

DEPARTMENT OF COMPUTER SCIENCE

NEHRU ARTS AND SCIENCE COLLEGE

(Affiliated to Bharathiar University Reaccredited with “A+” Grade by NAAC,
ISO 9001:2015 (QMS) Certified, Recognized by UGC with 2(f) &12(B),
Under Star College Scheme by DBT, Govt. of India)
Nehru Gardens, Thirumalayampalayam, Coimbatore - 641 105, Tamil Nadu..

B. Sc. Computer Science

SYLLABUS



EFFECTIVE FROM 2024-2025



Scheme of Examination

B. Sc. COMPUTER SCIENCE

Programme Code : UCS

(Applicable to the students admitted during the year 2024-2025 onwards)

Semester	Part	Sub. Code	Name of the Subject	Instruction hours	Duration of Examination	Examination Marks			Credits	
						CIA	ESE	Total		
I	I	23U1TAM101/ 24U1HIN101 / 24U1MAL101/ 24U1FRN101	Elanthamizh Rachnathmak Hindi Kadha, Samskaaram, Vivarthanam Français general - I	4	3	20	55	75	3	
	II	24U2ENG101	Professional English I	4	3	20	55	75	3	
	III	23U3CKC101	Core Paper I: Python Programming		5	3	25	75	100	4
		23U3CKC102	Core Paper II: Digital Fundamentals and Computer Architecture		5	3	25	75	100	4
		24U3CSP101	Core Paper III: Practical in Python Programming		4	3	40	60	100	4
	IV	23U3MIA101	Allied Paper I: Mathematics for Computer Science		5	3	25	75	100	4
		21U4ENV101	@ Ability Enhancement Compulsory Course Environmental Studies		2	3	50	-	50	2
			22U4HVY201	@ Value Education: Human Values and Yoga Practice	1	-	-	-	-	-
				30				600	24	
II	I	23U1TAM202/ 24U1HIN202/ 23U1MAL202/ 24U1FRN202	Pynthamizh Sanchar Hindi Novalum Bhashaapadanavum Français general - II	4	3	20	55	75	3	
	II	24U2ENG202	Professional English II	4	3	20	55	75	3	
	III	23U3CKC203	Core Paper IV: Java Programming		5	3	25	75	100	4
		23U3CKC204	Core Paper V:Data Structures		5	3	25	75	100	4
		23U3CSP202	Core Paper VI: Practical in Java Programming and Bio-Computing		4	3	40	60	100	4
		23U3MIA202	Allied Paper II: Discrete Mathematics		5	3	25	75	100	4
	IV	21U4HRC202	@ Ability Enhancement Compulsory Course Human Rights and Constitution of India		2	3	50	-	50	2
		22U4HVY201	@ Value Education: Human Values and Yoga Practice		1	2	50	-	50	2
		24U4SEC201	Skill Enhancement Course 1 – Career Foundation Skills		2	2	-	-	25	1
				32				600	24	

III	I	23U1TAM303/ 24U1HIN303 / 24U1MAL303/ 24U1FRN303	Arunthamizh Sahityak Hindi Kavithayum Smaranayum Le Français general - III	4	3	20	55	75	3
	II	24U2ENG303	Communicative English Practical - I	4	3	30	45	75	3
	III	23U3CKC305	Core Paper VII: Operating Systems	4	3	20	55	75	3
		24U3CSC303	Core Paper VIII: Object Oriented System and Design	4	3	20	55	75	3
		23U3CSP304	Core Paper IX: Practical in Case Tools	3	3	30	45	75	3
		23U3MIA303	Allied Paper III: Operations Research	4	3	25	75	100	4
	IV	23U4CSZ301	Skill Enhancement Course II -Practical in Agile Software Development	3	3	30	45	75	3
		22U4NM3BT1 / 22U4NM3AT1 / 22U4NM3CAF / 22U4NM3GST / 22U4NM3WRT	# @Basic Tamil - I / ##Advanced Tamil- I / * NME: Consumer Affairs / Gender Sensitization/ Women's Rights	2	2	50		50	2
		SBOEC	Skill Enhancement Course III - Extra Departmental Elective Course	2	3	-	50	50	2
		23U4CDVALC	Skill Enhancement Add on Course - Institute Industry Linkage	4	-	-	-	-	-
24U4SEC302		Skill Enhancement Course IV – Employment Enhancement Training	2	2	-	-	25	1	
				36			675	27	
IV	I	23U1TAM404/ 24U1HIN404 / 24U1MAL404/ 24U1FRN404/	Muthamizh Prayogik Hindi Drisyakalaa Saahithyam Le Français general - IV	4	3	20	55	75	3
	II	24U2ENG404	Communicative English Practical - II	4	3	30	45	75	3
	III	23U3CKC407	Core Paper X: RDBMS and MySQL	4	3	20	55	75	3
		23U3CKC408	Core Paper XI: R Programming	4	3	20	55	75	3
		23U3CSP405	Core Paper XII: Practical in R Programming	3	3	30	45	75	3
		23U3BTA404	Allied Paper IV: Fundamentals of Bioinformatics	4	3	20	55	75	3
	IV	24U4CSZ402	Skill Enhancement Course V Practical in HTML, CSS, Java Script	3	3	30	45	75	3
		22U4NM4BT2 / 22U4NM4AT2 / 22U4NM4GEN	# @Basic Tamil- II / ##Advanced Tamil- II / General Awareness	2	2	50		50	2
	IV	VBOE	Value Based Open Elective Courses – Intra School Course	2	3	-	50	50	2
		24U4CSVALC	Skill Enhancement Course VI Add on – Institute Industry Linkage	4	-	50	-	50	2
				34			675	27	

V	III	24U3CSC507	Core Paper XIII: Data Communication and Networks	5	3	25	75	100	4
		23U3CJC506	Core Paper XIV: Artificial Intelligence	5	3	20	55	75	3
		23U3CSC508	Core Paper XV: Android Programming	5	3	20	55	75	3
		23U3CSP509	Core Paper XVI: Practical in Android Programming	5	3	30	45	75	3
		23U3CKE501/ 23U3CKE502/ 23U3CKE503/ 23U3CKE504	Discipline Specific Elective Paper I	6	3	25	75	100	4
		24U3CSV406	Internship	-	-	50	-	50	2
	IV	23U4CSZ503	Skill Enhancement Course VII Practical in Networking	4	3	30	45	75	3
		24U4SEC503	Skill Enhancement Course VIII – Campus to Corporate	2	2	-	-	25	1
		24U4SEC504	Skill Enhancement Course IX – Industrial Exploration / Corporate Visit	2	2	-	-	25	1
				34				600	24
III	23U3CSC610	Core Paper XVII: Full Stack Development	6	3	25	75	100	4	
	23U3CSV611	Project and Viva-Voce	6	-	40	60	100	4	
VI	III	23U3CKE605/ 23U3CKE606/ 23U3CKE607/ 23U3CKE608	Discipline Specific Elective Paper - II	6	3	25	75	100	4
		23U3CSE609/ 23U3CSE610/ 23U3CSE611/ 23U3CJE612	Discipline Specific Elective Paper - III	6	3	25	75	100	4
	IV	23U4CSZ604	Skill Enhancement Course X: Practical in Full Stack Development and Bio-Perl	6	3	30	45	75	3
	V	23U4EXT601	Extension Activities	-	-	50	-	50	2
				30				500	20
Total								3750	150
Additional Credit (Optional)		Semester II - VI							10

Basic Tamil -Students who have not studied Tamil upto 12th standard.

##**Advanced Tamil** – Students who have studied Tamil language upto 12th standard and chosen other languages under part I of the programme but would like to advance their Tamil language skills.

* **NME** – Student shall choose any one course out of three courses.

@ No End Semester Examinations. Only Continuous Internal Assessment (CIA)

\$ - Not included in total Marks and CGPA calculation

List of Elective papers (Choose any one of the papers)

Elective Papers	Course Code	Group	Name of the Course
Elective Paper - I	23U3CKE501	A	Blockchain Technology
	23U3CKE502	B	Next Generation Networks
	23U3CKE503	C	Internet of Things
	23U3CKE504	D	Big Data Analytics
Elective Paper - II	23U3CKE605	A	Software Quality Assurance
	23U3CKE606	B	Information Security
	23U3CKE607	C	Cloud Computing
	23U3CKE608	D	Cyber Security
Elective Paper - III	23U3CSE609	A	Data Mining and Warehousing
	23U3CSE610	B	Machine Learning Techniques
	23U3CSE611	C	PC Hardware & Troubleshooting
	23U3CJE612	D	Digital Marketing

Extra Departmental Course offered by the Department to other Department Students

S.No.	Subject Code	Name of the Subject
1	24U4CS3ED1	Practical in Multimedia Technologies
2	24U4CS3ED2	Practical in Web Designing

- Students need to opt a Course other than the Course offered by their department.

Intra School Course offered by the Department to other Department Students (within the School)

S. No.	Subject Code	Name of the Subject
1.	22U4VBOE01	Design Ecosystem
2.	22U4VBOE02	Design Thinking
3.	22U4VBOE03	Disaster Management
4.	22U4VBOE04	Environmental Pollution and Waste Management (EMS)
5.	22U4VBOE05	History of Ancient India
6.	22U4VBOE06	Indian Knowledge System
7.	22U4VBOE07	Principles of Intellectual Property Rights
8.	22U4VBOE08	Science, Society and Culture
9.	22U4VBOE09	Community Engagement
10.	22U4VBOE10	Emotional Intelligence

11.	22U4VBOE11	Fundamentals of Tourism
12.	22U4VBOE12	Health Education
13.	22U4VBOE13	Media and Politics
14.	22U4VBOE14	Positive Psychology and Work Life
15.	22U4VBOE15	Professional Ethics
16.	22U4VBOE16	The Science of Happiness
17.	NCC	

- Students shall opt any course within their Schools.
- NCC – Students who qualify NCC B Certificate Examination need not appear for these open Electives. The Credits shall be transferred.

Self-Study Paper offered by Costume Design and Fashion Department

S. No.	Semester	Course code	Course Title
1	Semester II to V	22UCSSS01	Libre Office
2		22UCSSS02	Management Information System

Chairman
Board of Studies in Computer Science
Nehru Arts and Science College
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