

UNDERGRADUATE COURSES

Course Title – BCA (Data Analytics)

The department has started BCA(Data Analytics) in the academic year 2020 . The curriculum is designed to meet the present Industry requirements and demands, makes it a popular choice for students because of high possibilities of job opportunity. Fueled by Big Data, AI, IOT and demand for Data Science skills is exponentially growing.

The course aims to equip the students with statistical tools and concepts that help in decision making. The emphasis is on their applications in business environments. It will give not only job opportunities but also a strong foundation to pursue higher studies in this field like M.Sc. (Big Data Analytics).

Duration – 3 years(Compulsory Internship at Industry/industry based project in sixth semester)

Eligibility – A candidate who has passed the two years Pre-University Examination conducted by the Pre-University Education Board in Karnataka or Three years Diploma in Engineering of Government of Karnataka or any other examination considered equivalent thereto shall be eligible for admission. They must have studied mathematics in plus two level.

Program Outcome – Students will be industry ready with following knowledge:

1. Mathematical foundation, statistical and machine learning theories for analytics
2. Programming skills to implement the analytics and machine learning concepts
3. Basic concepts of ethical aspects of data analytics

Syllabus

BCA (Data Analytics)

SUMMARY OF CREDITS

Total hrs in the semester	Credit	Number of hrs per week	Title	Code number
Semester -I				
45	4	4	Probability Theory and Exploratory Statistics	BCADA1120
45	4	4	Mathematics I	BCADA1220
45	4	4	Basics of programming	BCADA1320

45	4	4	Principles and Practices of Data Science	BCADA1420
60	3	4	English I	
60	3	4	Language I	
PRACTICALS				
30	1	2	Quantitative I Lab	BCADA1P1
30	1	2	Data Analytic Lab	BCADA1P2
30	1	2	Programming Lab	BCADA1P3
Total Credits	25			
Semester –II				
45	4	4	Probability Distributions and Statistical Analysis	BCADA2120
45	4	4	Mathematics II	BCADA2220
45	4	4	Python Programming	BCADA2320
45	4	4	Digital Principles and Fundamentals of computing	BCADA2420
60	3	4	English II	
60	3	4	Language II	
PRACTICALS				
30	1	2	Quantitative II Lab	BCADA2P1
30	1	2	Digital Lab	BCADA2P2
30	1	2	Python Programming Lab	BCADA2P3
Total Credit	25			
SEMESTER III				

45	4	4	Multivariate Statistics	BCADA3120
45	4	4	Mathematics III	BCADA3220
45	4	4	DBMS	BCADA3320
45	4	4	Data Warehousing and Data Mining	BCADA3420
60	3	4	English III(communucative English)	
60	3	4	Language III	
PRACTICALS				
30	1	2	DBMS Lab	BCADA3P1
30	1	2	Data Visualization Lab	BCADA3P2
30	1	2	Quantitative III Lab	BCADA3P3
Total credit	25			
SEMESTER IV				
45	4	4	Statistical Forecasting and Inference	BCADA4120
45	4	4	Java Programming	BCADA4220
45	4	4	Abstract algebra and Ordinary Differential of Higher order	BCADA4320
60	3	4	English IV(communucative English)	BCADA4420
60	3	4	Language IV	
30	0	2	Open Elective I	
30	0	2	Open Elective II	

PRACTICALS				
30	1	2	Java Lab	BCADA4P1
30	1	2	Mini Project Lab	BCADA4P2
Total Credit	20			
SEMESTER V				
45	4	4	Machine Learning	BCADA5120
45	4	4	Operations research	BCADA5220
45	4	4	Linux Operating System	BCADA5320
45	4	4	Data communication and networks	BCADA5420
45	4	4	Enabling Data Science	BCADA5520
30	2	2	Ethics in business environment	BCADA5620
PRACTICALS				
30	1	2	Machine Learning Lab	BCADA5P1
30	1	2	Enabling Data Science Lab	BCADA5P2
30	1	2	Linux Lab	BCADA5P3
Total credit	25			
SEMESTER VI				
60	4	4	Cloud computing	BCADA6120
ELECTIVE(ANY ONE)				
60	4	4	AI and Deep learning	BCADADE5P1
60	4	4	IOT	BCADADE5P2
PRACTICAL				
300	14	28	Major Project/Internship	BCADA6220

Total credit	26
Total credit for the course	146