About Us

Kenya Methodist University(KeMU) is a Chartered Christian University, with the main campus situated in Meru and other campuses at Nairobi, Mombasa and Meru Town Center. KeMU offers PhD, Masters, Degree, Diploma and Certificate programmes. Our market driven courses, industry linkages and opportunities outside classroom provide positive career outcomes for our students in their chosen fields.

At KeMU we place a strong emphasis on a holistic approach to education that fosters character, values, and skills that extend far beyond the lecture hall.

We offer a diverse range of academic programs and extracurricular activities to cater to the unique interests and talents of our students.

Since our founding over 26 years ago, we continue to shape not only intellectually sound students, but also individuals who are truly grounded spiritually and physically, ready to serve our nation and the whole world.

Application Procedure

Application forms are available at all our Main campus-Meru, Nairobi, Mombasa & Meru Town Center.

You can download the application forms from the university website www.kemu.ac.ke

The future is here

KeMU
Kenya Methodist University

Bachelor of Science in Data Science and Machine Learning

About the program

The Bachelor of Science in Data Science and Machine Learning is grounded in a multidisciplinary approach, emphasizing the confluence of mathematical rigor, computational efficiency and domain-specific insights. The learner will gain comprehensive knowledge and proficiency in substantial data analytics, data mining, computational intelligence, machine learning, statistical learning, scalable algorithms and the optimization of expansive databases.

Graduates of this program can explore diverse and promising career trajectories, including but not limited to:

- Data Scientist
- Data Analyst
- Machine Learning Scientist/ Engineer
- Business Intelligence Scientist
- Market Research Analyst

Admission Requirements

i. A mean grade of C+ and above in KCSE with at least grade C plain in English and a C plain in Mathematics or Physics.

ii. Diploma in Information Technology or Diploma in Business Information Technology or Diploma in Computer Information Systems or professional qualifications from an institution recognized by the University Senate.

Mode of Delivery of the Program

The Bachelor of Science in Data Science and Machine Learning is offered on full time, part time and Open and Blended Virtual Learning modes. It will be taught purely in English

Program Learning Outcomes

By the end of this program, the learner will be able to:

1. Articulate comprehensive insights into the applications of data science across a diverse spectrum of data-centric domains.
2. Apply advanced data science technologies adeptly to resolve intricate real- world challenges spanning multiple sectors.
3. Formulate sophisticated data analysis models and undertake independent or collaborative projects with precision.
4. Demonstrate a profound understanding of the ethical codes and professional conduct principles inherent to the field of data science.

Credit Transfer

A course taken in another accredited university or college in the relevant field of study may be considered for not more than 49% credit transfer provided the candidate attained a pass grade in that course.

A learner will not transfer more than half (50%) of the total credits required for graduation.

Total credit hours and course units required for graduation

The program shall be offered in 9 trimesters (3 Academic Years). The minimum total courses for the program are 50.
The minimum total course credit hours required for graduation is 150 hours..

YEAR 1

Trimester 1

Unit Code:	Course Title:	CH
COMM 111:	Communication Skills	3
BUSS 221:	Entrepreneurship	3
THEO 111:	Christian Beliefs	3
BDML 111:	Computer Applications	3
BDML 115:	Probability and Statistics I with R	3
MATH 103:	Calculus I	3

Trimester 2

Unit Code:	Course Title:	CH
BDML 112:	Introduction to Programming I (Python and R)	3
ENVI 201:	Environmental Science	3
BDML 116:	Contemporary Issues in Psychology	3
BDML 117:	Introduction to Database Systems	3
MATH 110:	Linear Algebra	3
BDML 214:	Fundamentals of Data science	3

Trimester 3

Unit Code:	Course Title:	CH
BDML 211:	Database Administration	3
BDML 212:	Programming II (Python and R)	3
MATH 104:	Calculus II	3
MATH 211:	Discrete Mathematics	3
BDML 215:	Introduction to Artificial Intelligence and Machine Learning	3
BDML 216:	Data Science on Cloud	3

YEAR 2

Trimester 1

Unit Code:	Course Title:	CH
HSCI 225:	HIV/AIDS	3
BDML 222:	Advanced Database Systems	3
BDML 223:	Python for Data Science	3
BDML 224:	Multivariate Calculus	3
MATH 230:	Statistics and Probability II with R	3
BDML 225:	Data Mining and Warehousing	3

YEAR 2

Trimester 2

Unit Code:	Course Title:	CH
BDML 311:	Research Methods in Data Science	3
BDML 313:	Web Application Development I	3
BDML 314:	Advanced Techniques in Machine Learning	3
MATH 330:	Operation Research	3
BDML 315:	Statistical Inference for Data Science	3
BDML 316:	Deep Learning and Computer Vision	3

Trimester 3

Unit Code:	Course Title:	CH
BDML 321	Computer Communication Network	3
BDML 322	Applied Research Project I	3
BDML 323	Data Structures and Algorithms	3
BDML 324	Differential Equations with Numerical Methods	3
BDML 325	Applied Statistical Hypothesis Testing	3
BDML 326	Human Psychology and Philosophy	3

YEAR 3

Trimester 1

Unit Code:	Course Title:	CH
BDML 327	Natural Language Processing	3
BDML 411	Web Application Development II	3
BDML 412	Advanced Data Mining and Warehousing	3
BDML 417	Machine Learning Deployment and Monitoring	3
Elective	Elective 1	3
Elective	Elective 2	3

Trimester 2

Unit Code:	Course Title:	CH
BDML 421	Data Governance, Ethics and Law	3
BDML 422	GIS Principles and GEO-spacial data analytics	3
BDML 423	Data Science Project Management	3
BDML 426	Bayesian Inference and Decision Theory	3
Elective	Elective 3	3
Elective	Elective 4	3

Unit Code:	Electives:	CH
BDML 414	Data Protection and Security	3
BDML 415	Statistical Simulation and Modeling	3
BDML 416	Linear Modelling	3
BDML 424	Big Data Analytics and Visualization with Apache Hadoop	3
BDML 425	Time Series Analysis	3

YEAR 3

Trimester 3

Unit Code:	Course Title:	CH
BDML 428	Industrial Attachment	3
BDML 427	Applied Research Project II	3

Scan to apply

Contact Us

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