

PREAMBLE

The field of engineering and technology are facing unparallel changes and consolidations. As educators, we must be continuously aware of these developments so that we cannot only define a fixed path but also we have to take full advancement in engineering and technology. Keeping view of the current thrust, relevance and importance of the development in engineering and technology, the faculties of technical institute have to keep a place with its exchanging trends for social and industrial benefits. Researchers and Scientists have applied modeling and computational techniques as a tool to represent the various problems in real word situations. It is because of the wide applicability of Data Mining and Image Processing techniques in different domains of Engineering and Technology, this FDP is being organized with the following objectives.

- Motivate and equip the participants with the basics as well as the recent advancements of Intelligent Computing Techniques in Data Mining and Image Processing, and their applications for solving wide variety of problems in various fields of engineering and technology.
- To expose the faculties with the newer dimensions of the area with their practical approaches to tackle the real life problems in engineering and technology and other related disciplines.
- To take up various challenges of the present day to day societal problems for their acceptable logical solutions.

This Faculty Development Program will be helpful for faculty members and researchers to utilise methods, tools, and computational techniques for real life problems solving.

COURSE CONTENTS

The following topics will be covered in this FDP:

- Data analytics methods on Correlation, Regression, Multiple regression, Logistic regression, Factor analysis and emotional intelligence.
- The theme of the program also highlights on overview of Big Data Analytics, Data Mining and its associated techniques like Association analysis, Classification and Clustering algorithms.
- Fundamentals of Image Processing.
- Object Tracking.
- Digital Image Filtering.
- Image Processing with basic operations.
- Classical to soft computing Approaches.
- Deep learning concepts.
- Applications of Deep learning in Image Processing.
- Hardware Design concepts for machine learning algorithms.
- Challenges and Advancements in Data mining and Image Processing.
- Hands-on Experiences in WEKA, MATLAB, and other associated tools.

RESOURCE PERSONS

The Resource Persons for the Faculty Development Program will be Eminent Professors and experts from IITs, IIITs, NITs, and other esteemed institutions.

FINANCIAL ASSISTANCE

There will be no registration fee for the participants. Free boarding and lodging will be arranged in the Institute hostels/Guest house or Hotels. Reimbursement towards TA/DA will be made to participants attending the course. TA is limited to III AC (to and fro by via rail).

ABOUT MITS

Madhav Institute of Technology and Science (MITS), Gwalior was established by His Highness Late Sir Jiwaji Rao Scindia, Maharaja of Erstwhile State of Gwalior, with an aim to create world class quality engineers and technocrats capable of providing leadership in all spheres of life and society. Fpunded as Madhav Engineering College in 1957 with three UG programmes, this temple of learning is now about 60 years old. Since its inception, the institute has constantly strive for excellence and quality in technical education. Today, the institute offers nine UG programmes along with research programmes leading to Masters and Ph.D. degree in various specializations of engineering and technology. All the departments of the institute have well equipped laboratories and experienced faculties. The institute is a minor QIP centre of AICTE for Ph.D. programme in five disciplines. The institute is also funded by World Bank under TEQIP phase III to strengthen the quality of technical education.



LOCATION

Gwalior city has major road and rail connectivity. The Institute is located on Agra-Bombay Road (NH-3) and is approximately 320 KM from Delhi. The institute is located in the heart of city and is at a distance of about 2 km from Gwalior Bus Stand/Gwalior Railway Station.

ABOUT THE DEPARTMENT

The department of CSE & IT has an excellent & rich history and an outstanding record of contributions to the profession and community. The department is well recognized for excellence in facilities and teaching. The Department offers UG, PG and Ph.D. Programmes in Computer Science & Engineering and Information Technology. The Department has a comprehensive curriculum on topics related to all aspects of Computer Hardware and Software with an emphasis on practical learning. The course structure is up-to-date and includes courses on emerging topics to equip our students with the latest developments in Computer Science and Engineering. The Department has state-of-the-art infrastructure and computing equipment supported by high speed Ethernet and wireless networks. Our faculty members aim at delivering top class education blending their rich research experience with classroom teaching.