

A photograph of a man and a woman looking at a laptop screen. The man is on the left, wearing a pink shirt, and the woman is on the right, wearing a blue shirt. They are both smiling and appear to be engaged in a collaborative activity. The background is a blurred indoor setting with a window. An orange semi-transparent box is overlaid on the right side of the image, containing the text for the program.

**Master of Science
in Data Science and
Analytics (MSc DSA)**



Strathmore
UNIVERSITY

Introduction

Every day industry executives in both the private and public sectors bemoan the lack of data scientists. CEOs, CIOs, CFOs and COOs need people who theoretically know how to look at the data that their company generate, and delve into it to derive the all-important insights. The demand for these professionals with data skills is increasing alongside the rising investment in data. Companies today realise the value of Data Analytics. As a result, they are looking for skilled people to capture and make sense of it.

Data Science - "Data is the new crude oil, do you have the skills to refine it?"

95% of the world's data has been created in just the past 2 years. Data is the next natural resource and Big Data is becoming the new differentiating factor of production. Faced

with overwhelming amounts of data, organisations are struggling to extract the powerful insights they need to make smarter business decisions. To help uncover the true value of your data, the MSc in Data Science and Analytics is for all professionals looking to harness data in new, innovative ways and make data-driven decisions.

During the course of two years participants will be able take their data analytics skills to the next level as they learn the theory and practice behind recommendation engines, regressions, network and graphical modeling, anomaly detection, hypothesis testing, machine learning, and big data analytics. This program is a collaboration between Strathmore Institute and Mathematical Sciences (SIMS) and @iLabAfrica Research and Innovation Centre.



Who Should Attend?

This programme has been designed for students who have completed a degree in either Statistics, IT, Commerce, Economics or Finance, and technical enthusiasts wishing to further their knowledge of Data Science and Analytics. The programme provides students with a route to high-quality careers in Big Data, Machine Learning, Artificial Intelligence, Data Analytics and Data Science. The programme will supply industry and government entities with a stream of highly trained data experts.

Data science is responsible for discovering insights from massive amounts of structured and unstructured data to help shape or meet specific business needs and goals. The role of Data Science is becoming increasingly important as businesses rely more heavily on big data and Data Analytics to drive decision-making.

If you are interested in being able to:

- Clean, prepare your data for analysis, apply programming to explore and model data.
- Apply analytic techniques to solve development problems in Medicine, Engineering, Finance, Economics, Real Estate and Social Sciences. The types of analytics covered include – Descriptive Analytics, Diagnostic Analytics, Predictive Analytics and Prescriptive Analytics.
- Deploy Machine Learning Algorithms to mine your data.
- Interpret analytical models to make better business decisions, present your findings and impress the audience.

Consider applying for Strathmore University's MSc in Data Science and Analytics today!



Course Content

The course work will cover core areas, such as: Data Mining, Storage and Retrieval, Time Series Analysis and Forecasting, Statistical Inference in Big Data, Applied Machine Learning in Data Science, Text and Unstructured Data Analytics.

Specialisations

The programme offers two specialisations:

- a. **Business Analytics** - This is for students who are interested in learning how to extract/discover/find insights from business data, and those who want to improve processes and outcomes within a business. You will learn how to use software to perform data modelling, data and statistical analysis to construct and develop digital analytics arguments with clearly identifying assumptions and conclusions. Course topics include Business Intelligence and Big Data in Finance and Banking.
- b. **Computational Statistics** - This is for students interested in improving Data Science algorithms and analytics and/or who want to transition into becoming a Data Science researcher. You will learn the details of computational models behind the study of data science and analytics and how to use software modules to statistically model data, transforming them into usable information, and from that information derive insights. Course topics include Optimisation for Data Science and Bayesian Statistics.

Duration

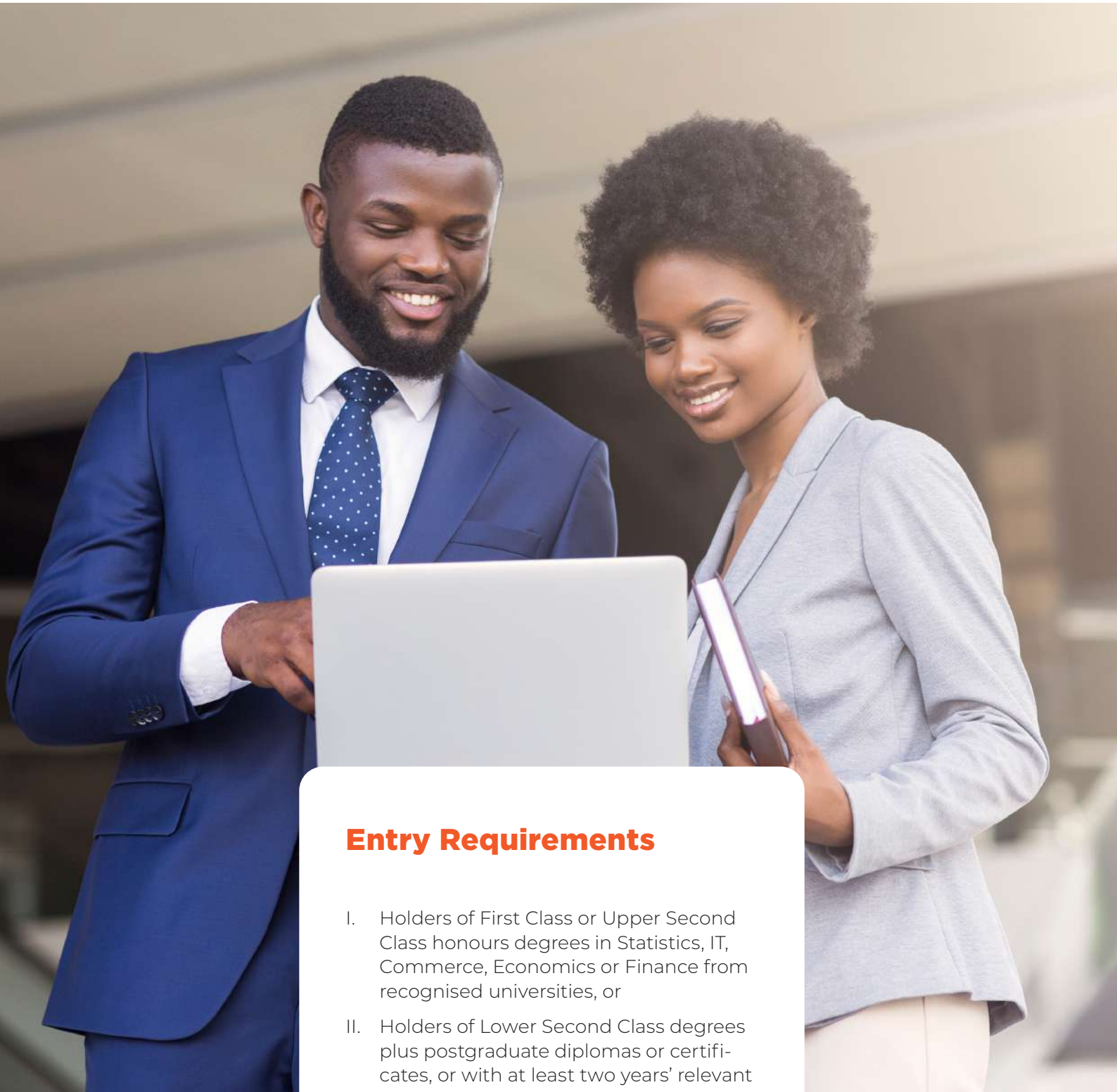
Two (2) Academic Years

Classes will be held Monday to Friday from 5:30 - 8:30 pm EAT.

Mode of Delivery

The course will be a hybrid of both face-to-face sessions as well as video-conferencing. We have made the decision to accommodate the learning both from home and/or on-campus. Classes are organised as five (5) taught modules and a dissertation.





Entry Requirements

- I. Holders of First Class or Upper Second Class honours degrees in Statistics, IT, Commerce, Economics or Finance from recognised universities, or
- II. Holders of Lower Second Class degrees plus postgraduate diplomas or certificates, or with at least two years' relevant experience in the areas above, or
- III. Holders of other related qualifications from recognised universities, considered by the Academic Council as equivalent to the criteria in (i) or (ii).

Applications and Admission Process

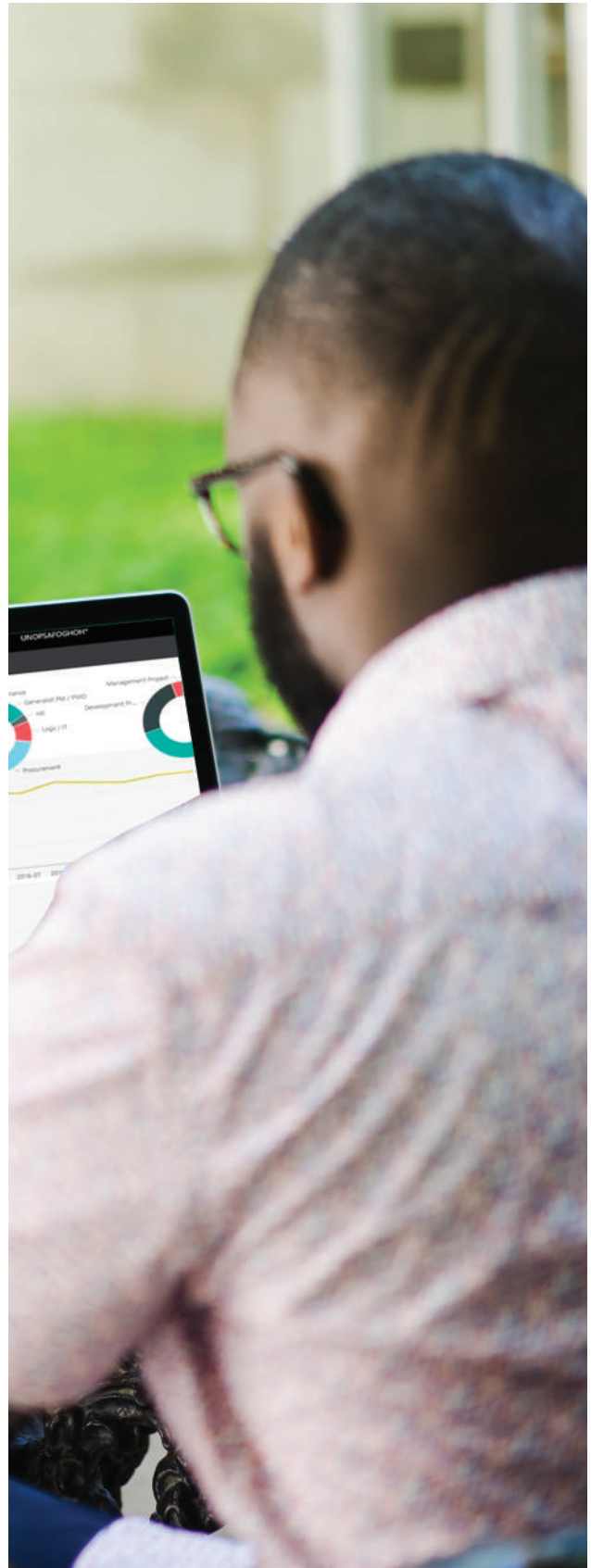
Upon meeting the entry requirements above, the applicant should begin the application process by filling in an online application at; www.strathmore.edu/msc-dsa/

The applicant should upload the following documents

- I. Undergraduate degree certificate and transcript of records (TOR) in English giving full details of subjects studied and grades/marks obtained.
- II. Kenya Certificate of Secondary Education-KCSE certificate (Secondary/High School Certificate or its equivalent).
- III. An updated Curriculum Vitae. Please use the Europass CV template (<http://europass.cedefop.europa.eu>).
- IV. Digital passport photo.
- V. A copy of National Identity Card (ID) or a copy of Passport (bio-data page).
- VI. Interview fee of Ksh 2,500/= (paid through the application portal.)

NB: Upon acceptance into the programme, the above copies and transcripts should be certified by the awarding institution or by an advocate of the high court.

After submission of the application the candidate will be contacted by the University to take the Graduate Entrance Exam (GEE), which can be done in person or online. The GEE consists of English comprehension and grammar, arithmetic as well as an essay. Once the applicant has completed and passed the written exam they will be scheduled for an oral interview.



Why Study in Strathmore University?

- 1. Global exposure/ international outlook:** Strathmore's international faculty and partners, global alumni network and diverse student body connect you with a world of opportunities.
- 2. Academic rigour:** Through our innovative research and learning approach, you will enhance your capacity to manage and solve business challenges.
- 3. People-focused:** We believe that putting people at the center of decisions is essential to sustainable business growth and outstanding business education.
- 4. Teaching staff:** Our dedicated teaching staff are active professionals who will bring you face-to-face with real situations. You will learn through:
 - Innovative teaching.
 - Individualised attention and guidance.
 - Small class groups.
- 5. Timely completion of studies:** Students are assured of completion of an uninterrupted learning period of 2 years.
- 6. World-class facilities:** Strathmore has avant-garde architecture that has been designed and built uniquely and in compliance with energy conservation requirements. This ensures delivery of a rich and holistic learning experience for its students.





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