FATIMA COLLEGE (AUTONOMOUS)

Re-Accredited with "A" Grade by NAAC (3rd Cycle)
74th Rank in India Ranking 2020 (NIRF) by MHRD
Maryland, Madurai- 625 018, Tamil Nadu, India

NAME OF THE DEPARTMENT : STATISTICS

NAME OF THE PROGRAMME : B.Sc. STATISTICS

PROGRAMME CODE : USST

ACADEMIC YEAR : 2020 - 2021

Minutes of the annual upgradation of Syllabus meeting in Statistics held on 28.02.2020 at 10.30 am.

The following members were Present in the meeting.

1. Dr. T. Asir, Assistant Professor, Department of Mathematics, Directorate of Distance Education, Madurai Kamaraj University, Madurai.
2. Dr. R. Muthukrishnan, Professor, Department of Statistics, Bharathiar University, Coimbatore.
3. Dr. A. Kachi Mohideen, Assistant Professor, Department of Statistics, Periyar E.V.R College. Trichy.
4. Ms. A. Roshini, I M.Sc. Statistics, The Madura College, Madurai.
5. Dr. E. Helena, Asst. Professor & Head Department of Mathematics, Fatima College.
6. Dr. R. Srija, Asst. Professor, Department of Statistics, Fatima College.
7. Mrs. K. Bhuvaneswari, Asst. Professor, Department of Statistics, Fatima College
8. Ms. K. Saranya, Asst Professor, Department of Statistics
9. Ms. K. Mano, Asst. Professor, Department of Statistics.
10. Ms. A. Mable Jasmine Shoba, Dean of Academic affairs (SF).

The board reviewed the syllabi for I UG (I & II Semester), II UG (III & IV Semester) and III UG (V & VI Semester) and gave Consent for self study Component in all the Courses.

As Proposed last Year, the action was taken to incorporate Mooc Courses (atleast 2 Credits) from SWAYAM Portal (NPTEL/UGC/CEC) during the V Semester in the Category of Mathematical Sciences.

Also Self learning Courses for advanced learners is introduced.

19UGSLST1 - Official Statistics
19UGSLST2 - Bio Statistics
19UGSLST3 - Data Analytics with Python

The following changes of titles were also Carried out.

19ST1CC1 - Descriptive Statistics I is changed to Basic Statistics

19ST2CC3 - Descriptive Statistics II is changed as Descriptive Statistics

19ST4CC7 - Statistical Inference I is changed as Estimation theory

19ST5CC10 - Statistical Inference II is changed as Testing of Hypotheses.

1. Dr. T. Asir — 28/2/2020.

2. Dr. R. Muthukrishnan — 28/02/2020

3. Dr. A. Kachi Mohideen — 28/2/2020

4. Ms. A. Roshni — A. Roshni 28/02/2020

5. Dr. E. Helena — 28/2

6 Dr. R. Srija — 28/2/2020

7. Mrs. K. Bhuvaneswari — 28/02/2020

8. Ms. K. Mano — 28/2/2020

9. Ms. K. Saranya

10. Ms. A Mable Jasmine Shoba — A. Mable Jasmine Shoba

28/02/2020

FATIMA COLLEGE (AUTONOMOUS), MADURAI-18

DEPARTMENT OF STATISTICS

For those who joined in June 2019 onwards

Sem	Sub.Code	Title of the Paper	Hr	Cr	Int A	Ext B	Total A+B
I	19ST1CC1	Descriptive Statistics - I	6	4	40	60	100
	19ST1CC2	Probability Theory	6	4	40	60	100
	19ST1AC1	Calculus	5	5	40	60	100
	19ST1NME	Fundamentals of Statistics	2	2	40	60	100
II	19ST2CC3	Descriptive Statistics - II	6	4	40	60	100
	19ST2CC4	Distribution Theory - I	6	4	40	60	100
	19ST2AC2	Algebra	5	5	40	60	100
	19ST2NME	Fundamentals of Statistics	2	2	40	60	100
III	19ST3CC5	Distribution Theory II	5	4	25	75	100
	19ST3CC6	Sampling Theory	5	4	25	75	100
	19ST3AC3	Linear Programming	5	5	25	75	100
	19ST3SB1	Practical Statistics I	2	2	50	50	100
IV	19ST4CC7	Statistical Inference - I	5	4	25	75	100
	19ST4CC8	Applied Statistics	5	4	25	75	100
	19ST4AC4	Linear Algebra	5	5	25	75	100
	19ST4SB2	Practical Statistics - II	2	2	50	50	100
V	ST5CC9	Statistical Inference - II	6	6	25	75	100
	ST5CC10	Design of Experiments	6	6	25	75	100
	ST5CC11	Computer Programming with C	6	5	25	75	100
	ST5CCP1	C Practicals	2	2	40	60	100
	ST5ME1	Real Analysis	6	6	25	75	100
	ST5ME2	Multivariate Analysis	6	6	25	75	100
	ST5SB3	Practical Statistics - III	2	2	50	50	100
	ST5SB4	Statistical Software - SPSS	2	2	50	50	100

VI	ST6CC12	Statistical Quality Control	5	5	25	75	100
	ST6CC13	Stochastic Processes	6	5	25	75	100
	ST6CC14	Operations Research	5	5	25	75	100
	ST6ME3	Actuarial Statistics	5	5	25	75	100
	ST6ME4	Regression Analysis	5	5	25	75	100
	ST6ME5	Numerical Methods	5	5	25	75	100
	ST6ME6	Industrial Statistics	5	5	25	75	100
	ST6SB5	Practical Statistics - IV	2	2	50	50	100
	ST6SB6	Statistical Software -R	2	2	50	50	100

EXTRA CREDIT COURSE

Course Code	Courses	Hrs.	Credits	Semester in which the course is offered	CIA Mks	ESE Mks	Total Marks
19UGSLST1	**SELF LEARNING COURSE for ADVANCED LEARNERS (offered for III UG)** **Official Statistics**	-		V & VI	40	60	100
19UGSLST2	**Biostatistics**						

III B.Sc STATISTICS

For those who joined in 2019 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
USST	19UGSLST1	Official Statistics	Self Study	-	

COURSE DESCRIPTION

This paper gives an idea about various methods in which Statistics are being collected in different sectors Goal :

COURSE OBJECTIVES

To enable the students to understand how the statistics are collected, recorded and published

UNIT –I OFFICIAL STATISTICS

Official Statistics: Definition – Growth of Indian Statistics – Statistical organizations of India: Central Statistical Organisation (CSO) – Divisions of Central Statistical Organisation – Functions – Publications.

UNIT – II SURVEY ORGANISATION

National Sample Survey Organisation (NSSO) – Divisions of NSSO – Functions of NSSO – Procedure for collection of information – Agriculture Statistics, Yield Statistics – Official series: Traditional method, Random Sampling Method – NSS Series – Forest Statistics, Fisheries Statistics – Defects in agricultural Statistics.

UNIT – III NATIONAL INCOME

National income: Definition – Methods of estimating national income: The Income method, the Output method and the Expenditure method – Uses of National income estimates – Difficulties of estimation.

UNIT – IV SOCIAL ACCOUNTING

Social accounting – Population statistics – Sources – Different methods of collecting population census – Methods of enumeration – Merits and demerits of De Facto method, Merits and demerits of the De Jure system.

UNIT – V PRICE STATISTICS

Price Statistics: Wholesale prices, Retail prices, Uses and limitations of price statistics. Industrial Statistics: Main Sources of industrial Statistics – Limitations.

TEXT BOOK:

R.S.N. Pillai and V. Bagavathi (1995), Statistics, Third Edition, S. Chand & Company, New Delhi – 110 055.

REFERENCES:

1. Central Statistical Organization (2011), Statistical Systems in India, Department of Statistics, Ministry of Planning, New Delhi.
2. Goon, A.M. Gupta, M.K and Das Gupta, B.(1986), Fundamentals of Statistics, Volume II, The World Press Private Limited, Calcutta.

On successful completion of this course a student will have a knowledge about the statistical organizations, NSSO etc and the methods of collecting and recording statistic

III B.Sc STATISTICS

For those who joined in 2019 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
USST	19UGSLST2	Bio Statistics	Self Study	-	

COURSE DESCRIPTION

This course covers the basic tools for the collection, analysis and presentation of data in all areas of public health.

COURSE OBJECTIVES

To enable the students describe the roles of biostatistics serves in public health and biomedical research

UNIT –I STUDY DESIGN

Introduction to study designs – Different types of observational studies – Experimental studies, Epidemiology – Odds – Odds ratio – Confidence interval for odds ratio – Relative risk

UNIT – II CHI-SQUARE TEST

Chi-Square test: Diagnostic Procedures with Threshold model. Measuring the accuracy of diagnosis – Sensitivity, Specificity, ROC curve.

UNIT – III CLINICAL TRAILS

Clinical Trials: Introduction – Different Phases of Clinical Trials - Purpose – Duration Cost - Drug Regulatory Bodies

UNIT – IV SURVIVAL DISTRIBUTIONS

Survival Time, Survival Distributions- Hazard Function- Exponential – Gamma – Type I and Type II Censoring, Progressive Censoring – Estimation of Parameters with Numerical Examples.

UNIT – V

Estimating Survival Function and Variance using Kaplan Meier Method – Comparison of Survival Distribution – Log Rank Test for Comparing Two Groups

TEXT BOOK:

1. Dawson, Beth & Robert, G (2001) ; Basic & Clinical Biostatistics,

Mcgraw-Hill

2. Ellisa T.Lee (1992): Statistical Methods For Survival Data Analysis
3. Friedman, L.M, Forbes, C.D, And Demats, D.L(TT): Fundamental of Clinical Trials, Springer.

REFERENCES:

1. David G. Kleinbawn (1996): Survival Analysis, Springer.
2. Mathews, J.N.S. (2006): Introducing To Randomized Controlled Clinical Trials, Chapman and Hall.
3. Steven Diantadosi (2000): Clinical Trials – A Methodological Perspective, John Willey.
4. Stephan Sann (2000) : Statistical Issues In Drug Development, John Wiley

HOD's Signature

Dr. E. Helena
Head & Assistant Professor
Department of Mathematics (SF)