



# HSNC University, Mumbai

A NEW ERA IN EDUCATION

School of Applied Science  
Presents

## **UNDERGRADUATE COURSE IN DATA SCIENCE AND BUSINESS ANALYTICS**

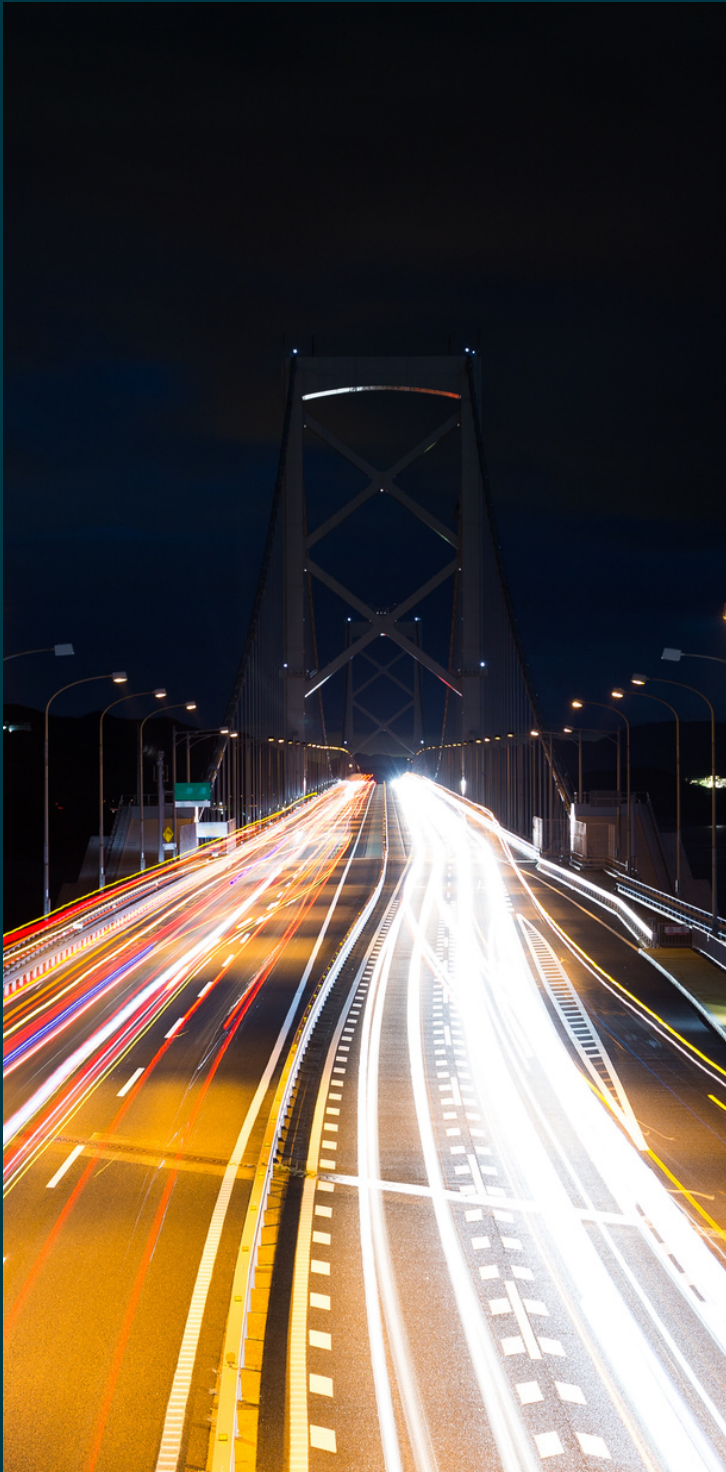


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# DATA SCIENCE , THE FUTURE IS NOW



## **IBM DECLARES**

*it as a trending job of the 21st century and predicted that the demand for Data Analyst will increase in the coming years*

## **11.5 MILLION**

*according to the U.S. Bureau of Labor Statistics, 11.5 million new data science and analytics jobs will be created by the year 2026*

## **3 MILLION**

*In a recent survey conducted by Analytics Insight, by 2021, there will be 3,037,809 new job openings in data science, worldwide*

## **10.9%**

*The global market of Big Data is forecast to grow at a CAGR of 10.9% from US\$179.6 billion in 2019 to US\$301.5 billion in 2023.*



### Data science and Business Analytics

The B. Sc. Data Science and Business Analytics program is a minimum of 140 credits covering six semesters. Data is the new oil. The analytics may be input for human decisions or drive fully automated decisions. It helps decision-makers build strategies to perform deep-dive understanding and provide descriptive, predictive and prescriptive analysts. It is used to run the business effectively and is instrumental in growing it. It is the area for the vast potential for corporate investments. Business Analytics include identifying KPIs, measurement strategy, data analysis, complex statistical model and analysis, data mining and deep understanding of cause-and-effect models. Business analytics can drive critical decision making in the organization and help executive decision-makers build strategy, predictive analysis, forecasting, risk analysis, identifying and preventing fraud, market analysis, etc. Data Scientists use these skills can provide insights into discrete data sets, build complex models and present them in Scorecard format and use the same in executive reviews to lead a data-driven discussion and decisions. Some of the impactful use of this is in Management Information Systems, Financial Service, Marketing Research, Process Improvements, Six Sigma, Process Excellence, Scorecard, Dashboard, End-to-End Product Management, etc.

The program emphasizes both theory and modern applications of Data Science and Business analytics. It is structured to provide knowledge and skills necessary for students' employability in industry, academics, and other government and non-government organizations. The program has some unique features like independent projects, several elective courses and extensive computer training in statistical computations, including standard software packages like C++, SQL, SPSS, SAS, MINITAB, R and PYTHON etc. Due to Cluster University, the department got the academic autonomy, and it has been utilized to add the new and need-based elective courses. The independent project work is one of the essential components of this program. The syllabus has been framed to possess a decent balance of theory, methods and applications of statistics. The students can study introductory courses from other disciplines like economics, life sciences, computer science and Information Technology in place of optional/electives. The thrust of the course is to prepare students to enter into a promising career after graduation and provide them with a platform for pursuing higher studies resulting in post-graduation degrees.



### About HSNCU, Mumbai

- The HSNC University has been approved by Rashtriya Uchchatar Shiksha Abhiyanand (RUSA) and the Govt. of Maharashtra and is the first State Cluster University to be set up in the Government - Private Management Body partnership
- The HSNC University comprises of renowned South Mumbai colleges – H.R College of Commerce & Economics as its Lead College and K.C College of Arts, Science & Commerce and Bombay Teachers' Training College as its constituent colleges.
- HSNC University has built partnerships within the respective industry and has new curriculum aligned with Industry 4.0.
- This multi-faculty University aims to set new paradigms of education and innovation.
- The first University to start Data Science and Business Analytics as a undergraduate program.

### Vision

*Our vision is to train students to become good data scientists, Promote research in data science. Collaborate with industries. Put HSNC universities' "Data Science and Business Analytics course" on the global map.*

### Mission

- *Provide hands-on training to students to develop and enhance the strong analytical, quantitative modeling skills and business skills for solving team-based, real-world business problems and to make students ready for the role of Data Scientist.*
- *Provide opportunity to work on some real-life data/problems or simulated data through building the business Intelligence reports, scorecard and dashboard.*





Mode: Classroom/ Online

Semesters: Six

Eligibility: Students of Arts, Science & Commerce with Minimum 50% aggregate in 12th or equivalent examination.

Duration: 3 years/6 Semesters

### ***Program Delivery***

- *Classroom Sessions from Monday to Saturday(7:30 AM to 3:30 PM)*
- *3 Years of Classroom and online-based learning*
- *In-class lab sessions*
- *Dedicated Placement Assistance*

## **ON COMPLETING THIS PROGRAM , YOU WILL**

- 1.*Be well versed in analytics tools and technologies such as python, Tableau, SQL, Power BI.*
- 2.*Apply industry-relevant machine learning techniques such as regression, Predictive Modeling, Clustering, Time series, forecasting, Classification*
- 3.*Structure a business problem into an analytics framework using statistics and Data Modeling*
- 4.*Perform data cleaning and data transformation operations using several tools and techniques*
- 5.*present yourself as an ideal candidate for data analyst, data engineer, and data scientist roles in leading analytics companies*



# Syllabus

## Semester 1

- *Business Statistics I*
- *Mathematics foundation I*
- *C++ Programming*
- *Microsoft Excel*
- *Introduction to Cyber Security*

## Semester 2

- *Business Statistics II*
- *Applied Linear Algebra*
- *R Programming*
- *Database Management System with SQL*
- *Business Analytics*

## Semester 3

- *Predictive Analytics using SPSS*
- *Mathematical Foundation II*
- *Python Programming*
- *Objected-Oriented Programming with Java*
- *Visualization using Tableau and Maya*

## Semester 4

- *Structural Equation Modeling using SPSS AMOS/FOSS*
- *Multivariate Calculus*
- *Introduction to Artificial Intelligence*
- *Advanced Java*
- *Machine Learning and Deep Learning*



### Semester 5

- *Time series and Forecast Modelling*
- *Categorical Data and Text Analysis*
- *Data Science Case Studies*
- *Introduction to Six Sigma*
- *Introduction to Internet of Things (IoT) and Block Chain*

### Semester 6

- *Internships - 3 months Industrial training*

### Salient Features

- 1) *Syllabus is prepared by top most industry experts, eminent statisticians, Data Scientist and reputed faculties of KC College.*
- 2) *Skills covered includes Statistics, Data Analytics, Business Analytics, Data Visualization, machine learning algorithm, Text Mining, Forecasting/ Predictive Analytics, Hypothesis Testing etc.*
- 3) *Tools and Technology covered includes R, Python, My SQL, tableau, c++, SPSS, Minitab, Excel, Maya and many more.*
- 4) *Course includes several Assignments and Case Studies.*
- 5) *Getting industrial experience by working on industry relevant live projects and internship.*
- 6) *University/ College has tie up with 100+ companies to provide job to many students.*
- 7) *University/ College has a dedicated placement cell for the participants who will complete course.*
- 8) *Teaching Faculties will include good blend of Academicians and Industry Experts.*
- 9) *Focus is to prepare Participants with clear, concise concept to experts in data Science field to add quality and value to institute they join.*
- 10) *University/ College has well placed Alumni working at top position.*



### Learning Outcomes

*Students will learn Analytics from basic concepts to creating advanced models for predictions. Students will learn how analytics is actually used large corporations like Microsoft, Jio, Amazon and other top companies globally. In the hands-on session, students will gain skills on identifying opportunities for Analytics, Machine Learning, IoT, AI, Blockchain, coming up with the right set of metrics/KPIs, use cases, defining the metrics, measuring and implementing it. Students will be able to develop specific Analytics Opportunities, Define Metrics and KPIs successfully for any business.*

## Program Highlights

### CLASSROOM PROGRAM

- **5 Month Full-time classroom-based learning**
- **Classroom and lab session from Monday to Thursday ( 7:30AM to 3:30PM) at HSNC University**

### DEDICATED PLACEMENT ASSISTANCE

- **Career guidance and mentorship by HSNC university faculty and Industrial Experts .**
- **Resumes review and interviews preparation sessions**
- **Access to opportunities with leading companies**

### BECOME JOB-READY

- **Real-world case studies to build practical skills**
- **Hands-on exposure to analytics tools & techniques such as Python, Tableau, SQL, Power BI and many more.**
- **Learn industry insights through multiple industry knowledge sessions**



## **EXCELLENT INFRASTRUCTURE**





# HSNC University, Mumbai

A STATE CLUSTER UNIVERSITY



Fees

INR 95000/- Per Annum

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Admission/ Application / Technical Related Queries

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