Dr. N.G.P. ARTS AND SCIENCE COLLEGE

(An Autonomous Institution, Affiliated to Bharathiar University, Coimbatore)
Approved by Government of Tamil Nadu and Accredited by NAAC with 'A++' Grade (3rd Cycle-3.64 CGPA)
Dr. N.G.P. - KalapattiRoad, Coimbatore-641048, Tamil Nadu, India
Web: www.drngpasc.ac.in |Email: info@drngpasc.ac.in | Phone: +91-422-2369100

REGULATIONS 2026-27 for Under Graduate Programme

(Outcome Based Education model with Choice Based Credit System)

Bachelor of Science in Information Technology Degree

(For the students admitted during the academic year 2026-27)

Programme: B. Sc (Information Technology)

Eligibility

Candidates for admission to the first year of the Bachelor of Science (Information Technology) Degree Programme shall be required to have passed in the Higher Secondary Examinations conducted by the Government of Tamil Nadu in the relevant subjects or an Examination accepted as equivalent there to by the Academic Council. Subject to such other conditions as may be prescribed there to are permitted to appear and qualify with any one of the following subjects: Mathematics / Computer Science / Statistics / Business Mathematics and wherever the students have not studied Mathematics, the necessary Mathematics knowledge be imparted through Tutorial/ Bridge Course.

Programme Educational Objectives

The Curriculum is designed to attain the following learning goals which students shall accomplish by the time of their graduation:

1. Demonstrating a substantial understanding of concepts in key areas of Information Technology and its applications.

2. Analysis and synthesis involved in Computer System, Information System and Computer applications.

3. To develop a software and in its design and implementation for professional competence

4. To equip and train the students to meet the requirement of the IT Industries and Public Sectors.

5. To stimulate an interest in computing as an academic discipline with a view to encouraging progression to research and higher studies.

PROGRAMME OUTCOMES

On the successful completion of the program,
the following are the expected outcomes.

PO Number	PO Statement
PO1	Understand the fundamental concept of Information Technology
PO2	Gain knowledge on programming language to constructs application and packages
PO3	Improve programming knowledge to solve real-world problems using Information Technology
PO4	Develop necessary skills to design digital system
PO5	Enhance problem solving, analytical, communication, team work and potential to develop software and network management

B. Sc. INFORMATION TECHNOLOGY

(For the students admitted during the Academic Year 2026-2027)

Credit Distributions

Part	Subject	No. of Papers	Credit	Semester No.
I (12 Credits)	Tamil / Hindi / French/Malayalam	4	4 x 3 = 12	I to IV
II (12 Credits)	English	4	4 x 3 = 12	I to IV
III (108 Credits)	Core (4 credits)	11	11x4=44	I to VI
	Core (3 credits)	2	2x3=6	I to VI
	Core Practical (5 credits)	2	2x5=10	III to IV
	Core Practical (2 credits)	3	3x2=6	I to VI
	Core Project (4 credits)	1	1x4=4	VI
	Inter Departmental Course (IDC)	4	4x4=16	I to IV
	Discipline Specific Elective (DSE)	3	3 x 4 =12	V & VI
	Skill Enhancement Course (SEC)	4	4x2 =8	III to VI
	Industrial Training	1	1x2=2	V
IV (8 credits)	Environmental Studies (AECC)	1	1x2=2	I
	Basic Tamil/ Advanced Tamil/Human Rights, & Women's Rights (AECC)	1	1x2=2	II
	Generic Elective (GE)	1	1x 2=2	V
	Innovation & IPR/ Innovation, IPR & Entrepreneurship (AECC)	1	2	VI
V (2 Credits)	NSS/NCC/YRC/RRC/Yoga/ Sports/Clubs/ Health and Wellness	-	2	I - II
TOTAL CREDITS			**142**	

CURRICULUM
B. Sc. INFORMATION TECHNOLOGY

Course Code	Course Category	Course Name	L	T	P	Duration (h)		Exam (h)	Max Marks			Credits
						Week	Total		CIA	ESE	Total	
First Semester												
Part–I												
26TLU1TA	Language-I	Tamil–I	4	1	-	5	60	3	25	75	100	3
26TLU1HA		Hindi-I				5	60					
26TLU1MA		Malayalam-I				5	60					
26TLU1FA		French –I				5	60					
Part–II												
26ELU1EA	Language-II	English -I	4	-	1	5	60	3	25	75	100	3
Part–III												
26AIU1CA	Core-I	Programming in C	4	1	-	5	60	3	25	75	100	4
26ITU1CA	Core-II	Digital Computer Fundamentals	4	-	-	4	48	3	25	75	100	4
26ITU1CP	Core Practical-I	C Programming	-	-	4	4	48	3	40	60	100	2
26MTU1IC	IDC-I	Numerical Methods and Statistics	4	1	-	5	60	3	25	75	100	4
Part-IV												
26CEU1AA	AECC-I	Environmental Studies	2	-	-	2	24	-	50	-	50	2
Part-V												
26ITU1XA	Extension Activity	NSS/NCC/YRC/RRC/Yoga /Sports/Clubs	-	-	-	-	-	-	50	-	50	1
Total			**22**	**3**	**5**	**30**	**360**	-	-	-	**700**	**23**

Course Code	Course Category	Course Name	L	T	P	Duration (h)		Exam (h)	Max Marks			Credits
						Week	Total		CIA	ESE	Total	
Second Semester												
Part-I												
26TLU2TA	Language-I	Tamil–II	4	1	-	5	60	3	25	75	100	3
26TLU2HA		Hindi-II				5	60					
26TLU2MA		Malayalam-II				5	60					
26TLU2FA		French –II				5	60					
Part–II												
26ELU2EA	Language-II	English -II	4	-	1	5	60	3	25	75	100	3
Part–III												
26CAU2CA	Core-III	Data Structures	4	1	-	5	60	3	25	75	100	4
26CSU2CA	Core-IV	Python Programming	4	-	-	4	48	3	25	75	100	4
26ITU2CP	Core Practical–II	Data Structures with Python	-	-	4	4	48	3	40	60	100	2
26MTU2IC	IDC-II	Discrete Mathematics	4	1	-	5	60	3	25	75	100	4
Part-IV												
26TLU2AA	AECC-II	Basic Tamil	2	-	-	2	24	-	50	-	50	2
26TLU2AB		Advanced Tamil				2	24					
26CMU2AA		Human Rights and Women's Rights				2	24					
Part-V												
26ITU2XA	Extension Activity	NSS/ NCC/ YRC/ RRC/ Yoga/Sport/ Clubs/Health and Wellness	-	-	-	-	-	-	50	-	50	1
Total			**22**	**3**	**5**	**30**	**360**	**-**	**-**	**-**	**700**	**23**

Course Code	Course Category	Course Name	L	T	P	Duration (h)		Exam (h)	Max Marks			Credits
						Week	Total		CIA	ESE	Total	
Third Semester												
Part-I												
26TLU3TA	Language-I	Tamil–III	3	1	-	4	48	3	25	75	100	3
26TLU3HA		Hindi - III				4	48					
26TLU3MA		Malayalam - III				4	48					
26TLU3FA		French - III				4	48					
Part–II												
26ELU3EA	Language-II	English -III	3	1	-	4	48	3	25	75	100	3
Part–III												
26CAU3CA	Core -V	Java Programming	4	-	-	4	48	3	25	75	100	4
26CSU3CA	Core -VI	Operating Systems	3	-	-	3	36	3	25	75	100	3
26CTU3CM	Core Practical-III	Database Management Systems	3	-	4	7	84	3	40	60	100	5
26ITU3SP	SEC-I	Programming in Java	-	-	4	4	48	3	40	60	100	2
26ATU3IA	IDC-III	Business Accounting	4	-	-	4	48	3	25	75	100	4
Total			**20**	**2**	**8**	**30**	**360**	-	-	-	**700**	**24**

Course Code	Course Category	Course Name	L	T	P	Duration (h)		Exam (h)	Max Marks			Credits
						Week	Total		CIA	ESE	Total	
Fourth Semester												
Part–I												
26TLU4TA	Language-I	Tamil–IV	3	1	-	4	48	3	25	75	100	3
26TLU4HA		Hindi - IV				4	48					
26TLU4MA		Malayalam –IV				4	48					
26TLU4FA		French - IV				4	48					
Part–II												
26ELU4EA	Language-II	English -IV	3	1	-	4	48	3	25	75	100	3
Part–III												
26CTU4CA	Core-VII	Data Communication and Networks	4	-	-	4	48	3	25	75	100	4
26ITU4CA	Core-VIII	Software Engineering	3	-	-	3	36	3	25	75	100	3
26ITU4CM	Core Practical-IV	Mobile Application Development	3	-	4	7	84	3	40	60	100	5
26ITU4SP	SEC-II	Networking Tools	-	-	4	4	48	3	40	60	100	2
26COU4IC	IDC-IV	Human Resource Management	4	-	-	4	48	3	25	75	100	4
Total			**20**	**2**	**8**	**30**	**360**	-	-	-	**700**	**24**

Course Code	Course Category	Course Name	L	T	P	Duration (h)		Exam (h)	Max Marks			Credits
						Week	Total		CIA	ESE	Total	
Fifth Semester												
Part–III												
26ITU5CA	Core-IX	Full Stack Development	4	1	-	5	60	3	25	75	100	4
26ITU5CB	Core-X	Cyber Security and Ethics	4	1	-	5	60	3	25	75	100	4
26ITU5CC	Core-XI	IT Infrastructure and Service Management	4	1	-	5	60	3	25	75	100	4
26ITU5CP	Core Practical-V	Full Stack Development	-	-	4	4	48	3	40	60	100	2
26ITU5SP	SEC-III	Internet of Things	-	-	4	4	48	3	40	60	100	2
26ITU5DA	DSE–I	Data Science Fundamentals	4	1	-	5	60	3	25	75	100	4
26ITU5DB		Principles of Data Mining and Data Warehousing				5	60					
26ITU5DC		Software Project Management				5	60					
26ITU5TA	IT	Industrial Training	-	-	-	-	-	3	40	60	100	2
Part–IV												
	GE		2	-	-	2	24	-	50	-	50	2
Total			**18**	**4**	**8**	**30**	**360**	**-**	**-**	**-**	**750**	**24**

Course Code	Course Category	Course Name	L	T	P	Duration (h) Week	Duration (h) Total	Exam (h)	Max Marks CIA	Max Marks ESE	Max Marks Total	Credits
Sixth Semester												
Part–III												
26ITU6CA	Core-XII	Cloud Computing	4	-	-	4	48	3	25	75	100	4
26ITU6CB	Core-XIII	Big Data Analytics	4	-	-	4	48	3	25	75	100	4
26ITU6SP	SEC–IV	Big Data Tools	-	-	4	4	48	3	40	60	100	2
26ITU6CV	Core Project-XIV	Project and Viva-Voce	-	-	8	8	96	3	40	60	100	4
26ITU6DA	DSE–II	Blockchain Technology and Applications	4	-	-	4	48	3	25	75	100	4
26ITU6DB		Artificial Intelligence and Machine Learning				4	48					
26ITU6DC		Distributed and Enterprise Systems				4	48					
26ITU6DD	DSE–III	Introduction to Quantum Computing	4	-	-	4	48	3	25	75	100	4
26ITU6DE		Human Computer Interaction Design				4	48					
26ITU6DF		DevOps				4	48					
Part–IV												
26BTU6AA	AECC-III	Innovation, IPR & Entrepreneurship	2	-	-	2	24	-	50	-	50	2
Total			18	-	12	30	360	-	-	-	650	24
		***Grand Total**									**4200**	**142**

***Total Credit Should not exceed 142 credits**

DISCIPLINE SPECIFIC ELECTIVE

Students shall select the desired course of their choice in the listed elective course during Semesters V and VI.

Semester V (Elective I)

List of Elective Courses

S. No.	Course Code	Name of the Course
1	26ITU5DA	Data Science Fundamentals
2	26ITU5DB	Principles of Data Mining and Data Warehousing
3	26ITU5DC	Software Project Management

Semester VI (Elective II)

List of Elective Courses

S. No.	Course Code	Name of the Course
1	26ITU6DA	Blockchain Technology and Applications
2	26ITU6DB	Artificial Intelligence and Machine Learning
3	26ITU6DC	Distributed and Enterprise Systems

Semester VI (Elective III)

List of Elective Courses

S. No.	Course Code	Name of the Course
1	26ITU6DD	Introduction to Quantum Computing
2	26ITU6DE	Human Computer Interaction Design
3	26ITU6DF	DevOps

GENERIC ELECTIVE COURSES (GE)

The following are the courses offered under Generic Elective Course:

Semester V(GE)

S. No.	Course Code	Course Name
1	26ITU5GA	Business Information Systems

EXTRA CREDIT COURSES

The following are the courses offered under self-study to earn extra credits:

Semester III

S. No.	Course Code	Course Name
1	26ITUSSA	IT Governance and Compliance
2	26ITUSSB	Mobile Computing

30/4/26

BoS Chairman/HOD
Department of Information Technology
Dr. N.G.P. Arts And Science College
Coimbatore - 641 048

Dr.N.G.P. Arts and Science College
APPROVED
BoS- 21st 01-04-2026 | AC - | GB -

Semester – I CORE I: PROGRAMMING IN C							
Semester	**Course Code**	**Course Name**	**Category**	**L**	**T**	**P**	**Credits**
I	26AIU1CA	PROGRAMMING IN C	CORE	48	12	-	4

Preamble	This course has been designed for students to learn and understand • the C language fundamentals. • the programs using functions, arrays and strings. • the representation and working of pointers, structures and files.
Prerequisite	Knowledge on Logical Thinking

Course Outcomes (Cos)		
CO Number	**Course Outcomes (COs) Statement**	**Bloom's Taxonomy Knowledge Level**
CO1	Understand the fundamentals of C Language	K2
CO2	Implement decision making using branching and looping.	K3
CO3	Develop programs using arrays and functions	K3
CO4	Analyze the use of Strings and pointers.	K4
CO5	Assess programs using structures and files.	K5

Mapping with Program Outcomes:					
Cos / POs	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**
CO1	S	M	M	S	M
CO2	M	S	S	M	S
CO3	M	M	S	M	M
CO4	S	M	M	M	S
CO5	M	S	S	M	S

26AIU1CA | PROGRAMMING IN C

Syllabus

Unit	Content	Hrs	Resources
I	**C Programming** Introduction to C - Structure of C program – C Tokens- Character set – Keywords –Data types - Variables – Constants – Input/Output statements – Operators – Type Conversion and Type casting.	12	Text Book/ Reference Books/NPTEL
II	**Decision making and Iterative statements** Conditional and Branching Statements: if statement – if-else statements – if-else-if statement - switch statement - Iterative statements: while loop – do-while loop – for loop – Nested loops – Break and Continue statements – goto.	12	Text Book/ Reference Books/NPTEL
III	**Function and Arrays** Function: Need for functions – Elements of functions – Function declaration and prototypes- parameter passing- scope of variables - Storage Classes – recursive function. Arrays: Introduction – Types of arrays – Declaration and Initialization of Arrays –Passing arrays to functions.	12	Text Book/ Reference Books/NPTEL
IV	**Strings and Pointers** Declaring and Initializing the string variables – String handling functions. Pointers: Understanding Pointers – Declaration and Initialization of pointer variables – Accessing variables through pointers – Pointers and arrays – Pointers and Strings – Dynamic memory allocation.	12	Text Book/ Reference Books/NPTEL
V	**Structures and Files** Structures - Nested structures – Pointer and Structures – Array of structures –Structures and functions– Union. Files: Defining and opening a File – Closing a file – I/O Operations on files - Command Line Arguments.	12	Text Book/ Reference Books/NPTEL
	Total	**60**	

Text book	1.	Reema Thareja, 2016, "Programming in C", 2nd Edition, Oxford University Press.
Reference Books	1.	E. Balagurusamy, 2017, "Programming in ANSI C", 7th Edition, TMH.
	2.	Paul Deitel, Harvey Deitel, 2019, "C How to Program", 8th Edition, Pearson
	3.	Ashok N. Kamthane, 2009, "Programming and Data Structures", 1st Edition, Pearson Education.
	4.	Anita Goel, Ajay Mittal, 2016,"Computer Fundamentals and Programming in C", 1st Edition, Pearson.
	5.	Byron Gottfried, 2018, "Schaum's Outline of Programming with C", 4th Edition, McGraw Hill Education.

Journal and Magazines	-
E-Resources and Website	https://nptel.ac.in

Learning Method	Chalk and Talk/Assignment/Seminar/ Group Discussion/Case Study

Focus of the Course	Skill Development/ Employability/ Entrepreneurial Development/ Innovations

D.N.G.P. ARTS AND SCIENCE COLLEGE ★ 1997 ★

Semester – I CORE II: DIGITAL COMPUTER FUNDAMENTALS							
Semester	Course Code	Course Name	Category	L	T	P	Credits
I	26ITU1CA	DIGITAL COMPUTER FUNDAMENTALS	CORE	48	-	-	4

Preamble	This course has been designed for students to learn and understand • the concepts of number system and circuits • the principles of logic gates and memory • the design and architecture of microprocessors and microcontrollers.
Prerequisite	Knowledge on basic digital system

Course Outcomes (COs)		
CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	Understand the types of number systems, Boolean Algebra	K2
CO2	Understand and analyze Logic gates	K2
CO3	Illustrate the concepts of combinational circuits	K3
CO4	Analyze different types of sequential logic and memory organization	K4
CO5	Evaluate and compare the architecture of microprocessors and microcontrollers	K5

Mapping with Program Outcomes:					
COs / POs	PO1	PO2	PO3	PO4	PO5
CO1	S	M	S	S	M
CO2	S	M	M	S	M
CO3	S	S	S	S	S
CO4	S	M	S	S	M
CO5	S	M	S	S	M

26ITU1CA | DIGITAL COMPUTER FUNDAMENTALS

Syllabus

Unit	Content	Hrs	Resources
I	**Binary systems and Boolean functions** Binary Numbers- Number base conversions- Octal and Hexadecimal conversions- Compliments- Binary codes. Basic Definitions-Boolean functions- Canonical and standard forms: Minterms and Maxterms - Sum of Minterms-Product of Minterms-conversion between canonical forms, standard forms.	10	Text Book 1 / Reference Book
II	**Digital Logic Gates & Map methods** AND, OR, Inverter, Buffer, NAND, NOT, Exclusive-OR, Exclusive-NOR. The Map Method-Two and three-variable Maps-Four variable Map - Five and Six-Variable Maps- Product of Sum simplification - Don't care conditions.	08	Text Book 1 /Reference Book
III	**Combinational Logic** Adders: Half-Adder, Full-Adder. Subtractors Half-Subtractor, Full-Subtractor. Multilevel NAND Circuits: Universal Gate. Multilevel NOR Circuits: Universal Gate. Binary Parallel Adder- Decimal Adder - BCD Adder. Decoders: Demultiplexers-Encoders - Multiplexer.	10	Text Book 1 / Reference Book
IV	**Flip flops and Memory** Introduction- Flip-flops-Clocked RS Flip-flop - D Flip-flop - JK Flip-flop - Design of Counters- Registers -Ripple Counters. The Memory Unit - Random Access Memories: Integrated-circuit Memory- Magnetic-core Memory.	10	Text Book 1 & NPTEL
V	**Microprocessor and Microcontrollers** Introduction – Microprocessor- Microcomputer- Architecture of Microprocessors- History- Evolution- Microprocessor Applications- Evolution of Microcontrollers- Application of Microcontrollers. Architecture of 8085 Microprocessor- Pin diagram of 8085 Microprocessor.	10	Text Book 2 / Reference Book & You Tube Videos
	Total	**48**	

Text book	1.	M.Morris Mano, 2019,"Digital Logic and Computer Design",2nd Edition, Pearson India Education.
	2.	Soumitra Kumar Mandal, 2018, "Microprocessors and Microcontrollers – Architecture, Programming and Interfacing using 8085, 8086, 8051", 15th Edition, Tata Mc Graw Hill Education.
Reference Books	1.	S. Salivahanan and S Arivazhagan, 2018,"Digital Circuits and Design", 5th Edition, Oxford University Press, Noida.
	2.	Thomas Floyd L., 2015, "Digital Fundamentals", 11th Edition, Pearson Publication Ltd, New Delhi

	3.	Aditya P Mathur, 2016,"Introduction to Microprocessor", 3rd Edition, McGraw Hill Education.

Journal and Magazines	International Journal of Computing and Digital System- https://journal.uob.edu.bh/handle/123456789/12?id=about https://www.pcmag.com/)
E-Resources and Website	https://nptel.ac.in https://www.coursera.org/learn/digital-systems/ https://www.nesoacademy.org/ec/05-digital-electronics

Learning Method	Lecture/Simulation/Demo/Mind Mapping

Focus of the Course	Skill Development/Employability

D.N.G.P. ARTS AND SCIENCE COLLEGE 1997

Semester –I CORE PRACTICAL I: C PROGRAMMING							
Semester	Course Code	Course Name	Category	L	T	P	Credits
I	26ITU1CP	C PROGRAMMING	CORE PRACTICAL	-	-	48	2

Preamble	This course has been designed for students to learn and understand • The structure of the C language along with its basic building blocks • The Concepts of arrays and functions • The use of pointers, structures and files operations in C programming.
Prerequisite	Knowledge of problem solving skills and logical thinking

Course Outcomes (Cos)		
CO Number	**Course Outcomes (COs) Statement**	**Bloom's Taxonomy Knowledge Level**
CO1	Demonstrate programs using Operators, Decision Making Statements.	K2
CO2	Apply iteration statements, arrays, and string handling functions to solve problems efficiently.	K3
CO3	Manipulate arrays of structures and matrices to handle complex data systematically.	K3
CO4	Analyze C programs using pointers to efficiently manage memory and optimize program performance.	K4
CO5	Evaluate file operations with command-line arguments to develop programs	K5

Mapping with Program Outcomes:					
Cos / POs	PO1	PO2	PO3	PO4	PO5
CO1	S	S	S	S	S
CO2	S	S	S	M	S
CO3	S	S	S	S	M
CO4	S	S	S	M	M
CO5	S	S	S	M	M

26ITU1CP	C PROGRAMMING

S.No	List of Programs
1	Program using various Operators in C.
2	Implement Decision making statements in C.
3	Program using Iteration statements in C.
4	Implement Array concept in C.
5	Program using User-defined functions.
6	Program Using Recursive functions.
7	Demonstrate handling of pointers.
8	Demonstrate string operations using pointers.
9	Implement User-defined data types using Union.
10	Implement Structure concept.
11	Implement File operations.
12	Implement Memory Management.

Text Books	1.	Yashavant Kanetkar,2022, "Let us C: Authentic guide to C Programming", 19th Edition, BPB Publications.
	2.	Byron Gottfried, 2018, "Schaum's Outline of Programming with C", 4th Edition, McGraw Hill Education.
	3.	Reema Thareja, 2016, "Programming in C", 2nd Edition, Oxford University Press.

Learning Method	Demonstration/ Hands on Experiments

Focus of the Course	Skill Development/ Employability

Semester – I IDC I: NUMERICAL METHODS AND STATISTICS							
Semester	Course Code	Course Name	Category	L	T	P	Credits
I	26MTU1IC	NUMERICAL METHODS AND STATISTICS	IDC	48	12	-	4

Preamble	This course has been designed for students to learn and understand • the method of solving linear system of equations • the relation between two attributes and measure their efficiency • the method of checking the validity of parameters through test statistic
Prerequisite	Knowledge on Basic Mathematics

Course Outcomes (COs)		
CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	Explain Newton-Raphson and various direct and iterative methods	K2
CO2	Apply interpolation and numerical integration methods to solve problems	K3
CO3	Recall concepts of frequency distribution, mean, median, mode, and dispersion	K1
CO4	Analyze relationships between variables using correlation and regression	K4
CO5	Evaluate hypotheses and draw conclusions based on statistical tests	K5

Mapping with Program Outcomes:					
COs / POs	PO1	PO2	PO3	PO4	PO5
CO1	✓				
CO2					
CO3					
CO4					✓
CO5					✓

26MTU1IC	IDC: NUMERICAL METHODS AND STATISTICS

Syllabus

Unit	Content	Hrs	Resources
I	**Solution of Algebraic, Transcendental and Linear systems of Equations** Introduction - Newton-Raphson method- direct methods - matrix inversion method - Gaussian elimination method - Gauss Jordan method - iterative methods - Gauss Seidel method - Gauss Jacobi method.	13	Text Book 1
II	**Interpolation, Numerical Differentiation and Integration** Introduction - Finite difference - Newton's formula for forward and backward interpolation – Interpolation with unevenly spaced points: Lagrange's interpolation- Numerical differentiation - maximum and minimum values of a tabulated Function - Numerical integration - Trapezoidal rule - Simpson's 1/3 Rule - Simpson's 3/8 Rule.	12	Text Book 1
III	**Classification, Measures of Central tendency and Dispersion** Frequency distribution - Characteristics of a good measure of central tendency - Mean - Arithmetic Mean - pooled mean - Geometric Mean - Harmonic Mean -Median - Mode. Measures of Dispersion - purposes - properties -Range - Inter quartile range –Mean deviation - Variance - Standard Deviation - coefficient of variation.	13	Text Book 2
IV	**Correlation and Regression** Scatter diagram - Least square method of fitting a regression line - properties - regression line of X on Y- Correlation methods - determination of correlation by graphical method - Correlation Coefficient - Correlation in grouped bivariate data - relationship between correlation coefficients and regression coefficient - Rank correlation.	11	Text Book 2
V	**Test of Significance and Chi-square Test** Test of hypothesis for population variance -two types of error - level of significance - critical region - one and two tailed test - size and power of a test -randomized test - non-randomized test - degrees of freedom - student's t-test - test of equality of two population means - paired t- test. Chi-square Test: test of hypothesis for population variance - test of goodness of fit - test in one way classification - Contingency table - Test of independence of factors - Yate's correction.	11	Text Book 2
	Total	**60**	

	Note: 20% Theory and 80% Problem

Text book	1.	Sastry S.S., 2012, "Introductory methods of Numerical Analysis", Prentice-Hall of India, New Delhi (Unit I to II).
	2.	Agarwal B L, 2013, "Basic Statistics", New age International (P) Limited publishers, New Delhi. (Unit III to V).
Reference Books	1.	Gupta C.B. and Vijay Gupta, 2007,"Introduction to Statistical Methods", S.Chand & Co, New Delhi.
	2.	Sanchetti D C, Kapoor V K, 2010, "Statistics", S.Chand & Co, New Delhi.
	3.	Venkataraman M K, 2004, "Numerical Methods in Science and Engineering", 4th Edition, NPC.
	4.	Veerarajan T, Ramachandran T, 2004, "Theory and Problems in Numerical Methods with Programs in C and C++", 10th Edition, Tata Mc- Graw Hill Publishing Company Limited, New Delhi.

Journal and Magazines	https://www.worldscientific.com/worldscinet/bms
E-Resources and Website	https://.nptel.ac.in

Learning Method	Chalk and Talk/Assignment/Seminar

Focus of the Course	Skill Development/ Employability

30/4/26

BoS Chairman/HOD
Department of Information Technology
Dr. N.G.P. Arts And Science College
Coimbatore - 641 048

Dr. N.G.P. Arts and Science College
APPROVED
21st
01-04-2026
AC -
GB -