



Programme Specifications

B.Sc. (Hons.) Programme

Programme:
Data Sciences and Analytics

Department:
Data Sciences and Analytics

School of Social Sciences
M.S. Ramaiah University of Applied Sciences

Programme Structure
School of Social Sciences
Ramaiah University of Applied Sciences

B.Sc. (Hons.) DATA SCIENCES AND ANALYTICS (3 years (6 semesters) & 4 years (8 semesters))

Semester 1		Semester 2	
CFC 1: Probability & Basic Statistics	(4 credits)	CFC 3	(4 credits)
CFC 2	(4 credits)	CFC 4	(4 credits)
CC1: Linear Algebra	(4 credits)	CC4: Inferential Statistics	(4 credits)
Tutorial	(1 credit)	Tutorial	(1 credit)
CC2: Programming in R Lab	(4 credits)	CC5: Regression Techniques and Time Series Analysis	(4 credits)
Tutorial	(1 credit)	Tutorial	(1 credit)
CC3: Data Visualization	(4 credits)	CC6: Python Programming Lab	(4 credits)
Tutorial	(1 credit)	Tutorial	(1 credit)
AECC 1	(2 credits)	GE 1	(4 credits)
		Tutorial	(1 credit)
		SEC 1	(2 credits)
Semester 3		Semester 4	
CC7: Multivariate Analysis	(4 credits)	CC10: Operations Research & Optimisation Techniques	(4 credits)
Tutorial	(1 credit)	Tutorial	(1 credit)
CC8: Database Management Systems	(4 credits)	CC11: Data Warehousing & Mining	(4 credits)
Tutorial	(1 credit)	Tutorial	(1 credit)
CC9: Data Pre-processing	(4 credits)	CC12: Artificial Intelligence	(4 credits)
Tutorial	(1 credit)	Tutorial	(1 credit)
GE 2		GE 3	
Tutorial	(4 credits)	Tutorial	(4 credits)
AECC 2	(1 credit)	SEC 2	(1 credit)
	(2 credits)		(2 credits)

<p style="text-align: center;">Semester 5</p> <p>CC13: Machine Learning Tutorial (4 credits) (1 credit)</p> <p>CC14: Big Data Tutorial (4 credits) (1 credit)</p> <p><i>DSE: Stream 1</i> 1.1: Deep Learning Tutorial (4 credits) (1 credit)</p> <p><i>DSE: Stream 2</i> 2.1: Introduction to Computational Social Sciences Tutorial (4 credits) (1 credit)</p> <p>One open elective from the School of Social Sciences or the School of Law Tutorial (4 credits) (1 credit)</p>		<p style="text-align: center;">Semester 6</p> <p>CC15: Dissertation/Project Tutorial (5 credits) (1 credit)</p> <p><i>DSE: Stream 1</i> 1.2: Computing for Data Sciences Tutorial (4 credits) (1 credit)</p> <p><i>DSE: Stream 2</i> 2.2: Risk Management Tutorial (4 credits) (1 credit)</p> <p>One open elective from the School of Social Sciences or the School of Law Tutorial (4 credits) (1 credit)</p>	
<p style="text-align: center;">Semester 7</p> <p><i>DSE: Stream 1</i> 1.3: Cloud Computing Tutorial (4 credits) (1 credit)</p> <p>1.4: Computing for Data Sciences Tutorial (4 credits) (1 credit)</p> <p>1.5: Advanced Machine Learning Tutorial (4 credits) (1 credit)</p> <p><i>DSE: Stream 2</i> 2.3: Applied Social Network Analysis with Python Tutorial (4 credits) (1 credit)</p> <p>2.4: Applications in Economics Tutorial (4 credits) (1 credit)</p> <p>2.5: Consumer Behavior Tutorial (4 credits) (1 credit)</p> <p>One open elective from the School of Social Sciences or the School of Law Tutorial (4 credits) (1 credit)</p>		<p style="text-align: center;">Semester 8</p> <p>Capstone Project/Internship (6 credits)</p>	

Note:

CFC: Compulsory Foundation Courses

CC: Core Courses

DSE: Discipline Specific Electives

Dissertation

GE: Generic Electives (non-discipline specific)

AECC: Ability Enhancement Compulsory Courses.

SECC: Skill enhancement Compulsory courses. 2x2 credits: 4 credits

SOPE: School Open Electives (Social Sciences, Law and Management & Commerce)