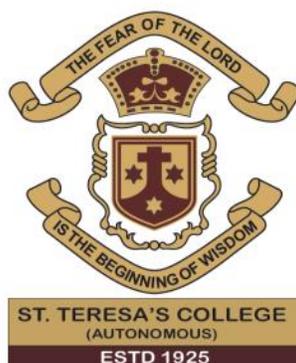


**ST. TERESA'S COLLEGE
(AUTONOMOUS)
ERNAKULAM**

(Affiliated to Mahatma Gandhi University, Kottayam)



**SYLLABI FOR
COMPLEMENTARY COURSES (STATISTICS)
FOR
BACHELOR'S PROGRAMMES IN
MATHEMATICS, PHYSICS, SOCIOLOGY,
PSYCHOLOGY, BCA AND
B.Voc.(SOFTWARE DEVELOPMENT)
AND
CORE COURSES (STATISTICS) FOR
B.Sc. COMPUTER APPLICATIONS**

Under Choice Based Credit & Semester System

(2018 Admission Onwards)

ST. TERESA'S COLLEGE (AUTONOMOUS), ERNAKULAM

Board of Studies in Statistics

Sl. No.	Name	Official Address	Designation
1	Dr .Hitha N	Associate Professor and Head, Department of Statistics, Maharaja's College (Autonomous), Ernakulam	Chairperson
2	Dr. Angel Mathew	Assistant Professor, Department of Statistics, Maharaja's College (Autonomous), Ernakulam	Subject Expert
3	Smt. Betty Joseph	Associate Professor and Head, Department of Statistics, St. Teresa's College (Autonomous), Ernakulam	Member
4	Smt. Shanty B.P.	Assistant Professor, Department of Statistics, St. Teresa's College (Autonomous), Ernakulam	Member
5	Ms. Anju N.B.	Guest Faculty, Department of Statistics, St. Teresa's College (Autonomous), Ernakulam	Member
6	Smt. Laya Joseph M.	Assistant Professor (Statistics), Department of Computer Applications, St. Teresa's College (Autonomous), Ernakulam	Member
7	Smt. Veena G.	Assistant Professor (Statistics), Department of Psychology, St. Teresa's College (Autonomous), Ernakulam	Member

Preface

As an autonomous college under Mahatma Gandhi University, St. Teresa's College has taken conscientious efforts to strengthen the curriculum by retaining all the fundamental stipulations of the University/Higher Education Council, to ensure a well-balanced Curriculum. Within the constraints of a prescribed syllabus, we have resolved to take a collective effort to create an inspiring academic culture in the institution, essential for teachers and students to access deeper knowledge and participate in its expansion and transmission. It is also to re-articulate the almost lost or forgotten fact that production and transmission of Quality Knowledge, essential for the development of students in particular and society in general, are the primary functions of any Educational Institution.

The Syllabus restructuring of 2018 aims to provide the students many opportunities to engage with authentic, real world learning. This has been evident through the significant number of new Programmes introduced at the wake of autonomy in 2014 with their integral placement opportunities. Increasingly, however, opportunities for engagement in work-based learning that can be provided through the curriculum across a range of subject areas are creating new and exciting ways to support student learning.

I acknowledge the efforts taken by the teachers in developing Programme and Course outcomes that focus on cognitive and intellectual skills of the learners ,confidence to carry out independent and scholarly research in area of professional interest to them and to position themselves globally effective cross- cultural educators .

I congratulate the efforts taken by the Principal Dr. Sajimol Augustine M. and the team for restructuring the syllabi under the leadership of Smt. Shanty B.P in a meaningful manner. Transformation is what makes St. Teresa's distinctive. Transforming lives in order to make a real impact on the local and international stage through the creation, sharing and application of knowledge. We look forward to sharing with you the outcomes of our curriculum restructuring and these resources we hope will enable you to reflect on learning gain in our own institution.

Dr. Sr. Vinitha (Dr. Celine E)

Director

Foreword

Autonomy in the field of higher education implies responsibility and accountability and this in turn leads to excellence in academics and pro active governance. St Teresa's College was given autonomous status in the year 2014 and we have made a concerted attempt to maintain a high level of quality in the standard of education that we impart.

Academic autonomy has granted us the freedom to fine tune the syllabus keeping in mind the changing needs of the new generation of students. Education in the current scenario throws up a multitude of challenges and the curricula and syllabi ought to reflect the paradigm shift that has occurred in the various disciplines. Structured feedback was taken from the Students, Alumni and the experts from the industry and the changes suggested by them were duly incorporated in the syllabi.

The Board of Studies constituted for each department meet regularly in the stipulated time frame and in depth discussions are conducted about the different dimensions of the curricula and syllabi. The IQAC team has felicitated the conduct of a number of workshops and conferences to equip the faculty with the necessary skill set to frame the syllabi, set question papers for internal tests that evaluate whether the learning outcomes enlisted in the syllabus have been achieved and to ensure the fair and transparent conduct of examinations.

The responsibility that autonomy has placed on us is indeed onerous but we have strived together to meet all the challenges that were placed in our way. We have worked towards moulding young women as responsible citizens who will carry forward the task of nation building in an exemplary manner. All effort has been made to nurture their academic ambitions as well as their skills in co curricular activities.

With sincere gratitude I acknowledge the instinct support and constant guidance extended by Rev. Sr. Dr. Vinitha, the Director of the College.

I specially thank the team headed by Smt. Shanty B. P. for updating the syllabi, the Heads of the Departments and all the faculty members for their diligence, commitment and exceptional contribution towards this endeavour.

Dr. Sajimol Augustine M.

PRINCIPAL

ACKNOWLEDGEMENT

I remember with gratitude all the guidance and help given by our Director, Rev. Dr. Sr. Vinitha and Principal, Dr. Sajimol Augustine M.

I also remember and acknowledge with gratitude all the members of the Board of Studies (Statistics) for their constructive suggestions and contributions in restructuring the syllabi of all the courses in Statistics. I wish to express my sincere thanks for guidance of Dr. Jogy Alex Associate Professor, Department of Chemistry, St. Thomas College, Pala in giving shape to the overall structure. I am also grateful to all the members of the Curriculum Committee of the college for their guidance during the syllabus restructuring process.

Betty Joseph
Associate Professor & Head,
Department of Statistics

CONTENTS

	Page Number
1. Preamble	1
2. Graduate Attributes	2
3. Objectives	3
4. Course Code Format	4
5. Scheme of Complementary Courses in Statistics	5
6. Examinations	7
7. Syllabus and Blue Print of Question Paper	
(i) Complementary Statistics for Mathematics, Physics & BCA and Core for Computer Applications I	10
(ii) Complementary Statistics for Mathematics & Physics and Core for Computer Applications II	14
(iii) Complementary Statistics for Mathematics & Physics and Core for Computer Applications III	18
(iv) Complementary Statistics for Mathematics & Physics and Core for Computer Applications IV	22
(v) Complementary Statistics for Sociology I	27
(vi) Complementary Statistics for Sociology II	31
(vii) Core Course for Computer Applications (Semester IV)	35
(viii) Core Course for Computer Applications (Semester V)	37
(ix) Core Course for Computer Applications (Semester VI)	42
(x) Complementary Statistics for Psychology I	44
(xi) Complementary Statistics for Psychology II	48
(xii) Complementary Statistics for Psychology III	50
(xiii) Complementary Statistics for Psychology IV	52
(xiv) Complementary Statistics for B. Voc. (Software Development)	54