



CRITERION I - CURRICULAR ASPECTS

1.3 Curriculum Enrichment

1.3.2 Certificate Courses/Value-added Courses

Value added Courses

**Department of Mathematics
2022-2023**

Brochure

- 1. Data Analysis Using SPSS**
- 2. Certificate Course on Scientific Documentation (LATEX)**
- 3. C- Programming Laboratory Course**
- 4. Certificate Course on MATLAB**
- 5. Basics Techniques in Spread Sheet.**



GOVERNMENT COLLEGE FOR WOMEN (AUTONOMOUS)
(Affiliated to Bharathidasan University)
KUMBAKONAM – 612 001. TAMILNADU



VALUE ADDED COURSE
DATA ANALYSIS USING SPSS
DEPARTMENT OF MATHEMATICS

Learning Objectives

1. To introduce the basic concepts in Statistics
2. To develop data reduction techniques.
3. To introduce the mathematical concepts required to learn theoretical statistics

Course Learning Outcomes:

1. Students' familiarity with the tool box of statistical software.
2. Capacitating students in analyzing complex information with the help of statistical.
3. software – Statistical Package for Social Sciences (SPSS).
4. A strong theoretical and empirical foundation in statistical analysis

Duration: 30 Hours

Registration Fee: Rs. 25/-

Course Co-ordinator: Mrs.K.KARPAGAM,
Guest lecturer in Mathematics.



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ABOUT THE COLLEGE

Government college for women (A) , Kumbakonam founded on 1963 and is one of the second women college in Tamil Nadu. The college has been accredited by National Assessment and Accreditation Council (NAAC) with B grade.

ABOUT THE DEPARTMENT

The department of Mathematics is one the oldest department in the college. The Undergraduate Programme was started in the year 1967 and Postgraduate started in the year 2003. The Department got recognition for guiding scholars for Ph.D. in 2013.

VISION OF THE DEPARTMENT

To inculcate a keen interest in learning Mathematics, acquiring skills in carrying out tasks systematically with perseverance and precision. Motivating towards research, inspiring to lead a life with scientific approach and promote the standard of personal and societal living. The Department activated various interdisciplinary workshops, quiz competitions so as to enrich the knowledge of the students.

ABOUT THE COURSE

SPSS is a powerful software tool for conducting various types of data analysis and interpretation. Whether you are doing a research project, a business report, or a personal inquiry, you can use SPSS to organize, manipulate, and visualize your data, and to test your hypotheses and draw conclusions. In this course, you will learn how to use SPSS for data analysis and interpretation, to represent a learning activity that has a defined, unique set of target skills delivered through specific course content and methodology. Learning paths provide an organized, role-based set of prescriptive learning experience to prepare for a specialty or certification.



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VALUE ADDED COURSE

CERTIFICATE COURSE ON SCIENTIFIC DOCUMENTATION (LATEX)

DEPARTMENT OF MATHEMATICS

Learning Objectives

1. Format words, lines and paragraphs, design pages, create lists, tables, references and figures in LATEX.
2. To handle more complicated parts of typesetting such as inputting mathematical symbols, creating table of contents, referencing and creating bibliography.
3. Prepare oral presentations and poster designed using the beamer and poster class file in latex.

Course Learning Outcomes:

5. Have job opportunities on professional typesetting, latex paginator, template developer and etc.
6. Take up profession in document preparation in scientific publishing companies and journal magazine, etc.

Duration: 30 Hours

Registration Fee: Rs. 30/-

Course Co-ordinator: Dr.A.K.R.Rajayal,

Guest lecturer in Mathematics.



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ABOUT THE COURSE

LATEX is a Powerful and open- source system that provides numerous facilities for automating typesetting of the document. That is structuring page layout, listing and auto- numbering of sections, tables, figures, citing, referencing and indexing. In this part of the course we teach the basics of how LATEX works, explain how to get started and go through lo of examples and how to format your text documents using LATEX including size and style, text alignment and more. This course enable the students to initiate start ups for employment.



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VALUE ADDED COURSE
C PROGRAMMING LABORATORY COURSE
DEPARTMENT OF MATHEMATICS

Learning Objectives

1. To introduce the basic concepts in C Language.
2. To introduce the mathematical concepts required to learn theoretical using C programme.

Course Learning Outcomes:

- a. Understand problem statements and identify appropriate solutions.
- b. Demonstrate the use of IDE and C Compiler.
- c. Develop programs using C Programming Language.

Duration: 30 Hours

Registration Fee: Rs. 25/-

Course Co-ordinator: Mrs.M.DEVI

Guest lecturer in Mathematics.



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ABOUT THE COURSE

C programming course offered equip learners with knowledge on programming fundamentals. Ways to solve complex problems by writing computer programs, systematic ways to read and write the C code, understanding of computing processes at a deep level, basic of algorithms and object oriented software.



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VALUE ADDED COURSE
CERTIFICATE COURSE ON MATLAB
DEPARTMENT OF MATHEMATICS

Learning Objectives

4. Provide to write basic Matlab code, mainly for numerical computing.
5. Training the different plots like two-dimensional plots and three-dimensional plots.
6. To enhance the programming skills with the help of MATLAB and its features which allow to learn and apply specialized technologies.

Course Learning Outcomes:

7. Write MATLAB coding related to find addition, Multiplication and determinants of matrices.
8. Learn use of for-loop and the while-loop in MATLAB coding.
9. Write MATLAB coding for mathematical functions.

Duration: 30 Hours

Registration Fee: Rs. 25/-

Course Co-ordinator: Dr.G.AMUDA,
Guest lecturer in Mathematics.



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ABOUT THE COURSE

This course provides hands on experience using the features in the MATLAB language to write efficient, robust and well organized code. These concepts form the foundation for writing full applications, developing algorithms and extending built- in – MATLAB capabilities for the students.



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VALUE ADDED COURSE
BASIC TECHNIQUES IN SPREAD SHEET
DEPARTMENT OF MATHEMATICS

Learning Objectives

3. To enable the students to use Excel for advanced data analysis.
4. To equip the students to with automation skills on excel.
5. To enable the students to use excel for informed decision making.

Course Learning Outcomes:

10. By studying this course, students will be able to make meaningful representations of data in the form of charts and pivot tables.
11. By studying this course, students will be able to draw analysis on data using spreadsheet and use interpretation to make decisions.
12. By studying this course, students will be able to generate word documents with appropriate formatting, layout, proofing.
13. By studying this course, students will be able to manage data for generating Queries, forms and reports in a database.

Duration: 30 Hours

Registration Fee: Rs. 25/-

Course Co-ordinator: Dr. G.VEMBARASI,

Guest lecturer in Mathematics.



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ABOUT THE COURSE

Spreadsheets software is one of the most popular and powerful data analytics tools. You'll learn the fundamentals of spreadsheets by working with tabular data and performing calculations. You'll also create your own formulas and learn how to use references to connect cells and bring your spreadsheets to life.