



SGT UNIVERSITY
SHREE GURU GOBIND SINGH TRICENTENARY UNIVERSITY
(UGC Approved) Gurugram, Delhi-NCR
Budhera, Gurugram-Badli Road, Gurugram (Haryana) – 122505 Ph. : 0124-2278183, 2278184, 2278185

Program Guide

**Bachelor of Science (Honours/Honours With
Research) Statistics & Data Science
Batch: 2026 – 2027**

**Department of Mathematics
School of Basic and Applied Sciences
SGT University, Gurugram**

Program Structure:-

Semester	Sr.	Course Code	Course Title	Credits	Total Marks	Course Type
1	1	17200101	Analytics using Excel/ Applied Data Analytics using Excel	3	100	SEC
	2	17200102	Descriptive Statistics	4	100	DSCC
	3	17200103	Calculus and Optimization for Data Science	3	100	DSCC
	4	17200104	Calculus and Optimization for Data Science (Practical)	1	100	DSCC
	5		Minor-I	4	100	Minor
	6		Ability Enhancement Course-I	2	100	AEC
	7		Multidisciplinary Course-I	3	100	MDC
	8		Value Added Course-I	2	100	VAC
Total Credits				22		

Semester	Sr.	Course Code	Course Title	Credits	Total Marks	Course Type
2	1	17200201	Programming with Python for Data Analytics	3	100	SEC
	2	17200202	Probability Theory: Concepts and Applications in Machine Learning	4	100	DSCC
	3	17200203	Differential Equations	3	100	DSCC
	4	17200204	Differential Equations Practical	1	100	DSCC
	5		Minor-II	4	100	Minor
	6		Ability Enhancement Course-II	2	100	AEC
	7		Multidisciplinary Course-II	3	100	MDC
	8		Value Added Course-II	2	100	VAC
Total Credits				22		

Semester	Sr.	Course Code	Course Title	Credits	Total Marks	Course Type
3	1	17200301	R/SQL/Power BI for Data Analysis	3	100	SEC
	2	17200302	Sampling Theory	4	100	DSCC
	3	17200303	Essential Linear Algebra for Machine Learning	4	100	DSCC
	4	17200304	Optimization Techniques	2	100	DSCC
	5		Minor-III	4	100	Minor
	6		Ability Enhancement Course-III	2	100	AEC
	7		Multidisiplinary Course-III	3	100	MDC
Total Credits				22		

Semester	Sr.	Course Code	Course Title	Credits	Total Marks	Course Type
4	1	17200401	Machine Learning	3	100	DSCC
	2	17200402	Machine Learning Practical	1	100	DSCC
	3	17200403	Statistical Quality Control & Demography	4	100	DSCC
	4	17200404	Inferential Statitics	4	100	DSCC
	5		Minor-IV	4	100	Minor
	6		Value Added Course-III	2	100	VAC
	7		Ability Enhancement Course-IV	2	100	AEC
Total Credits				20		

Semester	Sr.	Course Code	Course Title	Credits	Total Marks	Course Type
5	1	17200501	Research Methodology	3	100	SEC
	2	17200502	Discrete Mathematics	4	100	DSCC
	3	17200503	Applied Multivariate Analysis	3	100	DSCC
	4	17200504	Applied Multivariate Analysis Practical	1	100	DSCC
	5	17200505	Time Series Analysis	4	100	Minor
	6	17200506	Time Series Analysis Practical	2	100	AEC
	7		Minor-V	3	100	MDC
	Students will opt 1 Discipline Specific Elective Course of 4 credits (Either Theory or Theory+Practical))					
		17200507	Mobile Application Development	4	100	DSCE
		17200508	Numerical Methods	3	100	DSCE
		17200509	Numerical Methods Practical	1	100	DSCE
		17200510	Design of Experiment	4	100	DSCE
Total Credits				22		

Semester	Sr.	Course Code	Course Title	Credits	Total Marks	Course Type
6	1	17200601	Introduction to LATEX	2	100	SEC
	2	17200602	Reliability & Survival Analysis	3	100	DSCC
	3	17200603	Reliability & Survival Analysis Practical	1	100	DSCC
	4	17200604	Internship/Industrial Training	4	100	DSCC
	5		Minor-VI	4	100	Minor
	Students will opt 1 Discipline Specific Elective Course of 4 credits					
	7	17200605	Introduction to Artificial Intelligence	4	100	DSCE
	8	17200606	Number Theory	4	100	DSCE
		17200607	Business Analytics	4	100	DSCE
		17200608	Operating Systems	4	100	DSCE
Total Credits				22		

Semester	Sr.	Course Code	Course Title	Credits	Total Marks	Course Type
7	1	17200701	Big Data Analytics	4	100	DSCC
	2	17200703	Data Visualization and Modelling	2	100	DSCC
	3	17200704	Data Visualization and Modelling Practical	2	100	DSCC
	4		Minor-VII	4	100	Minor
	Students will opt 2 Discipline Specific Elective Course of 8 credits (Either Theory or Theory+Practical)					
		17200705	Database Management System	4	100	DSCE
	5	17200706	Cryptography	4	100	DSCE
	6	17200707	Introduction to decision modelling	4	100	DSCE
	7	17200708	Introduction of Stochastic Process	4	100	DSCE
	8	17200709	Linear Model & Regression Analysis	4	100	DSCE
Total Credits				20		

Semester	Sr.	Course Code	Course Title	Credits	Total Marks	Course Type
8	Option 1					
		17200801	Econometrics	4	100	DSCC
			Minor-VIII	4	100	DSCC
	Students will opt 3 Discipline Specific Elective Course of 4 credits (Either Theory or Theory+Practical)					
		17200803	Data Mining and Data Warehousing	2	100	DSCE
		17200804	Data Mining and Data Warehousing Practical	2	100	DSCE
		17200805	Deep Learning Techniques	4	100	DSCE
		17200806	Introduction to Financial Mathematics	4	100	DSCE
		17200807	Bayesian Inference	4	100	DSCE

	Option 2					
		17200801	Econometrics	4	100	DSCC
			Minor-VIII	4	100	DSCC
		17200802	Dissertation on Major/Minor / Academic Project/Entrepreneurship	12	100	IACP
Total Credits				20		

Important Related Information		
Total credits required for the degree	168	
Is there provision for Internal Marks Revision	Yes/ No, If yes then Reappear fee has to be paid	Yes
Number of chances for reappear	Fail / re-appear candidate of any semester may appear in the re-appear exams, as an ex-student, during any term end exams of his/her remaining semesters and up to two years after his final semester as per N+2 rule.	
Promotion Criteria	All students shall be promoted to the next semester / year irrespective of the number of papers cleared/passed in the lower semesters.	