



# **CERTIFICATE PROGRAMME IN DATA ANALYTICS**

**3.5 MONTHS ONLINE COURSE**



## INDIAN INSTITUTE OF MANAGEMENT- ROHTAK

In continuance of the Government's vision of promoting excellence in managerial education, the 8th Indian Institute of Management was established in Rohtak (Delhi/NCR) on November 16, 2009. It aspires to impart knowledge of business disciplines with a unique cross-functional perspective to prepare ethical and innovative leaders for the betterment of the world. The Institute seeks to build in its students advanced leadership skills, an appreciation for the impact of management systems on the working of organizations, and an understanding of the strategic, economic and operating significance of even the smallest of events in the current and foreseeable socio-economic scenario.

# PROGRAMME OBJECTIVES

The rapid developments in information and computer technologies have enabled the generation, storage and processing of data analytics that was out of reach a few years back. Data analytics as is believed to be the key to the next wave of management innovation, productivity, and growth. However, there is a shortage of professionals who can glean meaningful insights from data to make effective decisions. It has been a challenge for most businesses these days to figure out how to get the most reliable business tools to use

This course mostly envisages to provide an introduction & advanced data analysis using the omnipresent spreadsheet application Microsoft Excel(depth majority coverage) , and also one of the most popular and powerful open source statistical and data analytics tool 'R' for handling and analyzing business analytics data to enable informed and fact based managerial decision making.

This Data Analytic Course will discuss various real world scenarios where Analytics has been utilized to solve business problems and also explains as to how it helps in different domains like Operations/Marketing/IT/Strategy/HR.



To take advantage of the increasing demand for certified data professionals across industries, many job aspirants are competing with each other out there.



This course can help you a lot in standing out of the crowd and achieving your career objectives.



The online mode of education has today emerged as the best and the most viable option for full-time university students and working professionals to realize their career objectives.



This online course enable the working or otherwise busy candidates to decide their own time, place, and pace of study; hence, great flexibility is there.

## WHO SHOULD DO THIS COURSE



This programme has been developed for Working Professionals, Managers & Leaders , Working Executives and Project Team Members, Data Analytics Professionals and those who have abilities to drive innovation and change with a view of keeping their business relevant and competitive in the future.



Managers & Leaders, Coordinators & Team Members.



Data Analytics Professionals .



Working professionals in organization with an acumen and interest in Data Analytics.



Professionals who wish to complement and upgrade their career in Data Analytics.



Working Executives and Project Team Members

# PROGRAMME HIGHLIGHTS



Executive Certificate Programme in Data Analytics from IIM Rohtak.



Course content and structure designed entirely by IIM Rohtak who bring to you what is relevant to you, to your business and the market that you operate in.



Practical sessions with caselet based discussions.



Opportunity to present the project to IIM faculty in a face to face session at the campus. 2 days workshop shall be conducted at the end of the course for project submission.



Lectures imparted by eminent faculty from IIM Rohtak and Industry Experts.



Fully Online Courses with LIVE lectures that provide a “real” campus experience on a digital environment.



Plug and Play from home/office.



User friendly and easy to use technology interface. No Installation required, ready to plug and play.



# COURSE CONTENT

## Understanding Analytics and its Role in the Organizations

- Course Brief
- Introduction and Background of Data Analytics
- Knowledge Discovery Process

## Data Warehouse, OLAP and Pivot Table

- Extraction, Transformation and Loading of Data in Data Warehouse
- OLAP Operations
- Pivot Table

## Exploratory Data Analysis

- Graphical Techniques for EDA (Box Plot, Histogram, Run Chart, Pareto chart, etc.)
- Managing Designs
- Creating Interactive Charts

## Enterprise Reporting

- Building Dashboards using Tableau

## What If/ Sensitivity Analysis

- Scenario Manager
- Goal Seek
- Data Table

## Simulations

- Probability Distribution
- Monte Carlo Stimulation

## Python Programming

- Recording a Macro
- Writing Macro in Excel
- Looping
- Absolute vs Relative Referencing

## Price Analytics

- Creating Linear and Power Demand Curve
- Optimizing Price
- Estimating Demand Curves Without Price Elasticity
- Price Skimming
- Optimizing Sales Models
- Segmenting Customers to Maximize Revenue

## R Programming

- Loading and Handling Data in R
- Exploring Data in R



# COURSE CONTENT

## **Analytical Techniques for Business Intelligence – I**

- Classification using Decision Trees and Naive Bayesian

## **Analytical Techniques for Business Intelligence – II**

- Clustering

## **Analytical Techniques for Business Intelligence – III**

- Association Rule Mining

## **Analytical Techniques for Business Intelligence – IV**

- Neural Networks and Support Vector Machines

## **Analytical Techniques for Business Intelligence – V**

- Content based Recommendations
- Collaborative Recommendations

## **Analytical Techniques for Business Intelligence – VI**

- Genetic Algorithm and Fuzzy Logic

## **Analytical Techniques for Business Intelligence – VII**

- Text Analytics

## **Analytics Applications – I**

- Sentiment Analytics

## **Analytics Applications – II**

- Web and Social Media Analytics

## **Big Data Analytics**

- Big Data
- Hadoop
- HDFS
- MapReduce

## **Project Presentations**

- Project Presentations





## EMINENT FACULTY PANEL



**Dr. Manas Tripathi**  
M.TECH, P.H.D (BITS PILANI)

Dr. Manas Tripathi works as an Assistant Professor in the area of Information Systems at Indian Institute of Management Rohtak. He is a Fellow in Management (Doctoral level program) of Indian Institute of Management (IIM) Lucknow in the Information Technology & Systems area. Prior to joining IIM Lucknow, he has worked as a software engineer in software product based company. He has obtained his Bachelor of Technology (B.Tech.) degree in Information Technology from H.B.T.I. Kanpur. Prior to joining IIM Rohtak, he has also worked as a faculty in Information Systems area at Jindal Global Business School, Sonapat Haryana. He has published articles in journals, conferences, and magazine of international repute. His research interests include; business value of IT; business focused predictive analytics; IT risk and IT governance; IT Strategy and ICT in Emerging Economies.



**Dr. Praveen Ranjan Srivastava**  
PH. D. (BITS PILANI)

Dr. Praveen Ranjan Srivastava is a faculty 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 numerous international and national level conferences. He conducts several MDPs also.





## COURSE DELIVERY

**Duration:** 3.5 months blended

**Delivery mode:** Nulearn Plug n Learn

**Frequency:** Twice in a week



## COURSE PEDAGOGY

The form of delivery will be Blended (Campus, Self pace and Online), with 2 days workshop at the end of the course for project submission. All other sessions will be through digital platform & delivered LIVE by the eminent faculty of IIM-R. Students will have access to Self Service Learning through which they may access Webinars, past projects, assessments, notes, Alumni testimonials etc



## ELIGIBILITY

- Graduation or equivalent degree from any recognized University or Institute.
- Working professionals.
- Corporate Nominated (graduation criteria may be considered for exemption in cases where participants have some prior experience in similar domain.



## PAYMENT MODE

Online payment or DD in favor of “Human Racers Advisory Private Limited” payable at “New Delhi”.



## COURSE SCHEDULE

2.5 hrs on Saturday/ Sunday

Total Numbers of Online Hours: 47.5 Hours

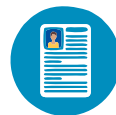
Total Number of Offline Hours: 10 Hours.

Course Commencement Date: 14th July, 2019



## ASSESSMENT

Periodic evaluations have been built in throughout the duration of the course in the form of quiz, assignment, project, case studies and other objective/subjective assessments. The evaluations are designed to ensure continuous student engagement and to encourage learning. Students who successfully clear the same along with the requisite attendance criteria will be awarded a Certificate from IIM Rohtak.



## HOW TO APPLY

To apply, students and working professionals can register at <http://nulearn.in> or call at **+918882720101** (Toll Free)

# Payment Structure

**Total Course Fee INR 60,000 + GST  
USD 1500**

## **For Indian Students**

Application Fee: INR 20000 + GST

Instalment 1 : INR 20000 + GST

Instalment 2 : INR 20000 + GST

## **For International Students**

Application Fee: USD 500

Instalment 1 : USD 500

Instalment 2 : USD 500

**Admission & Technology Partner**

# **Nulearn**

Co-Offiz, B1/630, First Floor,  
Above Maruti Suzuki Showroom,  
Janak Puri, New Delhi-110058

Email: [connect@nulearn.in](mailto:connect@nulearn.in)

Website: [www.nulearn.in](http://www.nulearn.in)

phone number: 08882720101