III SEMESTER

CORE COURSES

EMERGING EXPONENTIAL TECHNOLOGIES			
Course Code	20MBA301	CIE Marks	40
Teaching Hours/Week	3:0:2	SEE Marks	60
Credits	04	Exam Hours	03

Objective of the Course:

1. To understand the emerging technologies applicable in field of Management.
2. To study data science as a tool for decision making in Management
3. To understand the concept of AI, IOT and AR.
4. To study other emerging technologies in Management.

Module -1 Introduction to Emerging Technologies — **9 hours**

Evolution of technologies; Introduction to Industrial revolution; Historical background of the Industrial Revolution; Introduction to Fourth industrial revolution (IR 4.0); Role of data for Emerging technologies; Enabling devices and networks for emerging technologies (programmable devices); Human to Machine Interaction; Future trends in emerging technologies.

Module -2 Data Science — **7 hours**

Overview for Data Science; Definition of data and information; Data types and representation; Data Value Chain; Data Acquisition; Data Analysis; Data Curating; Data Storage; Data Usage; Basic concepts of Big Data.

Module -3 Artificial Intelligence(AI) — **9 hours**

Concept of AI, meaning of AI, History of AI, Levels of AI, Types of AI, Applications of AI in Agriculture, Health, Business (Emerging market), Education, AI tools and platforms (eg: scratch/object tracking).

Module -4 Internet of Things (IoT) — **9 hours**

Overview of IOT; meaning of IOT; History of IOT; Advantages of IOT; Challenges of IOT; IOT working process; Architecture of IOT; Devices and network; Applications of IOT at Smart home; Smart grid; Smart city; Wearable devices; Smart farming; IOT tools and platforms; Sample application with hands on activity.

Module-5 Augmented Reality (AR) and Virtual Reality (VR) — **9 hours**

Introduction to AR, Virtual reality (VR), Augmented Reality (AR) vs mixed reality (MR), Architecture of AR systems. Application of AR systems (education, medical, assistance, entertainment) workshop oriented hands demo.

Module-6 Ethics, Professionalism and Other Emerging Technologies — **7 hours**

Technology and ethics, Digital privacy, Accountability and trust, Treats and challenges.
Other Technologies: Block chain technology, Cloud and quantum computing, Autonomic computing, Computer vision, Cyber security, Additive manufacturing (3D Printing)

Course Outcomes:

By the end of this course the student will able to:

1. Identify different emerging technologies
2. Select appropriate technology and tools for a given task
3. Identify necessary inputs for application of emerging technologies
4. Understand the latest developments in the area of technology to support business

Practical Component:

- Big data analysis using an analytical tool
- Study the Application of AI in any one field and prepare a Report
- Study the Ethical practices of a Company
- 3D model Printing by Group or team
- Exposing the students to usage of IoT

CO-PO mapping

CO	PO				
	PO1	PO2	PO3	PO4	PO5
CO1	×				
CO2	×	×		×	
CO3	×	×		×	
CO4	×				

Question paper pattern:

The SEE question paper will be set for 100 marks and the marks scored will be proportionately reduced to 60.

- The question paper will have 8 full questions carrying equal marks.
- Each full question is for 20 marks.
- Each full question will have sub question covering all the topics under a Module.
- The students will have to answer five full questions; selecting four full question from question number one to seven and question number eight is compulsory.
- 100 percent theory in the SEE.

Sl No	Title of the book	Name of the Author/s	Publisher Name	Edition and year
1	Designing for Emerging Technologies: UX for Genomics, Robotics, and the Internet of Things	Follett, J.	O'Reilly Media	2014
2	Emerging Technologies for Emerging Markets	Vong, J., & Song, I.	Springer Singapore	2014
3	Disruption: Emerging Technologies and the Future of Work	Del Rosal, V.	Emtechub.	2015
4	Emerging Internet-Based Technologies	Sadiku, M. N. O	CRC Press	2019
Reference Books				
1	Digital Economy. Emerging Technologies and Business Innovation,	Mohamed Anis Bach Tobji, Rim Jallouli, Yamen Koubaa, Anton Nijholt		2018
2	Virtual & Augmented Reality for Dummies	Paul Mealy,		2018
3	Augmented Reality and Virtual Reality: Empowering Human, Place and Business,	Timothy Jung, M. Claudia tom Dieck		**2019**

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