



भारतीय प्रबंध संस्थान रोहतक

INDIAN INSTITUTE OF MANAGEMENT ROHTAK

मैनेजमेंट सिटी, दक्षिण बायपास, NH 10, सुनारिया, रोहतक, हरियाणा, भारत-124010
Management City, Southern Bye Pass, NH 10, Sunaria, Rohtak, Haryana, India-124010

Sub - Welcome to the Online Executive Education Programme in Business Analytics & Intelligence

Dear Participants,

Greetings from IIM Rohtak!

Indian Institute of Management Rohtak welcomes you to the 50-hour online course on 'Business Analytics & Intelligence II'.

As scheduled, the programme will commence on 07 May, 2023 and will culminate on 13 August, 2023.

The programme has been designed by the experienced and learned faculty of IIM Rohtak with an objective to enable business professionals to interpret a real-world data set and make informed decisions. The program aims to impart essential knowledge of several basic as well as advanced data analytics techniques to the participants by engaging them in hands-on case studies and scenarios in real business contexts.

We believe that this programme is going to take the participants through a unique learning experience in the coming weeks.

The Information brochure comprising programme objectives, day-wise session schedule and faculty profile is being shared with you.

We wish you a pleasant and fruitful interactive learning experience.

Best wishes,
IIM Rohtak



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Indian Institute of Management Rohtak

**Online Executive Education Programme in
Business Analytics & Intelligence**

Executive Education

Faculty Incharge

Prof Abhishek Verma

Course Objective

The increasingly volatile, uncertain, complex and ambiguous business environments demand businesses to make effective decisions. Despite being able to generate and store large volumes of data, businesses often find it difficult to glean important insights from it. However, a new genre of approaches, referred to as data analytics, has evolved as a potent approach to process and manage large volumes of data, and deliver business value and corporate results quickly. It is believed that managers skilled in data analytics will be able to steer the next wave of management innovation, productivity, and growth. This course envisages to equip managers with basic, as well as, advanced data analytics techniques for handling and analyzing business data to enable informed and fact-based managerial decision-making.

Pedagogy

A combination of cases, exercises, lectures, and hands-on practice using analytics tools will be used.

Detailed Day-wise Session Schedule for e-MDP on Business Analytics & Intelligence (BAI) - 3

07th May 2023 – 13th August 2023

Time: 04.05 PM-05.20PM-05.40PM-06.55PM.

Session Topics	Session No.	Coverage of Topics	Faculty	Case/Reading
Day 1. 7th May 2023				
Introduction to Business Analytics & Machine Learning	1-2	<ul style="list-style-type: none"> Knowledge Discovery Process and life cycle Introduction to case methodology 	Prof. Praveen Ranjan/ Prof. Abhishek Verma	Caselet: Business Analytics life cycle
Day 2. 13th May 2023 (Saturday)				
Data warehouse and Analysis	3-4	<ul style="list-style-type: none"> Introduction and need for data warehouse Star and snowflake schema Simulation ETL OLTP/OLAP 	Mr. Sumit Kumar Jha IE	
Day 3. 14th May 2023				
Exploratory Data Analysis	5-6	Analyzing Data through GUI and Extracting Knowledge for further process	Mr. Sharad B Nalawade IE	
Day 4. 21st May 2023 (Sunday)				
Building Dashboard	7-8	Dashboard management	Mr. R Vivekanand IE	
Day 5. 28th May 2023 (Sunday)				
Application of Data and business Analytics	9-10	Human moral optimization	Prof. Abhishek Verma	Case let: Human moral problem
Day 6. 4th June 2023 (Sunday)				
Tools for Business Analytics	11-12	Introduction to R (Part 1)	Prof. Harshit Singh	Case let: HW Problem
Day 7. 10th June 2023 (Saturday)				
Tools for Business Analytics	13-14	Introduction to R (Part 2)	Prof. Vaneet Bhatia	Case let: Data Expo 2009
Day 8. 11th June 2023 (Sunday)				
Analytical Techniques for Business Intelligence-I	15-16	<ul style="list-style-type: none"> Classification Models Various Theories like kappa, accuracy etc. using, under the classification 	Mr. Sumit Kumar Jha IE	
Day 9. 18th June 2023 (Sunday)				
Analytical Techniques for Business Intelligence – II	17-18	Ensemble Learning Techniques and its Application	Mr. Sharad B Nalawade IE	
Day 10. 24th June 2023 (Saturday)				
Analytical Techniques for Business Intelligence – IV	19-20	Web and Social Media Analytics	Prof. Ankit Kesharwani	Case let: web analytics ,scraping a
Day 11. 25th June 2023 (Sunday)				
Analytical Techniques for Business Intelligence – III	21-22	Clustering (ward method, Silhouette method, Gap statistic, Elbow method, Average, Single, Complete Method etc.) All the methods discussed with business scenarios	Prof. Harshit Singh	Segmenting the organic food market in Lebanon: an application of k means cluster analysis (Article) + Data will be shared before the session

Day 12. 2nd July 2023 (Sunday)				
Analytical Techniques for Business Intelligence – V	23-24	Unsupervised Learning in Details, Lift Support, confidence	Prof. Pramod C. Mane	Case let : Market basket data and store lay out design
Day 13. 8th July 2023 (Saturday)				
Analytical Techniques for Business Intelligence – VI	25-26	<ul style="list-style-type: none"> • Association Rule Mining • Apriori and Frequent Pattern 	Prof. Pramod C. Mane	Retail Case Study – Association Mining
Day 14. 9th July 2023 (Sunday)				
Analytical Techniques for Business Intelligence – VII	27-28	<ul style="list-style-type: none"> • Text Analytics • Sentiment Analytics • Image Analytics 	Prof. Ankit Kesharwani	Anggraini, N., & Suroyo, H. (2019). Comparison of Sentiment Analysis against Digital Payment “T-cash and Go-pay” in Social Media Using Orange Data Mining. Journal of Information Systems and Informatics, 1(2), 152-163
Day 15. 16th July 2023 (Sunday)				
Analytical Techniques for Business Intelligence – VIII	29-30	Recommendation System and Analysis (unsupervised Learning)	Prof. Ankit Kesharwani	Marchand, A., & Marx, P. (2020). Automated product recommendations with preference based explanations. Journal of retailing, 96(3), 328-343.
Day 16. 23rd July 2023 (Sunday)				
Application of Business Analytics: Marketing Analytics	31-32	Combination and offering Management and Analysis	Prof. Gautam Dutta VF	
Day 17. 30th July 2023 (Sunday)				
Tools for Business Analytics	33-34	Introduction to Python	Prof. Pramod C. Mane	Exercise on Jupyter Notebook of Anaconda IDE
Day 18. 6th August 2023 (Sunday)				
Application of Business Analytics: Sports Analytics	35-36	Analysis based on Sports data (Cricket)	Prof. Harshit singh	Case: Best strategy to win a match: an analytical approach using hybrid machine learning clustering association rule framework
Day 19. 12th August 2023 (Saturday)				
Big Data Analytics, Deep learning, Explainable AI (XAI) (introduction)	37-38	Concept discussion on emerging topics	Prof. Harshit singh	Case: What Does Explainable AI Really Mean? A New Conceptualization of Perspectives
Day 20. 13th August 2023 (Sunday)				
Project Presentations	39-40	<ul style="list-style-type: none"> • Project Presentations 	Prof. Pramod C. Mane	

Faculty Profiles



Dr. Harshit Kumar Singh holds a PhD from the Indian Institute of Management Ahmedabad in the area of Information Systems. Prior to joining his doctoral program, he has worked in the industry for three years as a Software Developer. He had completed his Bachelor's in Computer Science & Engineering from the National Institute of Technology Patna. His Ph.D. thesis investigates the challenges of large-scale adoption of work-from-home on organizations. His research interest includes IS competencies, motivational information systems with a focus on gamification and digital engagement. His teaching interests include Management Information System (MIS), Managing Software and Project Enterprises, Gamification Technology and Business, Data Structure and Algorithms and Theories of Information System.



Dr. Praveen Ranjan Srivastava is an Associate Professor in the Area of Information Technology Systems at IIM Rohtak. He did his Ph.D. in Computer Science & Engineering from Birla Institute of Technology & Science, Pilani. During Ph.D. tenure he got various fellowship and awards from leading organizations like Google, Microsoft etc. Dr. Srivastava received his Master of Technology (M.Tech) degree in Software Engineering from Motilal Nehru National Institute of Technology, Allahabad. Before joining IIM Rohtak, he has served As a Faculty In the Department of computer science @ BITS Pilani, Pilani campus Rajasthan about 8 years. He is currently doing research in the area of Data analytics, E-commerce & software engineering using nature inspired techniques. His research areas are software testing management, Analytics and E commerce, Software Project Management, Quality assurance, Agile Modeling & Management etc. He has published research papers in various leading international journals and conferences in the area of Information System/Computer science and engineering. His H index is 15 and I index is 24. He has been actively involved in reviewing various research papers submitted in his field to different leading journals and various international and national level conferences. He conducts several MDPs also.



Dr. Abhishek Verma is working as an assistant professor in the area of Management Information Systems at IIM Rohtak. He completed his PhD from the Department of Industrial and Systems Engineering, Indian Institute of Technology Kharagpur. He received his Master of Technology (M. Tech) in Computer Science and Engineering from ABV-Indian Institute of Technology, Gwalior. Before joining IIM Rohtak, he has served as a faculty in GLA University, Mathura and VIT University, Bhopal campus. His work is published in many reputed international journals, conferences and book chapters. He is also a reviewer of many reputed journals and conferences.



Dr. Ankit Kesharwani is an assistant professor in the area of Marketing and Strategy. Prior to joining IIM Rohtak, he was associated with the Indian Institute of Foreign Trade (IIFT) Delhi Campus (2018-2021), and IBS Hyderabad (2014-2018). During his Ph.D., he was a visiting scholar at Fogelman College of Business and Economics, University of Memphis, USA (2011 -2012). He has about 8 years of post-Ph.D. experience in teaching MBA students, Executive MBA students, and Doctoral students. He has specializations in Digital Marketing, Marketing Analytics, Web and Social Media, Analytics, Business Research Methods, Marketing Research, Marketing Management, and Customer Relationship Management. He has taken training sessions for employees of various government and corporate organizations, including DGR, Tata Metaliks, Electronics Corporation of India Limited, Punjab National Bank, National Cooperative Dairy Federation of India Ltd, Engineers India Ltd, and Indian Energy Exchange Limited. He was also involved in various government projects like Sector-Specific Logistics Performance Index (LPI-S) 2020 by IIFT, Logistics Ease Across Different States (LEADS) 2021 report by Ernst & Young, and Khadi and Village Industries Commission (KVIC) 2021 project by IIFT. He has also published several research papers in premier international journals such as Information & Management, Electronics Commerce Research, Behaviour & Information Technology, Journal of Strategic Marketing, Journal of Global Information Management, Journal of Internet Commerce, etc. Primarily his area of research interest revolves around Technology adoption, Mobile Health Apps, Mobile Payment Apps, Online Advertising, Service Co-creation, etc.



Dr. Pramod Mane worked as an Assistant Professor and a Faculty, respectively, at the Indian Institute of Information Technology Dharwad and National Institute of Technology Raipur. He earned his PhD in Computer Science and Engineering from Indian Institute of Technology Indore. He holds an M.Tech in Information Technology from the National Institute of Technology, Durgapur. His area of interest is broadly at the intersection of Computer Science, Economics, and Social Science. His current research focuses on understanding the dynamics of strategic network formation in sharing economy.