

School of Digital Sciences, Kerala University of Digital Sciences, Innovation and Technology

The MSc Data Science programme is designed to train data science professionals with real-life problem-solving capabilities. The programme teaches students how to extract insights from real-world data sets, apply cutting-edge tools and analytical methodologies, and interpret and communicate their findings in ways that influence decision support system. The programme offers an interdisciplinary curriculum that includes computer science, statistics, programming and problem-solving skills.

In the AY-2022-23 School of Digital Science is planning to start MSc in Data Analytics which can cater the HR requirements of the industry/academia/research organizations specific to Geospatial, Bio or Medicinal/Agricultural and scientific/engineering disciplines which utilizes high performance computing for problem solving.

This academic year we will start offering following courses

- MSc Data Analytics & Geoinformatics
- MSc Data Analytics & BioAI
- MSc Data Analytics & Computational Science

For all of these courses there will be a bouquet of core and electives courses. The school may update/delete the courses based on the faculty availability and industry/academic requirements. The candidate can select the elective courses from the list of courses offered in that specific semester.

List of courses – Data Analytics (Common to all)

Statistical Thinking

Predictive Analytics

Deep learning

DBMS (RDBMS & NoSQL)

Python Programming

Natural Language Processing & Information retrieval

Big data Technologies

Spatial Data Analytics

Parallel and GPU Computing

Mathematics for Machine Learning

Image and Video analytics

MLOps

Technical Communication and Plagiarism checking

List of Courses – Specific to Geoinformatics

Remote Sensing for Earth Observation

Geospatial Modelling and Analysis

Digital Image Processing

Thermal and Hyperspectral Remote Sensing

Web Mapping and Web GIS

Geospatial Analytics

Microwave Remote Sensing

Python Programming for Geospatial Applications

Thermal and Hyperspectral Remote Sensing

Geospatial Applications for Environmental Management

Geospatial Applications for Hydrological Modelling

Topographic Data Analysis Techniques and Applications

Geospatial Applications in Urban Planning

Geoinformatics Applications in Agriculture

List of Courses – Specific to Computational Science

Differential Equations

Discrete Mathematics

Numerical Methods

Computational Science

Computational Neuroscience

Computational Mathematics

Computational Chemistry
Computational Physics
Computer Aided Drug Design
Optimization techniques
Computational Epidemics
Graph Theory
Computational Fluid Dynamics
Discrete Mathematics
Computational Material Sciences
Computational Thinking
HPC & Cloud Computing

List of Courses Specific to BioAI

Chemical Biology
Bioinformatics and Data Analytics
Data Analytics applications in Genetics & Genomics
Analytics and ML in Biosciences
Analytics and ML in Biotechnology
Analytics and ML in Chemical Biology
Computer Aided Drug Design and AI
AI for Health Care
ML for patient testing & diagnostics
AI for Biomarker discovery
AI in medical imaging
Big Data and Decision Systems for Agriculture
Computer Aided Design of pesticides