M.Sc. Statistics Course Structure (W.E.F. 2017-18)

M.Sc. (Statistics)-I year (CBCS Pattern)

SEMESTER-I

Sr. No.	Course	Course Title	Theory/ Practical Paper	No. of Credits	Marks@ 25/Credit	Internal Component (50%)	Semester End Component (50%)	Grand Total
STT 01	Core I	Real Analysis	**L/T**	**4**	**100**	**50**	**50**	**100**
STT 02	Core II	Linear Algebra	**L/T**	**4**	**100**	**50**	**50**	**100**
STT 03	Core III	Distribution Theory	**L/T**	**4**	**100**	**50**	**50**	**100**
STT 04	Core IV	Sampling Methods	**L/T**	**4**	**100**	**50**	**50**	**100**
STT 05	Core V	Statistical Computing (R Programming)	**L/T**	**4**	**100**	**50**	**50**	**100**
Elective	Either Select any one Elective fromELE 1 to 7 (Intra/Inter)	ELE-1 Discrete Mathematics-1 (Intra)	**L/T**	**2**	**50**	**25**	**25**	**50**
		ELE- 2 French (Inter)	**L/T**	**2**	**50**	**25**	**25**	**50**
		ELE-3Soft Skill (Inter)	**L/T**	**2**	**50**	**25**	**25**	**50**
		ELE-4 Drama (Inter)	**L/T**	**2**	**50**	**25**	**25**	**50**
		ELE-5 Script Writing (Inter)	**L/T**	**2**	**50**	**25**	**25**	**50**
		ELE-6 Dance (Inter)	**L/T**	**2**	**50**	**25**	**25**	**50**
		ELE-7 Music (Inter)	**L/T**	**2**	**50**	**25**	**25**	**50**
STP 01	Core Practical I	Practical-I (based on STT 01 to 05)	**P**	**3**	**75**	**--**	**75**	**75**
		Total						**625**

SEMESTER-II

Sr. No.	Course	Course Title	Theory/ Practical Paper	No. of Credits	Marks@ 25/Credit	Internal Component (50%)	Semester End Component (50%)	Grand Total
STT 06	Core VI	Probability Theory	**L/T**	**4**	**100**	**50**	**50**	**100**
STT 07	Core VII	Regression Analysis	**L/T**	**4**	**100**	**50**	**50**	**100**
STT 08	Core VIII	Parametric Inference	**L/T**	**4**	**100**	**50**	**50**	**100**
STT 09	Core IX	Calculus	**L/T**	**4**	**100**	**50**	**50**	**100**
STT 10	Core X	Stochastic Processes	**L/T**	**4**	**100**	**50**	**50**	**100**
Elective	Either Select Elective 1(Intra) OR any one among Elective 2 to 6 (Inter)	ELE-1 Discrete Mathematics-2 (Intra)	**L/T**	**2**	**50**	**25**	**25**	**50**
		ELE- 2 French (Inter)	**L/T**	**2**	**50**	**25**	**25**	**50**
		ELE-3Soft Skill (Inter)	**L/T**	**2**	**50**	**25**	**25**	**50**
		ELE-4 Drama (Inter)	**L/T**	**2**	**50**	**25**	**25**	**50**
		ELE-5 Script Writing (Inter)	**L/T**	**2**	**50**	**25**	**25**	**50**
		ELE-6 Dance (Inter)	**L/T**	**2**	**50**	**25**	**25**	**50**
		ELE-7 Music (Inter)	**L/T**	**2**	**50**	**25**	**25**	**50**
STP 02	Core Practical II	Practical-I I (based on STT 06 to 10)	**P**	**3**	**75**	**--**	**75**	**75**
		Total						**625**

M.Sc. (Statistics)-II year (CBCS Pattern)

SEMESTER-III

Sr. No.	Course	Course Title	Theory/ Practical Paper	No. of Credits	Marks@ 25/Credit	Internal Component (50%)	Semester End Component (50%)	Grand Total
STT 11	Core XI	Industrial Statistics	**L/T**	**4**	**100**	**50**	**50**	**100**
STT 12	Core XII	Operations Research-I	**L/T**	**4**	**100**	**50**	**50**	**100**
STT 13	Core XIII	Design of Experiments	**L/T**	**4**	**100**	**50**	**50**	**100**
STT 14	Core XIV	Testing of hypotheses	**L/T**	**4**	**100**	**50**	**50**	**100**
STT 15 (A)/(B) /(C)	Elective Group I	Time Series Analysis/ Decision Theory/Statistical methods in Finance	**L/T**	**4**	**100**	**50**	**50**	**100**
Elective	Either Select any one Elective from ELE 1 to 7 (Intra/Inter)	ELE-1 Discrete Mathematics-1 (Intra)	**L/T**	**2**	**50**	**25**	**25**	**50**
		ELE- 2 French (Inter)	**L/T**	**2**	**50**	**25**	**25**	**50**
		ELE-3Soft Skill (Inter)	**L/T**	**2**	**50**	**25**	**25**	**50**
		ELE-4 Drama (Inter)	**L/T**	**2**	**50**	**25**	**25**	**50**
		ELE-5 Script Writing (Inter)	**L/T**	**2**	**50**	**25**	**25**	**50**
		ELE-6 Dance (Inter)	**L/T**	**2**	**50**	**25**	**25**	**50**
		ELE-7 Music (Inter)	**L/T**	**2**	**50**	**25**	**25**	**50**
STP 03	Core Practical III	Practical-III (based on STT 11 to 15)	**P**	**3**	**75**	**--**	**75**	**75**
		Total						**625**

SEMESTER-IV

Sr. No.	Course	Course Title	Theory/ Practical Paper	No. of Credits	Marks@ 25/Credit	Internal Component (50%)	Semester End Component (50%)	Grand Total
STT 16	Core XV	Asymptotic Inference	**L/T**	**4**	**100**	**50**	**50**	**100**
STT 17	Core XVI	Operations Research-II	**L/T**	**4**	**100**	**50**	**50**	**100**
STT 18	Core XVII	Multivariate Analysis	**L/T**	**4**	**100**	**50**	**50**	**100**
STT 19	Core XVIII	Reliability and Survival Analysis	**L/T**	**4**	**100**	**50**	**50**	**100**
STT 20 (A)/(B) /(C)	Elective Group II	Data Mining Techniques/ Directional Data Analysis/Actuarial Statistics	**L/T**	**4**	**100**	**50**	**50**	**100**
STS 4	Soft Skill	Seminar	**L/T**	**1**	**25**		**25**	**50**
STM 01	Core Project	Project	**P**	**4**	**100**	**--**	**100**	**100**
		Total						**625**

List of Core/ Elective Subjects to be offered

Core Subjects

1. Real Analysis
2. Linear Algebra
3. Distribution Theory
4. Sampling Methods
5. Statistical Computing (R Programming)
6. Practical-I (based on STT 01 and STT 05)
7. Elective: Soft Skill-I (any one)
8. Probability Theory
9. Regression Analysis
10. Parametric Inference
11. Calculus
12. Stochastic Processes
13. Practical-II (based on STT 07 to STT 10)
14. Elective: Soft Skill-II (any one)
15. Industrial Statistics
16. Operations Research-I
17. Design of Experiments
18. Testing of hypotheses
19. Practical-V (based on STT 11 to STT 15)
20. Elective: Soft Skill-III (any one)
21. Asymptotic Inference
22. Operations Research-II
23. Multivariate Analysis
24. Reliability and Survival Analysis
25. Project (carrying 100 marks)
26. Soft Skill-IV (Seminar)

Elective Subjects

Elective Group I (Any one for Third Semester)

1. Time Series Analysis
2. Decision Theory
3. Statistical Methods in Finance

Elective Group II (Any one for Fourth Semester)

1. Data Mining Techniques
2. Directional Data Analysis
3. Actuarial Statistics

NOTE:

- Each semester will have five Theory papers and each theory paper will be of 100 Marks [50 External Exam+ 50 Internal Exam (02 tests each of 15 Marks+20 Marks for Class performance].
- First Three semester Soft Skill course (Elective) will be of 50 marks [25 Internal Exam+ 25 External Exam].

- Fourth semester Skill course (Seminar) will be of 25 marks [25 External Exam].
- All the Practical, Soft Skill and Seminar courses are compulsory to all the students.
- Each semester is of 625 marks.
- Total marks for I sem+ II sem+ III sem + IV sem = 2500.
- Total degree is of 2500 Marks, converted in the form of 100 credits CBCS system.
- One credit is of 25 marks.
- Minimum 40% Marks are required for passing in each of the above head i.e. separate passing in External Exam and that in Internal Exam.
- Project/ Practical will be evaluated by one external examiner and one internal examiner.
- Project work will commence from 3rd semester. (i)Project carrying 75 marks which is to be given at the beginning of Semester-III and evaluated at the end of Semester-IV.
- Project batch is of minimum 02 and maximum 04 students.
- In paper STT-05 i.e. in Statistical Computing EDA using R software will be taken.
- In STT-12 and STT-17 papers i.e. Operations Research I & II TORA software and Solver tool pack will be used for practical purpose.