>	<p>Industrial visit &amp; Training at TVS Training and Services</p>					

**Outcome:**

The students understood the concept of – Industry 4.0, Smart Manufacturing and its components. The students learnt about Internet of Things (IoT), Cloud computing, Artificial Intelligence and Big data analytics. They also had learnt about the concept of Additive manufacturing, Industrial Automation. The students can further explore and do Innovative projects in the area of Industrial IOT & Smart manufacturing.

Event Photos:



