CAUVERY COLLEGE FOR WOMEN (AUTONOMOUS)

NATIONALLY ACCREDITED (IV CYCLE) WITH "A+" GRADE BY NAAC

TIRUCHIRAPPALLI – 18

DEPARTMENT OF COMPUTER APPLICATIONS

Bachelor of Computer Applications

2025-2026 onwards

SYLLABUS

CAUVERY COLLEGE FOR WOMEN (AUTONOMOUS)

DEPARTMENT OF COMPUTER APPLICATIONS

VISION

- To produce globally competent computer professionals by providing high quality education and also focus on developing the skills of technical competency.
- To make an incorporated framework that meets the higher instructive necessities of the community.
- To prepare the students for technical training with revolutionary vision so they can create employment opportunities for themselves as well as for others.

MISSION

- To produce a quality learning environment that helps students to enhance problem solving skills and practical knowledge.
- To provide technical education to the students through well-equipped labs.
- Giving personal attention to slow learners consequently, allowing them to cope-up with other wards.
- To impart the professional and communication skills training to the students to get better placement.

PROGRAMMEEDUCATIONAL OBJECTIVES (PEOs)

PEOs	Statements
PEO1	**LEARNING ENVIRONMENT** To facilitate value-based holistic and comprehensive learning by integrating innovative learning practices to match the highest quality standards and train the students to be effective leaders in their chosen fields.
PEO2	**ACADEMIC EXCELLENCE** To provide a conducive environment to unleash their hidden talents and to nurture the spirit of critical thinking and encourage them to achieve their goal.
PEO3	**EMPLOYABILITY** To equip students with the required skills in order to adapt to the changing global scenario and gain access to versatile career opportunities in multidisciplinary domains.
PEO4	**PROFESSIONAL ETHICS AND SOCIAL RESPONSIBILITY** To develop a sense of social responsibility by formulating ethics and equity to transform students into committed professionals with a strong attitude towards the development of the nation.
PEO5	**GREEN SUSTAINABILITY** To understand the impact of professional solutions in societal and environmental contexts and demonstrate the knowledge for an overall sustainable development.

PROGRAMME OUTCOMES for B.Sc Computer Science,

B.Sc Computer Science with Cognitive Systems , BCA and

B.Sc Information Technology PROGRAMME

PO NO.	On completion of B. Sc Computer Science / B. Sc Computer Science with Cognitive Systems / BCA/ B. Sc Information Technology Programme**,** the students will be able to
PO 1	**ACADEMIC SKILLS & SOCIAL RESPONSIBILITY** Apply Computing, Mathematical and Scientific Knowledge in Various disciplines by understanding the concerns of the society.
PO 2	**CRITICAL THINKING AND INNOVATIVE PROGRESS** Design the software applications with varying intricacies using programming languages for innovative learning in techno world to meet the changing demands.
PO 3	**PERSONALITY DEVELOPMENT** Perceive Leadership skills to accomplish a common goal with effective communication and understanding of professional, ethical, and social responsibilities.
PO 4	**LIFELONG LEARNING** Identify resources for professional development and apply the skills and tools necessary for computing practice to gain real life experiences.
PO 5	**CREATIVITY AND HOLISTIC APPROACH** Create a scientific temperament and novelties of ideas to support research and development in Computer Science to uphold scientific integrity and objectivity.

PROGRAMME SPECIFIC OUTCOMES FOR BCA

PSO NO.	The students of Bachelor of Computer Applications will be able to	POs Addressed
PSO 1	Understand the concepts of logical and critical thinking with adequate practical skills.	PO1 PO2 PO4 PO5
PSO 2	Adopt necessary technical, scientific, managerial and financial knowledge to be employable or purse higher education.	PO1 PO2 PO4
PSO 3	Apply neoteric technology in various domains and evaluate the method of implementing it.	PO1 PO2 PO4
PSO 4	Design and create innovative ideas that meet the requirements of an entrepreneur and software industry.	PO1 PO2 PO4 PO5
PSO 5	Explore the ethical values, sustainability and productivity.	PO3 PO4 PO5

CAUVERY COLLEGE FOR WOMEN (AUTONOMOUS)
DEPARTMENT OF COMPUTER APPLICATIONS
BCA
LEARNING OUTCOMES BASED CURRICULUM FRAMEWORK (CBCS – LOCF)
(For the Candidates admitted from the Academic year 2025-2026 and onwards)

Semester	Part	Course	Course Title	Course Code	Inst. Hrs. / week	Credits	Exam			Total
							Hrs.	Marks		
								Int	Ext	
I	I	Language Course - I(LC)	Tamil Illakkiya Varalaru – 1	25ULT1	6	3	3	25	75	100
			Hindi ka Samanya Gyan aur Nibandh	23ULH1						
			Poetry, Grammar and History of Sanskrit Literature	23ULS1						
			Foundation Course: Paper I- French I	23ULF1						
	II	English Language Course - I (ELC)	General English –I	23UE1	6	3	3	25	75	100
	III	Core Course – I (CC)	Python Programming	23UCA1CC1	5	5	3	25	75	100
		Core Practical - I (CP)	Python Programming Lab (P)	23UCA1CC1P	3	3	3	40	60	100
		First Allied Course - I (AC)	Essential mathematics	22UCA1AC1	4	3	3	25	75	100
		First Allied Course - II (AC)	Numerical analysis and statistics	22UCA1AC2	4	3	3	25	75	100
	IV	Ability Enhancement Compulsory Course -I (AECC)	Value Education	23UGVE	2	2	-	100	-	100
	Total				**30**	**22**				**700**

The Internal and external marks for theory and practical papers are as follows:

Subject	Internal Marks	External Marks
Theory	25	75
Practical	25	75

For Theory:

The passing minimum for CIA shall be 40% out of 25 marks (i.e. 10 marks).

The passing minimum for End Semester Examinations shall be 40 % out of 75 marks(i.e. 30 marks).

For Practical:

The passing minimum for CIA shall be 40 % out of 25 marks (i.e. 10 marks).

The passing minimum for End Semester Examinations shall be 40 % out of 75 marks(i.e .30 marks).

Internal Component (Theory)

Component	Marks
Attendance	03
Library	03
Seminar/ Quiz/ Assignment	4
CIA –I	7.5
CIA-II	7.5
Total	**25**

Internal Component (Practical)

Component	Marks
Observation	05
Record	05
Continual performance in practical	05
Model	10
Total	**25**

Question Paper Pattern

Answer all the questions

PART A (20 X 1 = 20)

Answer all the questions

PART B (5 X 5 = 25)

Answer any three questions

PART C (3 X 10 = 30)

SEMESTER - I

Semester I	Internal Marks:25			External Marks: 75
COURSE CODE	**COURSE TITLE**	**CATEGORY**	**HRS / WEEK**	**CREDITS**
23UCA1CC1 / 23UCS1CC1	**PYTHON PROGRAMMING**	**CORE**	**5**	**5**

Course Objectives

- To make students understand the concepts of Python programming
- To apply the OOPs concept in Python programming
- To make the students learn best practices in Python programming

Course Outcome and Cognitive Level Mapping

CO Number	CO Statement On the successful completion of the course, students will be able to	Cognitive Level
CO1	Recall the fundamental concepts of Python	K1
CO2	Demonstrate the problem-solving approach using Python statements	K2
CO3	Construct the Python program using functions and modules	K3
CO4	Analyze the Python programming concepts to develop programs	K4
CO5	Develop a Python program to solve real-time problems	K5

Mapping of CO with PO and PSO

	PSO1	PSO2	PSO3	PSO4	PSO5	PO1	PO2	PO3	PO4	PO5
CO1	2	3	2	1	1	3	3	2	3	2
CO2	3	2	3	1	1	3	2	2	3	3
CO3	3	3	3	2	2	3	3	2	3	2
CO4	3	2	3	2	2	3	3	2	3	2
CO5	3	3	3	2	2	3	3	2	2	3

"1"-Slight (Low) Correlation

"2"-Moderate (Medium) Correlation

"3" –Substantial (High) Correlation

"-" - Indicates there Is no Correlation

Syllabus

UNIT	Contents	HOURS	COs	COGNITIVE LEVEL
I	**Basics of Python Programming:** Features of Python -History of Python- Literal Constants-Variables and Identifiers–Data Types- Input Operation- Comments– Reserved Words- Indentation- Operators and Expressions –Other Data Types- Type Conversion.	**15**	CO1, CO2, CO3, CO4, CO5	K1, K2, K3, K4, K5
II	**Decision Control Statements:** Selection/Conditional Branching statements: if, if-else, nested if and if-elif-else statements. **Basic Loop Structures / Iterative Statements:** while loop, for loop- Nested Loops- The break Statement- The continue Statement.	**15**	CO1, CO2, CO3, CO4, CO5	K1, K2, K3, K4, K5
III	**Functions and Modules:** Function Definition – **Function Call:** Function Parameters – **Variable Scope and Lifetime:** Local and Global Variables- Using the Global Statement-Resolution of Names. The return Statement. **More on Defining Functions:** Required Arguments, Keyword Arguments, Default Arguments and Variable Length Arguments. **Python Strings**: Strings are Immutable- Built-in String Methods and Functions – Comparing String**s. Modules:** The from…import statement- Name of Module – The dir() function – Modules and Namespace.	**15**	CO1, CO2, CO3, CO4, CO5	K1, K2, K3, K4, K5
IV	**Lists:** Access values in List-Updating values in Lists- Nested lists -Basic list operations-List Methods. **Tuple:** Creating, Accessing, Updating and Deleting Elements in a tuple – Nested tuples. **Dictionaries:** Creating a dictionary, Accessing values, Modifying an Entry -Deleting items – Built-in Dictionary Functions and Methods - Difference between a List and a Dictionary.	**15**	CO1, CO2, CO3, CO4, CO5	K1, K2, K3, K4, K5
V	**File Handling:** Types of files in Python - Opening and Closing files- **Reading and Writing files**: write() and writelines() methods- append() method – read() and readlines() methods – Splitting words –File Positions.	**15**	CO1, CO2, CO3, CO4, CO5	K1, K2, K3, K4, K5
VI	**Self Study for Enrichment (Not to be included for End Semester Examination)** Difference between lists and tuples - Defining our own modules- Renaming and deleting files.	-	CO1, CO2, CO3, CO4, CO5	K1, K2, K3, K4, K5

Textbook

1. Reema Thareja. (2017), Python Programming using problem solving approach, 1st Edition, Oxford University Press.

References

1. Dr. R. Nageswara Rao. (2017), Core Python Programming, 1st Edition, Dream tech Publishers.
2. VamsiKurama. (2017), Python Programming: A Modern Approach,1st Edition, Pearson Education.
3. Mark Lutz. (2013), Learning Python, Fifth Edition, Orielly.
4. Adam Stewarts. (2017), Python Programming, Online.
5. Fabio Nelli. (2015), Python Data Analytics,1st Edition, APress.
6. Kenneth A. Lambert. (2019), Fundamentals of Python – First Programs,2nd Edition, CENGAGE Publication.

Web References

1. https://www.programiz.com/python-programming
2. https://www.guru99.com/python-tutorials.html
3. https://www.w3schools.com/python/python_intro.asp
4. https://www.geeksforgeeks.org/python-programming-language/
5. https://en.wikipedia.org/wiki/Python_(programming_language)

Pedagogy

Chalk & Talk, PowerPoint Presentation, Discussion, Assignment, Demo, Quiz and Seminar

Course Designer

Dr.K.Akila, Associate Professor, Department of Computer Applications

Semester I	Internal Marks:25		External Marks: 75	
COURSE CODE	**COURSE TITLE**	**CATEGORY**	**HRS / WEEK**	**CREDITS**
23UCA1CC1P	**Python Programming Lab (P)**	**CORE**	**3**	**3**

Course Objectives

- To provide programming knowledge in Python.
- To create loops and decision statements in Python.
- To build and package Python modules for reusability.
- To read and write files in Python.

Course Outcome and Cognitive Level Mapping

CO Number	CO Statement On the successful completion of the course, students will be able to	Cognitive Level
CO1	Recall the syntax and semantics of Python.	K1
CO2	Identify the problem and solve using Python programming techniques.	K2
CO3	Identify suitable programming constructs for problem solving.	K3
CO4	Analyze various concepts of Python language to solve the problem in an efficient way.	K4
CO5	Develop a Python program for a given problem and test for its correctness.	K5

Mapping of CO with PO and PSO

	PSO1	PSO2	PSO3	PSO4	PSO5	PO1	PO2	PO3	PO4	PO5
CO1	2	3	2	1	1	3	3	2	3	2
CO2	3	2	3	1	1	3	2	2	3	3
CO3	3	3	3	2	2	3	3	2	3	2
CO4	3	2	3	2	2	3	3	2	3	2
CO5	3	3	3	2	2	3	3	2	2	3

"1"-Slight(Low)Correlation "2"-Moderate(Medium)Correlation

"3" -Substantial(High)Correlation "-"- Indicates there Is no Correlation

List of Practicals

1. Program using variables, constants, I/O statements in Python.
2. Program using Operators in Python.
3. Program using Conditional Statements.
4. Program using Loops.
5. Program using Jump Statements.
6. Program using Functions.
7. Program using Recursion.
8. Program using Arrays.
9. Program using Strings.
10. Program using Modules.
11. Program using Lists.
12. Program using Tuples.
13. Program using Dictionaries.
14. Program for File Handling.

Web References

1. https://www.programiz.com/python-programming
2. https://www.guru99.com/python-tutorials.html
3. https://www.w3schools.com/python/python_intro.asp
4. https://www.geeksforgeeks.org/python-programming-language/
5. https://en.wikipedia.org/wiki/Python_(programming_language)

Pedagogy

Chalk & Talk, PowerPoint Presentation, Discussion, Assignment, Demo, Quiz and Seminar

Course Designer

Dr.K.Akila, Associate Professor, Department of Computer Applications.

FIRST ALLIED COURSE –I (AC)
ESSENTIAL MATHEMATICS

(For B.Sc Computer Science , B.Sc Information Technology & BCA)

(2022-2023 and Onwards)

Semester I	Internal Marks:25		External Marks:75	
COURSE CODE	**COURSE TITLE**	**CATEGORY**	**Hrs/Week**	**CREDITS**
22UCS1AC1/ 22UCA1AC1/ 22UIT1AC1	**ESSENTIAL MATHEMATICS**	**ALLIED**	**4**	**3**

Course Objective

- **Apply** the basic concepts of Differentiation, Integration and their applications.
- **Compute** mathematical quantities using ordinary and partial differential equations.
- **Explore** fundamental concepts in graph theory.

Course Outcomes

Course Outcome and Cognitive Level Mapping

CO Number	CO Statement On the successful completion of the course, students will be able to	Cognitive Level
CO1	Remember and recall the basic concept of essential mathematics.	**K1**
CO2	Illustrate the various notions in the respective streams .	**K2**
CO3	Applythe different terminologies of essential mathematics.	**K3**
CO4	Classifythe solution of mathematical problems using various techniques.	**K4**
CO5	Examine the solution of mathematical problems.	**K4**

Mapping of CO with PO and PSO

COs	PSO1	PSO2	PSO3	PSO4	PSO5	PO1	PO2	PO3	PO4	PO5
CO1	3	2	3	3	3	3	3	3	2	3
CO2	3	3	3	3	3	3	3	3	3	2
CO3	3	2	3	3	3	3	3	3	2	2
CO4	3	2	2	3	3	3	3	3	3	2
CO5	3	2	3	3	3	3	3	3	2	2

"1" – Slight (Low) Correlation ¬ "2" – Moderate (Medium) Correlation ¬

"3" – Substantial (High) Correlation ¬ "-" indicates there is no correlation.

Syllabus

UNIT	CONTENT	HOURS	COs	COGNITIVE LEVEL
I	**Matrices** Matrix – Special types of matrices – Scalar multiplication of a matrix – Equality of matrices – Addition of matrices – Subtraction – Multiplication of Matrices – Inverse matrix– Relation between adjoint and inverse matrices – Solution of simultaneous equations – Rank of a matrix – A system of *m* homogeneous linear equations in *n* unknowns – System of non-homogeneous linear equations – Eigen values and Eigenvectors – Similar matrices – Cayley-Hamilton Theorem (proof not needed) – Simple applications only	12	CO1, CO2, CO3, CO4, CO5	K1,K2,K3, K4
II	**Differentiation** Maxima and Minima (Problems Only) –Points of inflexion. **Partial differentiation** Functions of function rule – Total Differential Coefficient – A Special case – Implicit Functions – Homogeneous functions – Euler's Theorem (proof not needed) – Simple problems only.	12	CO1, CO2, CO3, CO4, CO5	K1,K2,K3, K4
III	**Integration:** Integration of Rational algebraic functions – Rule (a) – Rule (b): Type i:$\int \frac{dx}{ax^2+bx+c}$, Type ii: $\int \frac{lx+m}{ax^2+bx+c}\,dx$ – Integration of Irrational functions : Case (ii) Integration of the form $\int \frac{px+q}{\sqrt{ax^2+bx+c}}$ – Type $\int \frac{dx}{a+bcosx}$ – Properties of definite integrals.	12	CO1, CO2, CO3, CO4, CO5	K1,K2,K3, K4
IV	**Differential Equations:** Linear Differential Equation with constant coefficients – The Operators D and D^{-1} – Particular Integral – Special methods of finding P.I.: X is of the form (a) $e^{\alpha x}$ (b) $cos\alpha x$ or $sin\alpha x$, where α is a constant (c) x^m (a power of x), m being a positive integer (d) $e^{ax}V$, where V is any function of x.	12	CO1, CO2, CO3, CO4, CO5	K1,K2,K3, K4
V	**Graph Theory** Introduction – Definition of Graphs – Applications of Graphs – Finite and infinite graphs – Incidence and Degree – Isolated Vertex, Pendant Vertex and Null Graph. **Path and Circuits** Isomorphism – Subgraphs – Walks, Paths and Circuits – Connected Graphs, Disconnected Graphs and Components – Euler graphs.	12	CO1, CO2, CO3, CO4, CO5	K1,K2,K3, K4

VI	**Self-Study for Enrichment** **(Not included for End Semester Examination)** Symmetric matrix – Skew symmetric matrix – Hermitian and skew Hermitian matrices Concavity and Convexity– Integration by parts – Linear equation – Hamiltonian Paths and Circuits.	-	CO1, CO2, CO3, CO4, CO5	K1,K2,K3, K4

Text Books

1. T.K.Manicavachagom Pillay, T.Natarajan, K.S.Ganapathy.(2015). *Algebra, Volume II.* S. Viswanathan (Printers & Publishers) Pvt., Ltd.
2. S.Narayanan, T.K.Manicavachagom Pillay.(2015*).Calculus,Volume I.* S. Viswanathan (Printers & Publishers) Pvt., Ltd.
3. S.Narayanan, T.K.Manicavachagom Pillay.(2015*).Calculus,Volume II*. S. Viswanathan (Printers & Publishers) Pvt., Ltd.
4. S.Narayanan, T.K.Manicavachagom Pillay.(2015*).Calculus,Volume III*. S. Viswanathan (Printers & Publishers) Pvt., Ltd.
5. Narsingh Deo. (2003). *Graph Theory with applications to Engineering and Computer*. Prentice Hall of India Private Limited

UNIT-I Chapter 2: Section 1 to 5, 7, 8, 10 to 16[1]

UNIT-II Chapter V: Section 1.1 to 1.5[2], Chapter VIII: Section 1.2 to 1.6[2]

UNIT-III Chapter 1: Section 7.1 to 7.3, 8 (CASE II), 9, 11[3]

UNIT-IV Chapter 2: Section 1 to 4[4]

UNIT-V Chapter 1: Section 1.1 to 1.5[5], Chapter 2: Section 2.1, 2.2, 2.4 to 2.6[5]

Reference Books

1. A.Singaravelu. (2003). *Allied Mathematics.* A.R.Publications
2. P.R.Vittal. (2014). *Allied Mathematics*. Margham Publications, Chennai.
3. S.Arumugam and S.Ramachandran.(2006*). Invitation to Graph Theory*. Sci Tech Publications (India) Pvt Ltd., Chennai

Weblinks

1. **https://youtu.be/rowWM-MijXU**
2. **https://youtu.be/TQvxWaQnrqI**
3. **https://youtu.be/pvLj1s7SOtk**
4. **https://youtu.be/Gxr3AT4NY_Q**
5. **https://youtu.be/xlbbefbYLzg**
6. **https://youtu.be/b0RJkIBhfEM**
7. **https://youtu.be/s5KZw1Eo**

Pedagogy

Assignment, Seminar, Lecture, Quiz, Group discussion, Brain storming, e-content.

Course Designers

1. Dr. V. Geetha
2. Dr. S. Sasikala

FIRST ALLIED COURSE-II (AC)

NUMERICAL ANALYSIS AND STATISTICS

(For B.Sc Computer Science , B.Sc Information Technology & BCA)

(2022-2023 and Onwards)

Semester I	Internal Marks: 25			External Marks:75
COURSE CODE	**COURSE TITLE**	**CATEGORY**	**Hrs / Week**	**CREDITS**
22UCS1AC2/ 22UCA1AC2/ 22UIT1AC2	**NUMERICAL ANALYSIS AND STATISTICS**	**ALLIED**	**4**	**3**

Course Objective

- **Understand** the implementation of various methods of Numerical Analysis.
- **Organize** and **summarize** the statistical data.
- **Analyze** and **evaluate** the strengths of the conclusions based on data.

Course Outcomes

Course Outcome and Cognitive Level Mapping

CO Number	CO Statement On the successful completion ofthe course, students will be able to	Cognitive Level
CO1	Understand the list of basic ideas of Numerical Methods and Statistics.	K1, K2
CO2	Solve the problems using various methods and also classify the given datas.	K2, K3
CO3	Identifythe conceptualcollection and classification of variables.	K3
CO4	Analyze the accuracyand graphical representation of statistical datas.	K4
CO5	Support the implementation of numerical methods and statistical datas.	K4

Mapping of CO with PO and PSO

COs	PSO1	PSO2	PSO3	PSO4	PSO5	PO1	PO2	PO3	PO4	PO5
CO1	3	3	3	3	3	3	3	2	3	2
CO2	3	3	2	2	2	3	2	3	2	3
CO3	2	3	3	2	2	2	3	3	2	3
CO4	3	2	3	2	2	3	3	2	3	2
CO5	3	3	2	3	3	3	2	2	3	3

"1" – Slight (Low) Correlation ¬ "2" – Moderate (Medium) Correlation¬

"3" – Substantial (High) Correlation ¬ "-" indicates there is no correlation.

Syllabus

UNIT	CONTENT	HOURS	COs	COGNITIVE LEVEL
I	**Solution of Algebraic & Transcendental Equations:** Introduction – The Bisection Method – The Iteration Method – Newton-Raphson Method (Problems Only) **Interpolation:** Finite Differences: Forward Differences, Backward Differences – Newton's Formulae for Interpolation – Interpolation with unevenly spaced Points: Lagrange's Interpolation formula	12	CO1, CO2, CO3, CO4, CO5	K1, K2, K3, K4
II	**Numerical Integration:** Numerical Integration: Simpson's 1/3-Rule – Simpson's 3/8-Rule (proof not needed). **Linear Systems of Equations:** Solution of Linear Systems–Direct Methods: Gaussian Elimination Method – Solutions of Linear Systems – Iterative Methods (Problems Only)	12	CO1, CO2, CO3, CO4, CO5	K1, K2, K3, K4
III	**Numerical solution of Ordinary Differential Equations:** Introduction – Euler's Method – Modified Euler's Method – Runge-Kutta Methods – Predictor - Corrector Methods : Adams-Moulton Method	12	CO1, CO2, CO3, CO4, CO5	K1, K2, K3, K4
IV	**Measures of Central Tendency:** Arithmetic Mean – Median – Mode – Geometric Mean – Harmonic Mean. **Measures of Dispersion:** Mean Deviation – Standard Deviation (Simple Problems Only)	12	CO1, CO2, CO3, CO4, CO5	K1, K2, K3, K4
V	**Correlation:** Introduction – Meaning of Correlation – Scatter Diagram – Karl Pearson's co-efficient of Correlation – Rank Correlation: Spearman's Rank Correlation Coefficient (Derivation not needed and Simple Problems Only). **Linear Regression:** Introduction – Linear Regression (Derivation not needed and Simple Problems Only)	12	CO1, CO2, CO3, CO4, CO5	K1, K2, K3, K4
VI	**Self Study for Enrichment:** **(Not included for End Semester Examination)** The method of False Position & Central Differences - Trapezoidal rule - Solution by Taylor's Series and Milne's Method - Range – Quartile Deviation - Rank Correlation (Repeated Ranks).	-	CO1, CO2, CO3, CO4, CO5	K1, K2, K3, K4

Text Books

1. Sastry S. S. (1998). Introductory methods of Numerical Analysis, Third Edition. Prentice Hallof India Private Limited.

2. Gupta. S.C & Kapoor, V.K (2007). Fundamentals of Mathematical Statistics. Sultan Chand& sons, New Delhi.

UNIT – I	Chapter 2: Sections 2.1 - 2.3(Omit 2.3.1), 2.5(Omit 2.5.1) [1]
	Chapter 3: Sections 3.3 (Omit 3.3.4), 3.6, 3.9(3.9.1only) [1]
UNIT – II	Chapter 5: Sections 5.4(5.4.2 & 5.4.3 only) [1]
	Chapter 6: Sections 6.3(6.3.2 only) & 6.4 [1]
UNIT – III	Chapter 7: Sections 7.1, 7.4- 7.6 (Omit 7.4.1 & 7.6.2) [1]
UNIT – IV	Chapter 2: Sections 2.5 - 2.9, 2.13 (Omit 2.13.1 & 2.13.2) [2]
UNIT –V	Chapter 10: Sections 10.1 - 10.4, 10.7(10.7.1 Only) [2]
	Chapter 11: Sections 11.1 & 11.2 [2]

Reference Books

1. Jain M. K, Iyengar S. R.K. and Jain R.K. (1999). Numerical Analysis Numerical Methodsfor Scientific and Engineering Computations. New Age International Private Limited.
2. Froberg C.E. (1979). Introduction to Numerical Analysis. II Edition. Addison Wesley

Web Links

1. **https://youtu.be/qCzUXav5Nk_**
2. **https://youtu.be/r6MTvrI8SQ4**
3. **https://youtu.be/s05dONL4xAs**
4. **https://youtu.be/XaHFNhHfXwQ**
5. **https://youtu.be/zPG4NjIkCjc**

Pedagogy

Power point presentations, Group Discussions, Seminar, Quiz, Assignment.

Course Designers

1. Dr.R.Buvaneswari
2. Ms.A.Gowri Shankari