



M.Sc.

**BUSINESS
ANALYTICS**



BITS Pilani
Pilani | Dubai | Goa | Hyderabad
Work Integrated Learning Programmes





Harvard Business review (October 2012) carried an article “Data Scientist: The Sexiest Job of the 21st Century”. The analytics market is poised to grow by \$172.77 billion during 2021-2025, reported by IDC.

The world over, there is a demand for Data Scientists, professionals comfortable with Statistics, IT and Business – Predictive/ Prescriptive/ Embedded/ Behavioural Analytics. The Internet of Things will also generate vast amounts of data which will require such skills.

M.Sc. Business Analytics is a five-semester Work Integrated Learning Programme designed for working professionals, who are

aspiring for rapid career progression in the high-growth areas of Business Analytics and Big Data, and wish to stand out in highly competitive workplaces by acquiring prestigious Master’s-level qualification from a premier institution.

WHO SHOULD APPLY?

The programme addresses the learning needs of highly driven and ambitious professionals, such as:

- ▶ Analysts who wish to hone their technical skills in Statistics and IT
- ▶ Statisticians who want to pick up programming skills and domain knowledge
- ▶ IT professionals who need to hone their quantitative knowledge and domain understanding.





WHAT ARE THE MAIN HIGHLIGHTS OF THE PROGRAMME?

- ▶ The programme is offered by BITS Pilani, a top-ranked institution, recently announced as an Institution of Eminence by MHRD, Govt. of India.
- ▶ The programme is of five semesters, and can be pursued without a career break.
- ▶ Classes will be conducted by BITS Pilani faculty over weekends through live online sessions.
- ▶ The programme offers exposure to state-of-the-art data analysis/ visualization tools such as R, SAS, Python and Tableau.
- ▶ Practitioner-oriented insights from industry experts will help you develop solutions to real world problems using cutting edge analytical techniques.
- ▶ The programme emphasizes on experiential learning through Simulations, Online Labs, Case Studies, Group Discussions, Assignments and Project work.
- ▶ Dissertation/ Project Work in the final semester enables learners to apply concepts and techniques learnt during the programme.

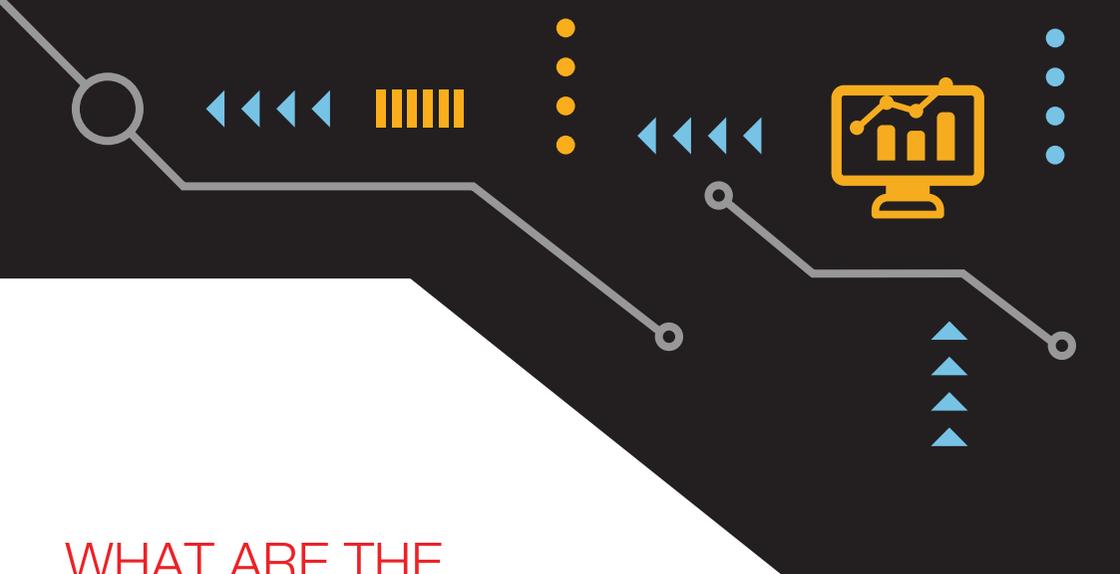




WHAT ARE THE PROGRAMME OBJECTIVES?

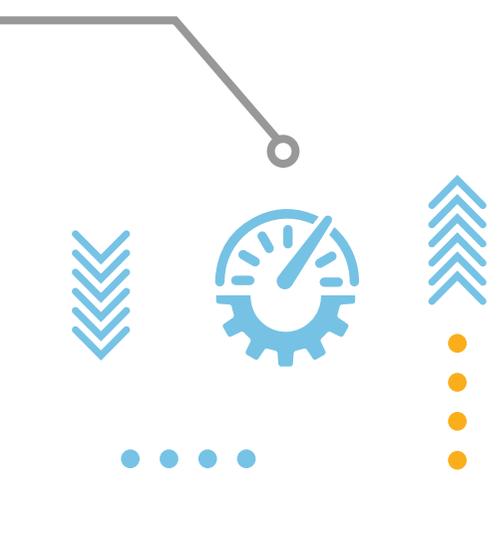
Studies have shown that senior positions in the analytics industry require holistic understanding and capabilities that span multiple domains, critical thinking & problem solving situations and cross-functional collaboration. This programme aims to:

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- ▶ Equip working professionals to take on challenging roles in business analytics by
 - i Laying a foundation in the area of Statistics, IT and selected business domain areas
 - ii Training students in the latest developments in the area of business analytics across various industry verticals
 - iii Ensuring a good mix of theoretical and cutting edge practical skills
 - ▶ Build and nurture the knowledge, skills and aptitude required to realise long-term career growth and enables participants to undertake higher responsibilities at the workplace
 - ▶ Provide requisite conceptual foundation, and contextual understanding of real-world applications that enable a learner to enhance workplace performance and stand out among peers for growth opportunities



WHAT ARE THE STUDENT LEARNING OUTCOMES?

Upon completion of this programme, the participants will be able to effectively apply:

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- ▶ Apply statistical data analysis and other decision science techniques to effectively solve real world business problems
 - ▶ Objectively analyse alternatives using quantitative techniques
 - ▶ Apply cutting edge tools and technologies to analyse Big Data
 - ▶ Develop appropriate algorithms using machine learning techniques to solve business problems
 - ▶ Be able to effectively communicate the results of the analysis using appropriate data visualization techniques

WHAT IS THE EDUCATION DELIVERY METHODOLOGY?



- ▶ Classroom sessions in this programme will be conducted through live online sessions which can be accessed by the learners from any location using a computer and a high-speed internet connection.
- ▶ Classes will be conducted by BITS Pilani faculty over weekends. A typical weekend classroom session per subject is of 1.5-2 hours duration. Since students typically pursue 4 courses in a semester, they will be expected to attend approximately 4 classroom sessions over a weekend. These classroom sessions will be typically scheduled over 16 weekends per semester.

The schedule of the classroom sessions, will be announced at the beginning of each semester.



EXPERIENTIAL LEARNING & LABS

The programme emphasises on Experiential Learning that allows learners to apply concepts learnt in classroom in simulated and real work situations. This is achieved through Simulations, Online Labs, Case Studies, Group Discussions, and Assignments, etc.

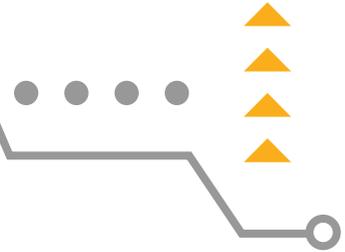
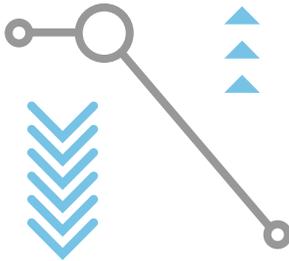


The programme covers Data analysis/ visualization tools such as Linear Optimization, Descriptive Statistics, Multivariate Analysis & Mining Algorithms using R, Python, Excel and Excel Solver



PROJECT WORK

During the final semester participants carryout a semester-long intensive project work applying the various concepts learnt throughout the program guided by the organisation mentor and supervisor. Participants are provided access to virtual labs where applicable, and faculty expertise to support the project work.



DIGITAL LEARNING

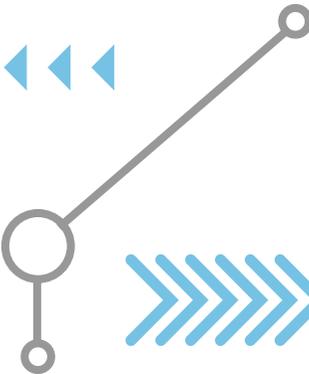
Learners can access engaging learning material at their own pace which lecture videos, student notes, curated content etc. for select courses, through a learning management platform that is engaging and mobile-friendly.



EXAMINATIONS & CONTINUOUS ASSESSMENT

The learners' performance is assessed continuously throughout the semester using various tools such as quiz, assignments, mid-semester and comprehensive exams. The assessment results are shared with the learners to improve their performance.

Each course will entail a minimum of 1 Assignment/ Quiz, a Mid-semester exam and a final Comprehensive exam. Your semester calendar will clearly indicate the dates of the Mid-semester and Comprehensive exam. Typically, a Mid-semester or Comprehensive examination for a course is for 2-3 hours duration. The examinations are typically conducted over a weekend, i.e. Saturday and Sunday. These exams will be conducted either at the learners' office premises, or at another suitable location. Details regarding the exam location will be communicated at the beginning of the semester.





WHAT IS THE ELIGIBILITY CRITERIA?

Minimum eligibility to apply: Working professionals holding M.Sc./MCA/B.E./B.Tech. or equivalent with minimum 60% aggregate marks and two years of work experience within HCL are eligible to apply.

FEE STRUCTURE

The following fees schedule is applicable for candidates seeking new admission during the academic year 2021-22

Application Fees (one time)	:INR 1,500
Admission Fees (one time)	:INR 16,500
Semester Fees (per semester)	:INR 57,750

PROGRAMME CURRICULUM

First Semester

- Marketing
- Management Information Systems
- Models and Applications in Operational Research
- Introduction to Statistical Methods

Second Semester

- Financial Management
- Business Data Mining
- Supply Chain Management
- Introduction to Data Science

Third Semester

- Advanced Statistical Methods
- Big Data Analytics
- Predictive Analytics
- Optimization Methods for Analytics

Fourth Semester

- Analytics for Competitive Advantage
- Elective 1
- Elective 2
- Elective 3

Fifth Semester

- Project Work
- Elective 4

Electives

- Advanced Financial Modeling
- Data Visualization
- Financial Risk Analytics
- HR Analytics
- Investment Banking Analytics
- Marketing Analytics
- Marketing Models
- Retail Analytics
- Supply Chain Analytics
- Real-time Analytics
- Text Analytics

HOW TO APPLY

- ▶ Create your login at the Online Application Center by entering your official HCL Email ID only and create a password of your choice. Once your login has been created, you can anytime access the Online Application Center using your official email ID and password
- ▶ Begin by clicking on Step 1 - 'Fill/ Edit and Submit Application Form'. This will enable you to select the programme of your choice. After you have chosen your programme, you will be asked to fill your details in an online form. You must fill all details and press 'Submit' button given at the bottom of the form
- ▶ Now, click on 'Pay Application Fee' to pay INR 1,500/- using Netbanking/ Debit Card/ Credit Card
- ▶ Finally, click on 'Upload & Submit All Required Documents'. This will allow you to upload one-by-one all the mandatory supporting documents such academic certificates and transcripts, photograph, etc. and complete the application process. Acceptable file formats for uploading these documents are .DOC, .DOCX, .PDF, .ZIP and .JPEG
- ▶ Upon receipt of your Application Form and all other enclosures, the Admissions Cell will scrutinise them for completeness, accuracy and eligibility
- ▶ Admission Cell will intimate selected candidates by email within two weeks of submission of application with all supporting documents. The selection status can also be checked by logging in to the Online Application Centre





DISCLAIMER

Ever since it was declared as a Deemed to be University in 1964, BITS Pilani has been offering higher education programmes in science and technology, and has earned an enviable reputation for its innovations in this sphere. The Work Integrated Learning Programmes (WILP) of BITS Pilani constitutes a unique set of educational offerings for working professionals. These programmes, which BITS began to offer in 1979, have, over the years, evolved along the lines envisaged in the National Policy on Education, 1986.

The WILP are rigorous higher education programmes in technology areas, designed keeping the evolving needs of industry in view, and meant for working professionals in their respective domains. The very intent is to deliver the education at the workplace, in order that the greatest degree

of work integration of the education is achieved, and thus the WILP are very distinct in philosophy and pedagogy from open, distance learning programmes. Though it is incorrect and improper, at times the WILP are compared to ODL programmes. Accordingly, it has been our constant endeavor to engage with the regulator, and provide all necessary information about these programmes.

The WILP have been well received, and accepted by industry, because of the high quality of the programmes in terms of the curriculum and the instruction, and also because of the high degree of work integration, which results not only in up gradation of knowledge, but also in up skilling, and productivity increase.

HCL_11/09/2021