



BHARATHIDASAN UNIVERSITY

Tiruchirappalli - 620 024, India

DEPARTMENT OF

STATISTICS

Faculty Members

Dr. A TAMILSELVAN
Professor & Head

Mrs. M RAMYA
Guest Lecturer

MS. SUNANDITA GHOSH
Guest Lecturer

MS. V NITHYA
Guest Lecturer

MS. G KOWSALYA
Guest Lecturer

Preface

The Department of Statistics is created in Bharathidasan University from the academic year 2011-2012. The mission of the Department is to provide an opportunity for students to enhance their ability to apply statistics in a wide range of fields of application. The vision of the Department is to produce committed, competent, efficient and professionally capable post graduates in theoretical and real time domain of statistics such as Statistical Analyst, Data analyst, Data Scientist, Big Data Analyst, financial analyst, Quality Analyst, Product Testing, Sample Surveys, Clinical Trials in Medicine, Nursing, Bio-Statistics, Environmental Studies, Consulting, Econometrics, Information Technologies, Education, Social Sciences and Engineering for research and extension. The Department also assures to render software competency and handling skills for real time problem in emerging fields like Data Science.

Our Department is focussed to deliver the subject contents included in Central Government Departments like Indian Statistical Service (ISS), IFS, Class-I Services, Statistical Officer at various levels in Central Statistical Organization (CSO), Statistical Officer, Project Associates at various levels in National Sample Survey Organization (NSSO), Assistant Director of Statistics (Planning Commission), Insurance Companies (Vital Statistics) and Statistical Investigator and State Government Departments like Assistant Director of Statistics, District Statistical Officer, Assistant Statistical Investigator, Statistical Inspector, Statistical Assistant and Block Development Statistical Investigator, Public and Private Sector , Industries , Organizations like NIMHANS, NIRT along with Actuarist and policy developers in Indian and foreign Banks.

DR. A TAMILSELVAN

Professor and Head

Objectives:

- To enrich the post graduate students with technical skills used in data science, data analytics through projects including big data.
- To enhance with the skills of creating taxonomy of cognitive domain in Statistics (Knowledge, Comprehension, Application, Analysis, Synthesis, evaluation)
- To stimulate with self learning skills that helps them in research work in future and also to perform in NET, SLET, GATE.
- To groom up with the present and advanced analytical skills that help them to be an entrepreneur or advisor in Data analytics and Predictive Modeler domain.
- To utilize their statistical skills, computation and comprehensive knowledge in other disciplinary courses and projects.
- To increase their competency and perform well in State government and Central government jobs for statistics like ISS, UPSC.
- To synthesize their statistical expertise in Medical research, Finance and can work as a prominent part in the medical survey, research analytics.
- To incorporate with the knowledge of data impurity and handling them with statistical techniques and well known with the automation of building a new statistical model with the criteria, assumptions and appropriateness

Vision and Mission

- To conduct technically enriched Master programmes demonstrating Applications of Statistics in emerging world of Data Science
- To motivate the students towards advanced research in different areas of Statistics like predictive modeling in Big data, Quality control and Financial modeling.

Conferences/Workshops/Seminars Organized

S. No.	Conferences/Workshops/Seminars	Period
1.	One Day International Symposium on Various Techniques in Mathematical Statistics and Its Applications (ISVTMSIA-2015).	February 28, 2015
2.	One Day Symposium on “ Research and Data Analysis with Statistical Advanced Tools ”	March 28, 2017

Programmes offered

1. M. Sc. <Statistics>

Program objectives

The objectives of **M. Sc. Statistics** programme are:

- To motivate towards the world of data science with a special note in Decision theory, machine learning .
- To deliver the fundamental framework of the Statistical ideas that are required for NET/ SLET exam /GATE.
- To integrate the intrinsic ideas of preliminary and advanced distributions in the viewpoint of NET/SLET, ISS, UPSC examination.
- To convey some extended concepts in sampling to encourage the students in industrial and research aspects.
- To build and simulate the advanced models and skills to implement in real time scenarios and research works

Eligibility

A candidate who has passed the following any one degrees or an examination of any other University accepted by the Syndicate of Bharathidasan University as equivalent to the B.Sc. degree examination of Bharathidasan University may be permitted to qualify for the M.Sc. Degree in Statistics (with Computer Applications) by undergoing courses and appearing for the examinations of this Department.

- B.Sc. Statistics
- B.Sc. Mathematics
- B.C.A in computer Applications(provided including Mathematics/Statistics as a subject in higher secondary and graduation
- B.Sc. in computer Applications(provided including Mathematics/Statistics as a subject in higher secondary and graduation.
- B.Sc. (with Mathematics or Statistics as one of the subjects)

Selection Procedure

Selection will be made on the basis of merit list and a technical interview prepared by the Department.

Awards Received by students/scholars

Year	Name of the Awarded Students	National Awards	
		Name of the Award	Awarding Institution
2014	Ms. M Sheyamaladevi	DST -PURSE	DST

M.a./M. Sc. Gold Medalists	
Name	Year of passing
Ms. K. Packiyalakshmi	2017
Ms. B. Muthu Priya	2018

Facilities

Internet and Software Facilitated Statistical Computing Laboratory



Conferences, Seminars and Workshop Organised

One Day Symposium on “**Research and Data Analysis with Statistical Advanced Tools**”
On **28.03.2017**

One Day **International Symposium on Various Techniques in Mathematical Statistics and Its Applications** (ISVTMSIA-2015). on **28.02.2015**

Contact us

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Appendix III

**Department of Statistics
Curriculum Structure
M.Sc. Statistics-2017-2018
New Syllabus
List of Subjects with codes
Total Credits-90**

Internal marks-25 External marks-75

Semester		Total
I	5 Core Courses	24
II	4Core courses 1 Department Elective Course	23
III	3Core Courses 1 Department Elective Course 1 University Elective Course	21
IV	2Core Course 2 Department Elective Course 1 Project	22

Department of Statistics
M.Sc. Statistics
Syllabus 2017-2018

List of Core / Department Elective / University Elective Courses to be offered
CORE COURSES (CC)

Code	Title of the Course	Lecture Hours	Tutorial Hours	Practical Hours	Credits
17SCA01CC	Probability and Measure Theory	4	2	0	5
17SCA02CC	Distribution Theory	4	2	0	5
17SCA03CC	Sampling Theory	4	2	0	5
17SCA04CC	Advanced Operations Research	4	2	0	5
17SCA05CCP	Statistical computing in C Programming &MySQL	4	0	2	4
17SCA06CC	Statistical Inference-I	4	2	0	5
17SCA07CC	Statistical Inference-II	4	2	0	5
17SCA08CC	Statistical Quality Control	4	2	0	5
17SCA09CCP	Statistical Computing in SPSS-Practical-II	4	0	2	4
17SCA10CC	Multivariate Analysis	4	2	0	5
17SCA11CC	Stochastic Processes and Time Series Analysis	4	2	0	5
17SCA12CCP	Data Science using R Programming	4	0	2	4
17SCA13CC	Applied Regression Analysis	4	2	0	5
17SCA14CCP	Data Analysis using Python Programming	4	0	2	4
17SCA15PRO	Project/Dissertation	4	2	0	5
17SCA16CC	Mathematical Methods for Statistics	4	2	0	5
17SCA17CC	Data Mining	4	2	0	5

DEPARTMENT ELECTIVE COURSES (DEC) for internal students

Code	Title of the Course	Lecture Hours	Tutorial Hours	Practical Hours	Credits
17SCA01DEC	Linear Models and Design of Experiments	4	2	0	4
17SCA02DEC	Demography and Econometrics	4	2	0	4
17SCA03DEC	Survival Analysis and Reliability Theory	4	2	0	4
17SCA04DEC	Actuarial Statistics	4	2	0	4
17SCA05DEC	Statistical Genetics	4	2	0	4

UNIVERSITY ELECTIVE COURSES (UEC) for Other department students

Code	Title of the Course	Lecture Hours	Tutorial Hours	Practical Hours	Credits
17SCA01UEC	Econometrics	2	1	0	3
17SCA02UEC	Bio-Statistics	2	1	0	3
17SCA03UEC	Industrial Statistics	2	1	0	3
17ST01UEC	Basic Statistical Tools in Data Analysis	2	1	0	3

VALUE ADDED COURSES (VAC)

Code	Title of the Course	Lecture Hours	Tutorial Hours	Practical Hours	Credits
17ST01VAC	Decision Theory and Machine Learning	2	1	0	2
17ST02VAC	Minor project in Data Science	2	1	0	2