ITM UNIVERSITY GWALIOR

“CELEBRATING DREAMS”

ST NATIONAL RESEARCH METHODOLOGY WORKSHOPS
FOR MANAGEMENT AND STATISTICAL ANALYSIS USING MATLAB

Sep 14, 21, Oct 5, 12, 2013

Organised by
ITM School of Business
“Knowing is not enough; we must apply. Willing is not enough; we must do.”

Johnson Von Goethe, German Philosopher

Introduction
Search for knowledge or any systematic investigation to establish facts is research. It is about searching systematically for solutions to problems. For this statistical device is required. Statistical device not only provides a way of summarizing the data into quicker and manageable information but also helps the researcher to make decisions about whether relationships between two or more variables are real ones. Statistics today have become indispensable in all field of human endeavor including not only natural physical and social science but also in the field of management science.

To address challenges and opportunities in the field of research a new software product MATLAB has enabled academicians and researchers to obtain valuable information from the data. Basic knowledge on MATLAB is vital for all users before they proceeded to survey and data analysis. But the basic operation of SPSS programme. This workshop is for the beginners with little or no experiences in MATLAB software who want to acquire the skills and knowledge of getting started in to this software. The programme simply aims at developing the pedagogical and research skills participants.

Objectives of the workshop
- To enable the participants to define research problem and develop a suitable methodology for addressing the key issues.
- To enable the participants to understand the needs for statistical tools in research.
- The objectives of seven days workshop is to impart the data analytical capabilities to the project leaders, business analysts, faculty, research scholars and post graduate students who want to enhance the quality of data analysis capabilities to facilitate decision making.
- The participants also learn about use of various data analysis techniques in research, designing the study, collecting data, issues involved in coding, editing, analyzing and interpreting the data collected.
- The primary focus will be on survey research with special seasons on Finance, Human Resources, Organization Behavior, and Marketing areas.
- To equip with analytical knowledge and skills to enhance the quality of work, enhance managerial ability to apply different types of statistical tools, interpret and use the result for decision making.

ITM School of Business - 9th position in North Zone (Silicon India Survey-2013).

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Highest Placements-2013 Batch
For whom
The participants to the programs could be the faculty members, project leaders, business analysts research scholars who have a inherent inclination towards research. The participants may be the starter or on the middle of research or at the analysis stage. You can attend this programme if you want to develop a holistic view on the statistical tools to do an excellent research. MATLAB software training is intended to instill confidence in data analysis and its interpretation. Corporate and educational Institutes can sponsor their employees.

Participants Fee
Participants from Industry : Rs. 1,000/- per day
Academicians : Rs. 500/- per day
Researchers : Rs. 500/- per day
Fee can be paid by Bank Draft drawn in favour of ITM University-Gwalior, Payable at Gwalior and clearly mentioning the participant’s name at the back (overleaf). The participation fee includes course materials, MATLAB software training, lunch, hi-tea, dinner. Accommodation on twin sharing basis will be provided at nominal rates (subject to availability).

Why you should attend?
- This workshop offers you hands-on experience to use state-of-art MATLAB software.
- Scholars who are taking this workshop have wide experience of international level research.

Resource Persons
Prof. Aditya Tripathi
Asst. Prof. SOMC, ITM University

Prof. Jitender (Jeet) N. D. Gupta, Eminent Scholar in Management & Technology, Alabama University, Hunts Ville.
ITM University Gwalior – A Silhouette
ITM University is a multidisciplinary University with an international reputation for the quality of its research and teaching across the academic spectrum, with subjects spanning Sciences, Engineering, Management, Education, Pharmacy, Library Science, Commerce, Agriculture, Medical, Nursing etc. It is at the forefront of learning, teaching and research and leader in many different fields. It seeks to sustain and enhance its excellence as an institution of higher learning through outstanding teaching and world-class societies they serve.

• Awarded as Best Private University Serving Social Cause by Enhancing Employment Opportunities on 9th April, 2013 by Dr. M.M. Pallam Raju, Minister-HRD, Govt. of India, Planning Commission & ASSOCHAM.
• “Best Innovative University for Industry Interface in India” Awarded on 14th April, 2013 by Brands Academy.
• Awarded in Feb., 2013, “Most Promising University of North and Central India” - (One PlanetResearch).
• One of the Five Most Promising Universities of India (India Today Aug. 2012).
• Awarded in December 2012 “Best University of Central Northern India.”

ITM School of Business
ITM School of Business is one of the flagship and leading schools of Central and North India. It has received highest ratings for its learning-outcomes based academic programmes, state-of-art infrastructure, rich academic resources, continuous evaluation system, credit based system and global outlook. Recently it has been ranked as 9th best B-School in North India (Excluding IIMs) by Silicon India (2013). Our programmes are a showcase of flexibility, predictability, and transparency. All our academic programmes are based on a system of credits—generally guided by ECTS (European Credit Transfer and Accumulation System) as a proper means of promoting the most widespread student mobility.

About Gwalior
Gwalior is a historical city in the heart of India, situated in the State of Madhya Pradesh, 120 Km from Agra (The city of Taj Mahal) and 317 Km from Delhi. It is well connected with Delhi, Bhopal, Mumbai, Bangalore and Hyderabad by train and road, and by air from Delhi and Mumbai.

Gwalior, known as city of music, has perhaps the richest musical tradition among all the cities in this great country starting from Tansen, Baijubabra, Hassukhan, Haddukhan, Krishnarao Pandit, Bala Saheb Puchhwale, Chote Bahyya Puchhwale, Bande Ali Khan, Shankar Rao Pandit and to come to the living legends Malini Rajurkar, Ustad Amjad Ali Khan, the list is endless. The legendary musician Tansen who belonged to Gwalior was recognized as one the nine jewels of Emperor Akbar’s court.

Most famous and memorable landmarks include Gwalior Fort, the living palace of Scindia’s, Jai Vilas Palace, the Tomb of the famous musician Tansen and museums.

Agra, the city of Taj, is 110 Kms from Gwalior and 1.5 hours journey by express trains. The world famous Khajuraho group of temples, depicting all facets of life, are 4 hours journey by road. Mitawali & Padavali has a group of 108 ruins of temples and is 20 Kms from Gwalior. Orchha is 100 Kms from Gwalior and is a treat for weekend trips as the village still carries old time feel with palaces, temples, cenotaphs and ruins along the banks of Betwa River.
### Programme Schedule

#### 14 Sep, 2013

<table>
<thead>
<tr>
<th>Title</th>
<th>Topics</th>
<th>Time</th>
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</table>
| Basics of MATLAB           | • Intro  
• Working with matrices  
• Importing data from excel  
• Intro to the functions and GUI  
• Loading data into command prompt from workspace | 9AM to 5PM |

#### 21 Sep, 2013

<table>
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<tr>
<th>Title</th>
<th>Topics</th>
<th>Time</th>
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</thead>
</table>
| Statistical Toolbox@MATLAB | • Introduction to Statistical Toolbox of MATLAB  
• Descriptive statistics intro  
• Hypothesis testing intro  
• One way and two way ANOVA intro  
• Correlation and regression intro  
• Continuous and random distribution GUI  
• Descriptive Statistics  
• Mean, Median, Trimmed Mean  
• Std, IQR, Variance, Range, Box Plots  
• Skewedness, kurtosis  
• Curve Fitting GUI | 9AM to 5PM |

#### 05 Oct, 2013

<table>
<thead>
<tr>
<th>Title</th>
<th>Topics</th>
<th>Time</th>
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| Hypothesis Testing@MATLAB  | • Hypothesis Testing  
• Testing of Assumption of Normality  
• One tailed and two tailed one sample z test  
• One tailed and two tailed two sample z test  
• One tailed and two tailed one sample t test(Independent/Paired)  
• One tailed and two tailed two sample t test (Independent/Paired) | 9AM to 5PM |

#### 12 Oct, 2013

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<th>Title</th>
<th>Topics</th>
<th>Time</th>
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| Univariate Statistics@MATLAB | • One way and Two Way ANOVA  
• Conduction of one way ANOVA and Interpretation of Results  
• Conduction of two way ANOVA and Interpretation of Results  
• Post Hoc Tests  
• Correlation and Regression  
• Conduction and interpretation of correlation  
• Testing the Assumption of Homoscedasticity  
• Conduction and interpretation of Multiple Linier Regression  
• Residual Plot and Outliers  
• Box Plot  
• Curve Fitting Toolbox Reference for Fitting Curves in Observed Data | 9AM to 5PM |

**Pedagogy:** The workshop will use a holistic model order to groom participant in the area of research methodology. The sessions will be a mix of pen/pencil exercises, concurrently implementing the same exercises via software in the same session and finally an overview of use of illustrated techniques in published research papers.

Based on lecture method  
Hands-on computer exercises or demonstration of the use of software via projector.  
A mix of lecture and hands-on computer exercises or demonstration of the use software via projector.
Patrons
Shri Rama Shankar Singh, Chancellor, ITM University Gwalior
Smt. Kanupriya Singh Rathore, Chairperson, ITM Universe Vadodara, Gujarat
Smt. Ruchi Singh Chauhan, Vice President, ITM University Gwalior
Shri Ravindra Singh Rathore, Managing Director, ITM Universe Vadodara, Gujarat
Shri Daulat Singh Chauhan, Managing Director, ITM University Gwalior
Dr. R.D. Gupta, Advisor to Chancellor, ITM University Gwalior

Programme Chairman
Prof. Yogesh Upadhyay, Vice Chancellor, ITM University Gwalior

Programme Coordinator
Prof. Aditya Tripathi

For further details contact at:
Email: fdp@itmuniversity.ac.in, Mobile: 09981202302

HIGHLY AWARDED FOR ITS ACADEMICS, INFRASTRUCTURE AND PLACEMENTS
The Only University of M.P. to be listed in India Today as ‘Emerging Universities’ (Issue: 12 August 2013)

Best Private University Serving Social Cause by Enhancing Employment Opportunities
Awarded on 9th April, 2013 by Dr. M.M. Pallam Raju, Minister-Ird, Govt. of India, Selected by a process and jury approved by Planning Commission of India & ASSOCHAM.

ITM University Gwalior is preferred as Second Best Choice of All India Students in Spot Round of JEE Allotment 2013

Ranked 6th among the Top 20 Private Universities in the Country by Silicon India Survey-2013

“Best Innovative University for Industry Interface in India” Awarded on 14th April, 2013 by Brands Academy, Singapore.

Awarded in Feb., 2013 ‘Most Promising University of North and Central India’ - (One PlanetResearch)

ITM School of Business - 9th position in north zone (Silicon India Survey-2013)

One of the Five Most Promising Universities of India (India Today Aug, 2012)

Awarded in Dec. 2012 “Best University of Central Northern India”

Awarded in Dec. 2012 “Best University of Northern, Central & North East India”

Ranked among top 40 B-Schools of India (only one in the region)-Outlook

ITM University Gwalior is considered at number one position for seeking admission-Career 360 (Outlook)

Accredited by Wipro for Conducting placement activities (only in the region)

Accredited by IAO, (International Accreditation Organization) USA.

Disclaimer: ITM University Gwalior has no connection with any other University with the similar name anywhere else in India.

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