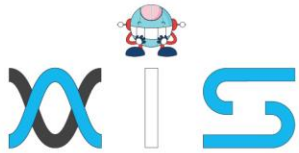# Business Analytics
for Strategic Decision-Making

Course Outline

Course Overview:

The contribution of Business Analytics in making strategic decisions for an organization's success is growing at a rapid pace. Analyzing data and putting it to work for you and your business is an essential skill for executives today. As a decision maker, it is important to understand analytics and to know how it can be used to derive meaningful insights and make tactical decisions for your organization. Join the new age of leaders and understand how best you can use analytics to grow your business.

The **Business Analytics for Strategic Decision-Making** program will help you understand the essentials of business analytics such as statistics, predictive analytics, prescriptive analytics, machine learning techniques, data visualization, data storytelling, and much more, along with the real-world applications of analytics across multiple business functions. This will equip you with the skills to apply in various industry domains as per your organization's need. It will also help you gain a competitive advantage by capturing data-enabled business opportunities and provide you with much-needed data literacy. \

This program offers best-in-industry content created by the top-notch professors from IIT Roorkee. The right mix of self-paced learning videos, live sessions, knowledge checks, business scenarios, and hands-on projects — leveraging the expertise of IIT Roorkee faculty — will help you understand the concept of analytics, connect it with the business you manage, and apply these concepts to find meaningful insights. Enroll in this program to build a data-driven organization and grow your business in the right direction.

Key Features:

- Program completion certificate from the prestigious Indian Institute of Technology, Roorkee
- Industry recognized IBM certificates for IBM courses
- Live-online masterclasses from distinguished IIT Roorkee faculty
- State-of-the-art curriculum designed and delivered by IIT Roorkee professors
- Real-world applications of analytics across multiple domains and sectors
- Get industry insights through masterclasses by specialists from IBM
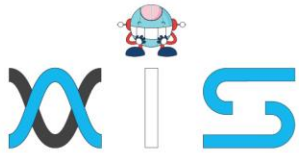
- Practical exposure through hands-on projects and a Capstone Industry-relevant, case-based learning specially designed for mid to senior-level managers and C-suite executives
- Interactive doubt clearing sessions to ensure clarity of course concepts

About IIT Roorkee

IIT Roorkee is among the foremost institutes of national importance in India for higher technological education, engineering, and research. Since its establishment, and now having completed more than 170 years of existence, the institute has played a vital role in providing technical manpower, know-how, and the pursuit of research to the country. The Institute ranks among the best technological institutions in the world and has contributed to all sectors of technological development. It has also been considered a trendsetter in the area of education and research in the field of science, technology, and engineering.

Indian Institute of Technology, Roorkee offers bachelor's degree courses in 10 disciplines of Engineering and Architecture and postgraduate degree courses in 55 disciplines of Engineering, Applied Science, Architecture, and Planning. The Institute has facilities for doctoral work in all departments and research centers.

About Continuing Education Center

Continuing Education Center, IIT Roorkee was established in 1955 for the promotion of knowledge up-gradation by organizing refresher/specialist courses for executives, working professionals, and aspiring individuals. In addition to the knowledge up-gradation, CEC IIT Roorkee courses also offer a launchpad to learners in the domains that are most sought after by the industry. CEC conducts sponsored and open participation programs in various disciplines of engineering, science, technology, and management for learners both nationally and globally. Through these courses, CEC also provides the opportunity to visit and study at IIT Roorkee for a short duration. Apart from the technical expertise available in the Departments and Centers of the Institute, wherever necessary, experts from industries and R&D organizations are also invited to deliver talks/lectures.
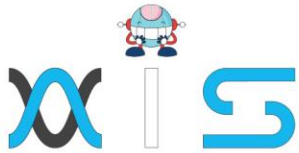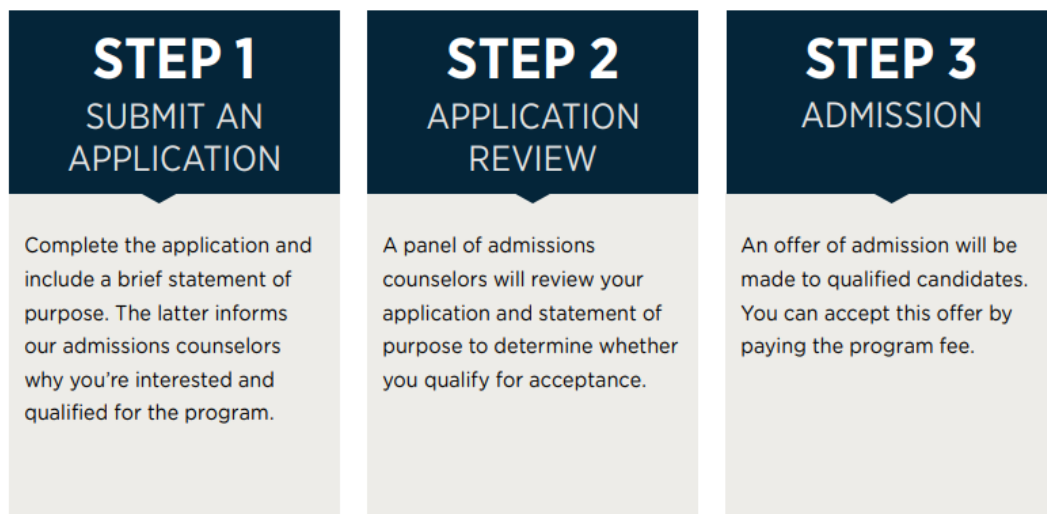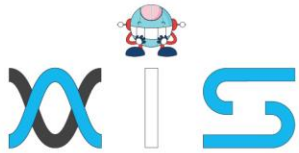
Eligibility Criteria

For admission to this program, candidates should have:

- A bachelor's degree (any background)
- No prior coding experience or technology know-how required
- An eagerness to apply course concepts to real business problems
- Working professionals with preferably 6+ years of work experience who are aspiring to leverage analytics to make business decisions

Application Process

The application process consists of three simple steps. An offer of admission will be made to the selected candidates and accepted by the candidates by paying the admission fee.

STEP 1
SUBMIT AN APPLICATION

Complete the application and include a brief statement of purpose. The latter informs our admissions counselors why you're interested and qualified for the program.

STEP 2
APPLICATION REVIEW

A panel of admissions counselors will review your application and statement of purpose to determine whether you qualify for acceptance.

STEP 3
ADMISSION

An offer of admission will be made to qualified candidates. You can accept this offer by paying the program fee.

## Talk to an Admissions Counselor

We have a team of dedicated admissions counselors who are here to help guide you in applying to the program. They are available to:

- Address questions related to the application
- Assist with financial aid (if required)
- Help you resolve your questions and understand the program

Program Outcomes:

- Learn the essential concepts of Business Analytics and Data Science and understand the basics of R programming for various analytics use cases
- Gain an understanding of various statistical techniques such as probability models, sampling, hypothesis testing, analysis of variance, and much more
- Learn to clean and prepare data, build and evaluate data models, and visualize data to generate meaningful insights
- Master the concepts of linear and logistic regression, data mining, time series analysis, and other forecasting techniques as part of predictive analytics
- Learn to define goals for your business and how you can optimize solutions to achieve those goals through the techniques associated with prescriptive analytics
- Master Machine Learning concepts and techniques, including supervised and unsupervised learning, classification and clustering techniques, and mathematical and heuristic aspects to expedite the decision-making process
- Analyze the performance of various marketing campaigns and optimize ROI using marketing analytics approaches
- Learn to use analytics to gain insights and make predictions about the organization's financial state and develop a business strategy based on customer profitability, risk, and cost of implementation
- Gain insights by analyzing data associated with the procurement, processing, and distribution of goods and other supply chain management activities
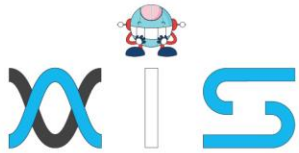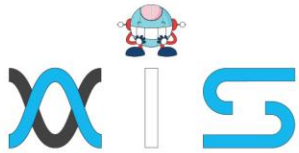
- Understand workforce analytics, employee engagement analytics, employee training analytics, and much more to make better people-centric decisions for your organization
- Create a roadmap for your organization to implement analytics and make data-driven business decisions

Who should enroll in this Program?

Businesses are using analytics to increase efficiency, improve customer service, and identify risks and opportunities across all sectors. This program is designed for business professionals who recognize this rapidly growing trend and want to use data and analytics techniques to guide strategy at the top levels of their organizations.

- This program is ideal for: Working professionals who are aspiring to lead analytics projects or would like to understand how to leverage analytics for strategic decision making.
- Professionals who engage with data teams and output reports and want to have more meaningful conversations with their analytics team and integrate data into their decision-making and corporate culture.
- This program will benefit professionals who engage with data teams and output reports and want to have more meaningful conversations with their analytics team and integrate data into their decision-making and corporate culture.
- Mid- to senior-level managers seeking to garner insights from data and looking to gain a practical understanding of the applications of analytics to initiate new projects or launch new business ideas.
- C-suite executives from any industry with access to a massive data stream — such as IT services, banking and financial services, retail, consumer products, and healthcare — seeking to attain data fluency, use analytics for strategic advantage, and develop an analytics roadmap for their organization.

Learning Path:

1. Foundations of Business Analytics
2. Statistical Analysis for Business Decision Making
3. Exploratory Data Analysis and Visualization using R
4. Predictive Analytics for Business
5. Prescriptive Analytics for Business
6. Data Science and Machine Learning for Decision Making
7. Capstone Project

   Certificate

Electives:

- Data Analysis with Python [Designed by IBM]
- Data Visualization with Python [Designed by IBM]
- Mathematical Optimization for Business Problems [Designed by IBM]
- Business Analytics for Strategic Decision Making - Academic Masterclass
- Business Analytics for Strategic Decision Making - Industry Masterclass
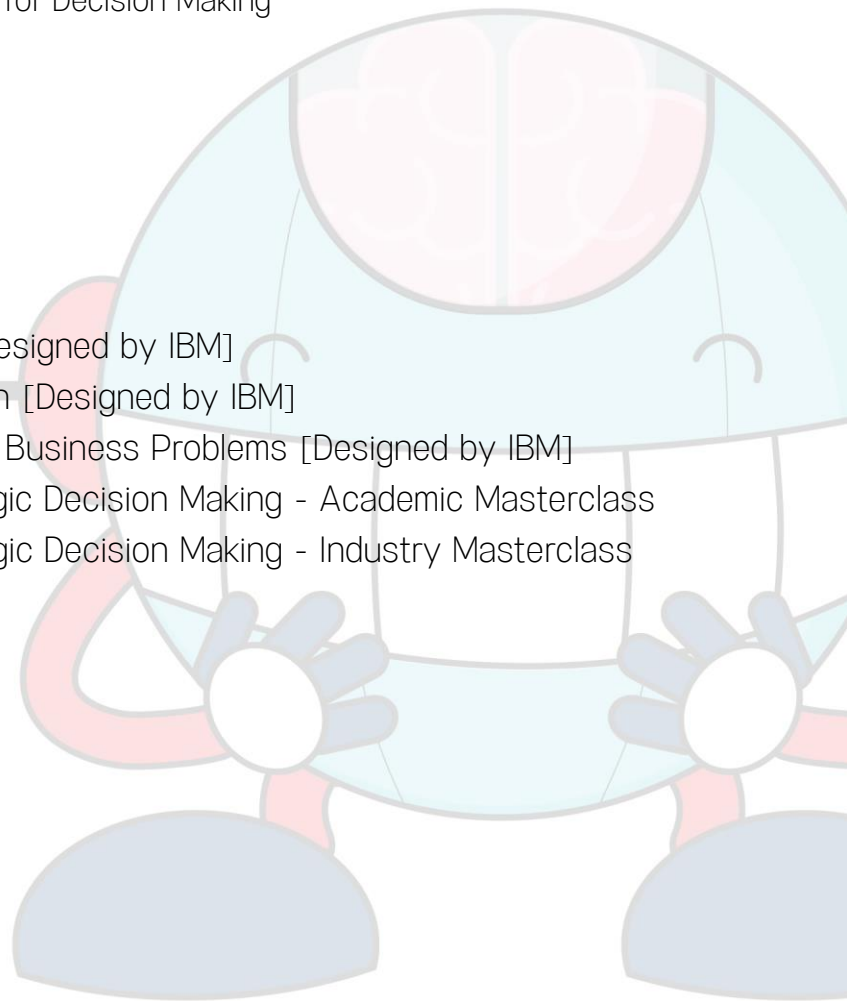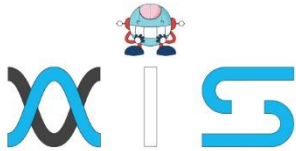
AIS

With the rising demand in scalable technology, AIS provides tailored goal-setting based on your organization's needs and expectations. With products geared towards the growing needs of your organization's customers and employees, AIS has innovative and value-driven solutions.

Learning Partners

SAS Management, Inc.

SAS Management, Inc. has been a leader in the training, certification and consulting services industry in the Philippines. With offices in Makati, Ortigas and Cebu, Philippines, the company has been the top training and consulting company for over 9 years. In its years of existence, it has provided certificates to over 100,000 professionals including 10,000 participants in the 160+ courses that have been conducted just during the 2020-2021 pandemic alone. The most sought-after courses being offered are ITIL, Project Management Professional (PMP)®, COBIT 5, Six Sigma Yellow Belt, Six Sigma Green Belt, PRINCE2, and organizational skills, among others.

Simplilearn

Simplilearn, based in California and India, is the world's #1 online bootcamp and one of the world's the leading certification and training providers. Simplilearn trained over 2,000,000 professionals with 2,000+ trainers and provides over 400 different courses.

Technology Partner

Freshworks

With over 40,000 customers, Freshworks is a business solutions software provider with products ranging from IT helpdesk and service desk, customer relationship management, live chat, marketing automation, phone system, and HR.
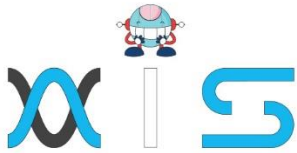
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