

## About MBM Engineering College

M.B.M Engineering College is one of the oldest college established post-independence on 15 August 1951, by the Government of Rajasthan. MBM offers more than 25 courses of study in engineering leading to the degrees of Bachelor of Engineering, Master of Engineering, Doctor of Philosophy (PhD), and Post Graduate Diploma.

ECE Department was started in 1972 and currently running 3 U.G. /B.E. programs (ECE, EEE, ECC), M.E. in Digital communication & PhD programs.

The college & department is committed to providing its students & teachers a quality education environment that combines rigorous academic study and developing a far more ambitious, integrated and influential environment that will best serve the nation.

## Prologue

- ML & AI are the key technology which are going to revolutionize every business and industrial sector & all human civilization.
- This Faculty Development program shall be an enriched learner experience on AI & Machine Learning to give participants a flavor of current technology and generate interest to work with future technologies.

## Objective of FDP

This FDP is designed to meet the following objectives:

- To train and develop faculties & research scholars in the emerging and thrust area of Artificial Intelligence & Machine Learning.
- To provide a bridge between the industry and academic institution to update their knowledge.
- To provide a platform for Faculty, Research Scholar, Engineers and Students to understand

the core concept of machine learning from basic theory to practical implementation. .

- To enhance faculty skills for academic growth and also make them to conductive research activity in the field of Machine learning.

## Course Contents

Major topics to be covered during the program as follows:

- Fundamentals of ML (Supervised, Unsupervised, Reinforcement learning: Introduction and examples).
- Statistical learning (Linear, Non linear and logistic Regression, Bayesian reasoning, k nearest neighbour classifier, least mean square algorithm and gradient descent optimization scheme).
- Support Vector machines (LDF for binary classification, Linear Maximal margin classifier, non linear classifier, Kernel induced feature space, regression by SVM, variants of basic SVM techniques).
- Neural networks (Neuron models, Feed forward and recurrent network architectures, perceptron, multi layer perceptron and error back propagation algorithm, Introduction to deep learning, Convolutional neural networks).
- Fuzzy Interference system (Introduction, Fuzzy rule base and approximate reasoning, Fuzzy inference system, Fuzzy model, Neuro Fuzzy inference system).
- Data Clustering and data Transformation (Partitional, Hierarchical and spectral clustering, K-means Clustering, Self-organising map for clustering, Principle Component analysis for attribute reduction, data cleansing, Gaussian mixture Clustering).
- Applications and case studies for machine learning with Hands-on in laboratory.

## Course Outcomes

- Enhanced competence of teachers & research scholars.
- FDP includes theory and Hands-on Practices.
- Facilitate insight to different research models & their application in teaching.
- To make the participants realize the importance of Artificial Intelligence, Machine Learning, and its applications in various fields as well as to demonstrate some demo projects on specific applications.
- Certificate of participation will be given.

## Registration Form

*TEQIP-III FDP on*

### “Machine Learning: An agent of Engineering for change”

09<sup>th</sup>–15<sup>th</sup> September, 2019

Name : .....

Designation : .....

Department : .....

Institute/Organization:.....

Qualification : .....

Address : .....

Mob No.: .....

E-mail: .....

The above information provided is true and to the best of my knowledge. I agree to abide by the rules and regulation of the program.

Signature of Candidate

## Resource Person

- Prof. Nishchal K Verma, IIT Kanpur.
- Dr. Alok Kanti Deb, IIT Khargpur.
- Dr. Gaurav Harit, IIT Jodhpur.
- Dr. Deepak Mishra, IIT Jodhpur.
- Dr. Yashaswi Verma, IIT Jodhpur
- Ms. Jhilmil Banerjee, InnoEmbed Tech., Pune
- Dr. Vinod Giri, Almondz Global Infra, Delhi
- Dr. Abhilash S. Mandloi, SVNIT, Surat
- Dr. Manoj Choudhary, Samsung, Bangalore
- Prof. Rajesh Bhadada, MBM Jodhpur
- Dr. Akhil Ranjan Garg, MBM Jodhpur
- Dr. Amit Goyal, AIIMS, Jodhpur
- Dr. Ajay P. Vyas

## Dates to Remember

- Last Date of Registration: 7<sup>th</sup> September, 2019.
- Course duration: 09<sup>th</sup> –15<sup>th</sup> September, 2019.

## Eligibility Criteria

- Faculties of TEQIP Engineering Institutions.
- PhD Scholars in area of Electronics /Electrical / Computer/IT.
- Seats limited (up to 50), on first come first served basis. However, department reserves right to increase or decrease the seats.

## Registration

- Free, however NO TA/DA or other expenses will be provided to participants.

### Contact for Registration

Dr. Mukesh Kumar Gupta, 9509712083  
Dr. Raju Patel, 9672996466

Department of Electronics and Communication Engg.  
MBM Engineering College,  
JNV University, Jodhpur  
E-mail:[ecembmfdp@gmail.com](mailto:ecembmfdp@gmail.com)

## Committees

### Chief Patron

Prof. Vishnu Sharma  
Hon'ble Vice Chancellor, JNV University, Jodhpur

### Patrons

Prof. S.K. Ojha, Dean  
Prof. S.K. Parihar, Coordinator TEQIP

### Program Director

Prof. Rajesh Bhadada, Prof. & Head (ECE)

### Program Co-Director

Prof. Akhil Ranjan Garg, Professor (EE)

### Convenor

Prof. Rajendra Bhansali, Associate Professor (ECE)

### Co-Convenors

Dr. Mukesh Kr. Gupta, Assist. Professor, ECE  
Dr. Raju Patel, Assist. Professor, ECE  
Prof. K. K. Arora  
Er. M. K. Gaur

### Program Advisors

Prof. Rajat Bhagwat, Professor  
Prof. V.S. Chouhan, Professor  
Prof. Anil Gupta, Professor  
Prof. Renu Bhardwaj, Associate Professor  
Prof. S. R. Meena, Associate Professor  
Prof. Anil Vyas, Associate Professor

### Organizing Committee

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Mr. Naginder Singh, Assist. Professor, ECE  
Ms. Kayenat Shahid, Assist. Professor, ECE  
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Mr. Deepak Patel, Assist. Professor, EE  
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Mr. Aditya Kachwaha Assist. Professor, EE

# TEQIP-III

One Week Faculty Development Program  
On

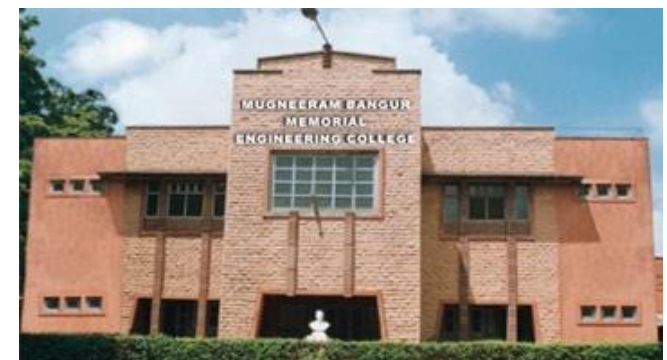
**Machine Learning: An agent  
of Engineering for change**

09<sup>th</sup> – 15<sup>th</sup> Sept., 2019



Organized by

**Dept. of Electronics and Communication  
MBM Engineering College  
JNV University, Jodhpur**



**Note: The registration may be done online on:**  
<https://forms.gle/kYAajZLn6hzDtz25H9>