IIM RANCHI
बहुमुखविकासो गन्तव्यः

EXECUTIVE CERTIFICATION PROGRAMME IN

# BUSINESS ANALYTICS AND AI FOR ASPIRING MANAGERS

FROM IIM RANCHI

# About IIM Ranchi

The Indian Institute of Management Ranchi (IIM Ranchi) is a nationally recognised management school that develops ethically grounded, innovation-minded leaders through a blend of rigorous academics, applied research, and industry partnerships. The institute emphasises experiential learning, multidisciplinary perspectives, and entrepreneurship to prepare graduates for complex, global business challenges.

**Key Highlights:**

- **NIRF 2025:** Ranked 18th nationally, reinforcing IIM Ranchi's position among India's top management institutions.
- **Entrepreneurship & Social Impact:** Drives innovation and social responsibility through E-Cell, initiatives, and collaborations supporting Jharkhand's start-ups.
- **Future-Focused & Multidisciplinary:** Offers NEP-aligned multidisciplinary learning integrating analytics, HR, policy, and strategy for future-ready leadership.
- **Research & Global Outlook:** Strengthens thought leadership through research centres and international collaborations, shaping globally aware, analytical managers.

# Why Choose This Course?

- **Prestigious Certification:** Receive a Certificate of Completion from IIM Ranchi, validating your Business Analysis expertise and strengthening your professional credibility.
- **Future-Proof Career Gateway:** Launch a high-growth career in Business Analytics skills that leading companies actively seek.
- **Advanced Curriculum:** Access cutting-edge analytics, and AI content with interactive tools and practical evaluations focused on real-world product development.
- **Case-Based Learning:** Engage in case-driven sessions that bridge the gap between theory and real product challenges, from feature design to growth optimisation.
- **World-Class Faculty:** Learn from IIM Ranchi faculty and industry leaders, gaining insights from their academic research and hands-on analysis experience.
- **Hands-On Projects:** Build end-to-end analytics and AI case studies, including business dashboards, analytical reports, data interpretation exercises, and AI-enabled decision scenarios that demonstrate practical managerial insight and strategic impact.

# What Will You Learn?

This programme equips managers with strategic foundations in business analytics and AI to enable data-driven decision-making. Participants learn to interpret analytical insights, oversee responsible AI use, communicate findings through effective storytelling, and lead analytics initiatives that support digital transformation and sustainable business value across organizations

**Toolkit**

# Course Details

| Course Duration | Time Commitment | Certification |
| --- | --- | --- |
| 6 Months | 8-10 hours per week | From IIM Ranchi |

# Course Curriculum

### Module 1: Data Management, SQL & Python for Analytics

This module introduces managers to how data is stored, integrated, and accessed within organisations. Participants gain a conceptual understanding of databases, data warehouses, and data lakes, along with hands-on exposure to querying data using SQL and Python. The emphasis is on asking the right questions of data, understanding query logic, and interpreting outputs rather than becoming programmers. Participants also see how ETL and integration tools support analytics workflows.

### Module 2: Data Understanding, Preparation & Governance

This module focuses on the often-overlooked foundations of analytics success—data quality, structure, and governance. Participants learn how business questions translate into data requirements, how poor data quality affects insights, and how features are conceptualised from a managerial perspective. The module also addresses ethical use of data, privacy regulations, and governance frameworks, enabling participants to balance innovation with responsibility and compliance.

### Module 3: Data Visualisation & Storytelling for Managers

This module develops the ability to convert analysis into insight and insight into action. Participants learn principles of effective data visualisation and how dashboards support managerial decision-making. Through demonstrations using Power BI, Tableau, and Python, the module shows how to design dashboards that highlight trends, comparisons, and anomalies. Special focus is placed on storytelling—how managers can frame insights, avoid misleading visuals, and communicate recommendations clearly to stakeholders.

### Module 4: Business Analytics & AI for Managers

This module provides a strategic foundation for understanding how analytics and AI create business value. Participants explore how organizations use data to build competitive advantage, enable digital transformation, and design new digital business models. The module clarifies the differences between traditional analytics and AI, introduces analytics and AI maturity models, and highlights leadership responsibilities in driving data-driven change. Emphasis is placed on accountability, governance, and cultural readiness so that managers can lead analytics initiatives responsibly and effectively.

### Module 5: Managerial Statistics &Quantitative Thinking

This module develops the statistical intuition required for effective managerial decision-making using Excel, Python, and Generative AI tools. Instead of emphasising mathematical derivations, the focus is on interpretation, analytical judgment, and business relevance. Participants learn to summarise and visualise data, understand variability and uncertainty, test hypotheses, and distinguish correlation from causation. Regression analysis is introduced as a decision-support tool, with Excel- and Python-based illustrations and GenAI-assisted interpretation to help managers draw meaningful, actionable insights from data while retaining oversight and validation.

### Module 6: Machine Learning for Business – Foundations

This module demystifies machine learning for managers by connecting models directly to business problems. Participants learn how predictive and prescriptive analytics differ from descriptive analysis and how business objectives translate into ML tasks. Core concepts of supervised and unsupervised learning are introduced, including regression, classification, clustering, and recommendation systems. The focus is on understanding model outputs, limitations, and business implications rather than technical model building.

### Module 7: Advanced Analytics, AI Applications & Leadership

This module expands the managerial lens to advanced AI applications such as deep learning, natural language processing, and generative AI. Participants explore how AI systems move from prediction to prescription and how organisations operationalise AI at scale. Critical issues such as explainability, bias, trust, and governance are discussed in depth. The module concludes with a leadership perspective on AI strategy, innovation, and sustaining competitive advantage in an AI-driven economy.

### Module 8: Campus Immersion

The campus immersion module provides an integrated learning experience that consolidates concepts from across the programme. Through discussions, demonstrations, and interactions, participants reflect on how analytics and AI can be applied within their own organisational contexts. This module strengthens peer learning, reinforces strategic thinking, and helps participants develop an actionable roadmap for applying programme insights after completion.

# Programme Directors

**Prof. Amit Sachan**
**Professor of Operations Management, IIM Ranchi**

Prof. Amit Sachan is Professor of Operations Management and Dean of Executive Education & Consultancy at the Indian Institute of Management Ranchi. He earned his B.Tech. in Industrial Engineering from the Indian Institute of Technology Roorkee and completed his doctoral studies as a Fellow of the Management Development Institute (MDI), Gurgaon. Prior to joining academia, he worked as a Service Manager in the Industrial Engineering Group at AON Hewitt.

**Dr. Sobhan Sarkar**
**Assistant Professor, IIM Ranchi**

Dr. Sobhan Sarkar is an Assistant Professor at IIM Ranchi, India in the Area of Information Systems & Business Analytics. He served as a Post-doctoral Fellow in the Management Science Division at the University of Edinburgh, UK. He received his Ph.D. from the Department of Industrial & Systems Engineering, IIT Kharagpur. He has 14 years of rich industry, teaching, and research experience in the domain of Industrial Engineering and Management. His research domain includes theoretical improvement and applications of data analytics using machine learning, data mining, and Operations Research approaches in solving business-related problems.

# Admission Process

**Clear Qualifier Test**
You must pass the exam to confirm your seat for the program

**Complete Counselling**
Only shortlisted candidates go through the counselling process

**Start Learning**
Learn from India's top educators and stand out from the crowd

# Fees Structure

| | |
|---|---|
| **Qualifier Test Fee** (Non-Refundable) | ₹99 |

| | Option 1 | Option 2 |
|---|---|---|
| | **Upfront** | **EMI** (Through our NBFC partners) |
| Secure Seat Fee (Non-Refundable) | ₹4,000 | ₹4,000 |
| Programme Fee (Non-Refundable) | ₹58,000 | ₹10,827 x 6 months |
| Total Program Fee | ₹62,000* | ₹68,962* |

**GST at 18% extra, as applicable*

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