

Course Structure of B.Sc. (Mathematics, Statistics, Data Science)

B.Sc. MSDS									
Semester	Nature of the Course	Subject Name	Subject Code	Credit Points	CIA Total Marks	ESE Total Marks	ESE Pass Marks	Total Marks	Pass Marks
I	Mandatory : Language Course -I	English- I	ENG101	4	30	70	28	100	40
	Choice Based: Language course -II *	Second Language- I	ARA101	4	30	70	28	100	40
			FRE101	4	30	70	28	100	40
			HIN101	4	30	70	28	100	40
			SAN101	4	30	70	28	100	40
			TEL101	4	30	70	28	100	40
	Choice Based : Core courses	Mathematics- I: Differential Equations	MAT101	4	30	70	28	100	40
		Mathematics Pr- I: Differential Equations	MAT111	1	15	35	14	50	20
		Statistics- I: Descriptive Statistics and Probability	STA101	4	30	70	28	100	40
		Statistics Pr- I: Descriptive Statistics and Probability	STA111	1	15	35	14	50	20
		Data Science- I: Fundamentals of Information Technology	DSC101	4	30	70	28	100	40
		Data Science Pr- I: Fundamentals of Information Technology	DSC111	1	15	35	14	50	20

	Mandatory: Ability Enhancement Compulsory Course-I	Gender Sensitization	AECC101B	2	15	35	14	50	20
	Choice Based : Skill Oriented Course	Open Elective* : Any one from the List	SOC101	2	15	35	14	50	20
II	Mandatory : Language Course –I	English- II	ENG202	4	30	70	28	100	40
	Choice Based :Language course -II *	Second Language- II	ARA202	4	30	70	28	100	40
			FRE202	4	30	70	28	100	40
			HIN202	4	30	70	28	100	40
			SAN202	4	30	70	28	100	40
			TEL202	4	30	70	28	100	40
	Choice Based : Core courses	Mathematics- II: Differential and Integral Calculus	MAT202	4	30	70	28	100	40
		Mathematics Pr- II: Differential and Integral Calculus	MAT212	1	15	35	14	50	20
		Statistics- II: Probability Distributions	STA202	4	30	70	28	100	40
		Statistics Pr- II: Probability Distributions	STA212	1	15	35	14	50	20
		Data Science- II: Problem Solving and Python Programming	DSC202	4	30	70	28	100	40
		Data Science Pr- II: Problem Solving and Python Programming	DSC212	1	15	35	14	50	20

	Mandatory: Ability Enhancement Compulsory Course-II	Environmental Science	AECC202A	2	15	35	14	50	20
	Choice Based : Co-Curricular Activity	Open Elective* : Any one from the List	CCA601	2	15	35	14	50	20
III	Mandatory : Language Course –I	English- III	ENG303	3	30	70	28	100	40
	Choice Based :Language course -II *	Second Language- III	ARA303	3	30	70	28	100	40
			FRE303	3	30	70	28	100	40
			HIN303	3	30	70	28	100	40
			SAN303	3	30	70	28	100	40
			TEL303	3	30	70	28	100	40
	Choice Based : Core courses	Mathematics- III: Algebra	MAT303	4	30	70	28	100	40
		Mathematics Pr- III: Algebra	MAT313	1	15	35	14	50	20
		Statistics- III: Linear Regression Analysis & Statistical Inference-I	STA303	4	30	70	28	100	40
		Statistics Pr- III: Linear Regression Analysis & Statistical Inference-I	STA313	1	15	35	14	50	20

		Data Science- III: Data Engineering with Python	DSC303	4	30	70	28	100	40
		Data Science Pr- III: Data Engineering with Python	DSC313	1	15	35	14	50	20
	Choice Based : Institutional Specific Skill Enhancement Course-I	Communication Skills	SEC301A	2	15	35	14	50	20
	Choice Based : Department Specific Skill Enhancement Course-I	Open Elective* : Any one from the List	SEC302	2	15	35	14	50	20
IV	Mandatory : Language Course –I	English- IV	ENG404	3	30	70	28	100	40
	Choice Based: Language course -II *	Second Language-IV	ARA404	3	30	70	28	100	40
			FRE404	3	30	70	28	100	40
			HIN404	3	30	70	28	100	40
			SAN404	3	30	70	28	100	40
			TEL404	3	30	70	28	100	40

	Choice Based : Core courses	Mathematics- IV: Real Analysis	MAT404	3	30	70	28	100	40
		Mathematics Pr- IV: Real Analysis	MAT414	3	30	70	28	100	40
		Statistics- IV: Statistical Inference-II	STA404	3	30	70	28	100	40
		Statistics Pr- IV: Statistical Inference-II	STA414	3	30	70	28	100	40
		Data Science- IV: Machine Learning	DSC404	3	30	70	28	100	40
		Data Science Pr- IV: Machine Learning	DSC414	3	30	70	28	100	40
	Choice Based : Institutional Specific Skill Enhancement Course-II	Universal Human Values	SEC403B	2	15	35	14	50	20
	Choice Based :Department Specific Skill Enhancement Course-II	Open Elective* : Second course from the List	SECE404	2	15	35	14	50	20
V	Mandatory : Language Course -I	English- V	ENG505	3	30	70	28	100	40
	Choice Based:	Second Language-V	ARA505	3	30	70	28	100	40

	Language course -II *		FRE505	3	30	70	28	100	40
			HIN505	3	30	70	28	100	40
			SAN505	3	30	70	28	100	40
			TEL505	3	30	70	28	100	40
	Choice Based : Core courses	Mathematics- V: Linear Algebra	MAT505	4	30	70	28	100	40
		Mathematics- Pr- V: Linear Algebra	MAT515	1	15	35	14	50	20
		Statistics- V: Sampling Techniques, Time Series & SQC	STA505	4	30	70	28	100	40
		Statistics Pr- V: Sampling Techniques, Time Series & SQC	STA515	1	15	35	14	50	20
		Data Science- V: Natural Language Processing	DSC505	4	30	70	28	100	40
		Data Science Pr- V: Natural Language Processing	DSC515	1	15	35	14	50	20
	Choice Based : Generic Elective Course	Inter Disciplinary Elective* : Any one from the List	GE501	4	30	70	28	100	40
	Mandatory: Ability Enhancement Compulsory Course-III	Capacity Building	AECC603	2	15	35	14	50	20

VI	Mandatory : Language Course -I	English- VI	ENG606	3	30	70	28	100	40
	Choice Based: Language course -II *	Second Language-VI	ARA606	3	30	70	28	100	40
			FRE606	3	30	70	28	100	40
			HIN606	3	30	70	28	100	40
			SAN606	3	30	70	28	100	40
			TEL606	3	30	70	28	100	40
	Choice Based : Core courses	Mathematics-VI: Numerical Analysis	MAT606	4	30	70	28	100	40
		Mathematics Pr-VI: Numerical Analysis	MAT616	1	15	35	14	50	20
		Statistics-VI: ANOVA, DoE, Vital Statistics & Index Numbers	STA606	4	30	70	28	100	40
		Statistics Pr-VI: ANOVA, DoE, Vital Statistics & Index Numbers	STA616	1	15	35	14	50	20
		Data Science-VI: Deep Learning	DSC606	4	30	70	28	100	40
		Data Science Pr-VI: Deep Learning	DSC616	1	15	35	14	50	20
	Choice Based: Project/ Internship/Core Elective* Any one from the core discipline	Mathematics	DSE607	4	30	70	28	100	40
		Statistics	DSE607	4	30	70	28	100	40
		Data Science	DSE607	4	30	70	28	100	40

