

Kunthavai Naacchiyaar Govt Arts College for Women (Autonomous)

Department of Computer Science

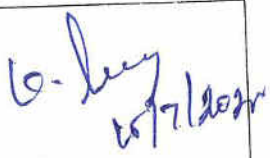
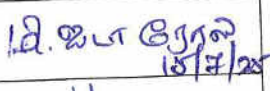
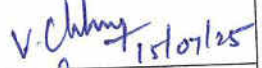
Minutes of UG Internal Board of Studies Meeting

Date: 15.07.2025

The B.Sc Computer Science Internal Board of Studies meeting for the academic year 2025 – 2026 was held on 15.07.2025 forenoon at the Department of Computer Science. All the faculties of the department attended the meeting.

1. In the third semester of the second year B.Sc., Computer Science, “Foundation of Coding with Python” (23K3NMCS) has removed in the course structure and instead of that Naan Muthalvan course entitled as “Full Stack-Front End Development” with the subject code 23K3NMCS has introduced. The Naan Muthalvan optional papers 23K3NMOCS entitled as “Cyber Forensics” has introduced.
2. In the fifth semester of the third year B.Sc., Computer Science, the course structure has altered as follows: from 6-lecture hours of 23K5CS09 course, 5-hours allotted to it and 1-hour reduced, and it has given to Naan Muthalvan course. 1-lecture hour of 23K5CS10 course has removed and it has given to Naan Muthalvan course entitled as 23K5NM Career Skill Enhancement and Employability Readiness Part I. The course entitled “Programming with C++” - 23K5NMOCS has introduced as Naan Muthalvan optional paper.

Staff Member List:

S.No	Name of the Faculty	Signature
1	Chair Person: Dr. V. Kayalvizhy, M.Sc., M.Phil., M.C.A., Ph.D., UGC-NET Head & Asst. Professor, Dept. of Computer Science, KNGAC, Thanjavur -07.	 15/7/25
2	Mrs. M. Ida Rose, M.Sc., B.Ed., M.Phil., UGC-NET Assistant Professor	 15/7/25
3	Mr. V. Chezhiyan, M.Sc., M. Phil., Assistant Professor	 15/7/25
4	Dr. A. Thirumalairaj, M.C.A., M.Phil., Ph.D., Assistant Professor	 15/7/25
5	Mrs G.Umarani, M.C.A., M.Phil., TNSET, UGC-NET Guest Lecturer	 15/7/25
6	Mrs. N. Baby Kala, M.Sc., M.Phil., M.C.A., TNSET., UGC-NET Guest Lecturer	 15/7/25

7	Mrs. N.Subha, M.Sc., M.Phil., M.C.A., TNSET Guest Lecturer	N. Subha 15/7/25
8	Mrs. R.Valarmathy, M.Sc., M. Phil., Guest Lecturer	R. Valarmathy 15/7/2025
9	Mrs. S.Ramya, M.Sc., M.Phil., TNSET, UGC-NET Guest Lecturer	S. Ramya 15/7/25
10	Mrs. K.Sharmila, M.Sc., M.Phil., TNSET Guest Lecturer	K. Sharmila 15/7/25
11	Dr. G.Muthamizselvi, M.Sc., M.Phil., Ph.D., UGC-NET Guest Lecturer	G. Muthamizselvi 15/7/25
12	Mrs. J.Shanmugapriya, M.Sc., M.Phil., B.Ed., TNSET Guest Lecturer	J. Shanmugapriya 15/7/25
13	Mrs. N.Anuradha, M.Sc., M.Phil., TNSET Guest Lecturer	N. Anuradha 15/7/25

15/7/2025
Head, Dept. of Computer Science

15/7/2025
Principal



Sem este r	Part	Course	Subject Code	Title of the Paper	Inst Hrs	Cre dit	Exa m. Hrs	Marks		Total
								Int.	Ext.	
I	I	LC 1	23K1T1	செய்யுள் (இக்கால இலக்கியம்), சிறுகதை, இலக்கிய வரலாறு, பயன்முறைத் தமிழ்	6	3	3	25	75	100
	II	ELC 1	23K1E1	English Made Easy – I	6	3	3	25	75	100
	III	CC 1	23K1CS01	Python Programming	5	5	3	25	75	100
		CC 2 (P)	23K1CS02P	Python Programming Lab	3	3	3	25	75	100
		EC1	23K1CH/P/CSECM1:1	Algebra and Calculus	4	4	3	25	75	100
			23K1CH/P/CSECM1:2	Numerical Methods with Applications						
		EC2		Differential Equations and Laplace Transforms	2	-	-	-	-	-
				Number Theory						
	IV	SEC1	23K1CSSEC1	Introduction to HTML	2	2	3	25	75	100
		FC	23K1CSFC	Foundation Course Problem Solving Techniques	2	2	3	25	75	100
			Total		30	22	-	-	-	700
II	I	LC 2	23K2T2	செய்யுள் (இடைக்கால இலக்கியம்), புதினம், தமிழில் பிறசொல் கலப்பு, இலக்கிய வரலாறு	6	3	3	25	75	100
	II	ELC 2	23K2E2	English Made Easy – II	6	3	3	25	75	100
	III	CC 3	23K2CS03	Data Structure and Algorithms	5	5	3	25	75	100
		CC 4 (P)	23K2CS04P	Data Structure and Algorithms Lab	3	3	3	25	75	100
		EC2	23K2CH/P/CSECM2:1	Differential Equations and Laplace Transforms	2	2	3	25	75	100
			23K2CH/P/CSECM2:2	Number Theory						
		EC3	23K2CH/P/CSECM3:1	Discrete Mathematics	4	3	3	25	75	100
			23K2CH/P/CSECM3:2	Mathematical Statistics						
	IV	SEC2	23K2CSSEC2	PHP Programming	2	2	3	25	75	100
		SEC3	23K2CSSEC3	Office Automation	2	2	3	25	75	100
			Total		30	23				800
III	I	LC 3	23K3T3	செய்யுள் (காப்பியங்கள்), உரைநடை, அலுவல்முறை மடல்கள், இலக்கிய வரலாறு	6	3	3	25	75	100
	II	ELC 3	23K3E3	Fluency in English – I	6	3	3	25	75	100
	III	CC 5	23K3CS05	Microprocessor and Microcontroller	5	5	3	25	75	100
		CC 6 (P)	23K3CS06P	Microprocessor and Microcontroller Lab	3	3	3	25	75	100
		EC4	23K3CSECP4:1	Allied Physics - I	4	4	3	25	75	100
			23K3CSECP4:2	Applied Physics - I						
		EC5		Allied Physical Practical	2	-	-	-	-	-
		SEC4	23K3CSSEC4	Advanced Excel	1	1	3	25	75	100

IV	ES		Environmental Studies	1	-	-	-	-	-	
	ECC1	23K3CSECC1:1	Competitive Skills	-	3	3	-	-	100	
		23K3CSECC1:2	MOOC (Valued Added)							
	ECC2	23K3CSECC2	Add-On Course	-	4	-	-	-	-	
	SEC5	23K3CSSEC5	Cyber Forensics	2	2	3	25	75	100	
	Total			30	21	-	-	-	700	
IV	I	LC 4	23K4T4	செய்யுள் (பண்டைய இலக்கியம்), இலக்கிய வரலாறு, நாடகம், பொதுக்கட்டுரை	6	3	3	25	75	100
	II	ELC 4	23K4E4	Fluency in English – II	6	3	3	25	75	100
	III	CC 7	23K4CS07	Java Programming	4	4	3	25	75	100
		CC 8(P)	23K4CS08P	Java Programming Lab	3	3	3	25	75	100
		EC5	23K4CSECP5P	Allied Physics Practical	2	2	3	25	75	100
		EC6	23K4CSECP6:1	Allied Physics - II	4	3	3	25	75	100
			23K4CSECP6:2	Applied Physics - II						
	IV	SEC6	23K4CSSEC6	Software Testing	2	2	3	25	75	100
		SEC7	23K4CSSEC7	Pattern Recognition	2	2	3	25	75	100
		ES	23K4EVS	Environmental Studies	1	2	3	25	75	100
	ECC3	23K4CSECC3:1	Reasoning Ability	-	3	3	-	-	100	
		23K4CSECC3:2	MOOC (Valued Added)							
		Total			30	24	-	-	-	900
V	III	CC 9	23K5CS09	Software Engineering	6	5	3	25	75	100
		CC 10	23K5CS10	Database Management System	6	5	3	25	75	100
		CC 11(P)	23K5CS11P	Database Management System Lab	6	5	3	25	75	100
		CC12P	23K5CS12PW	Core /Project with Viva voce	6	4	-	-	100	100
		EC7	23K5CSEC7:1	Cloud Computing	4	3	3	25	75	100
	23K5CSEC7:2		Human Computer Interaction							
	IV	VE	23K5VE	Value Education	2	2	3	25	75	100
			23K5I	Internship / Industrial Training (Summer vacation at the end of IV Semester Activity)	-	2				
		Total			30	26				600
VI	III	CC 13	23K6CS13	Computer Networks	7	6	3	25	75	100
		CC 14	23K6CS14	.NET Programming	7	6	3	25	75	100
		CC 15(P)	23K6CS15P	.NET Programming Lab	7	6	3	25	75	100
		EC8	23K6CSEC8:1	Fuzzy Logic	6	3	3	25	75	100
			23K6CSEC8:2	Artificial Neural Networks						
	IV	SEC8	23K6CSSEC8	Quantitative Aptitude	2	2	3	25	75	100
	V	Extn.	23K6EA	Extension Activity	-	1	-	-	-	-
		GS	23K6GS	Gender Studies	1	1	3	25	75	100
		Total			30	25				600
Grand Total				180	141				4300	

By 5/7/2021



Kunthavai Naacchiyaar Govt. Arts College for Women (Autonomous), Thanjavur - 7.

B.Sc. Computer Science Course Structure under CBCS

(For the candidates admitted from the academic year 2023 - 2024 onwards)

Semester	Part	Course	Subject Code	Title of the Paper	Inst. Hrs.	Credit	Exam. Hrs.	Marks		Total
								Int.	Ext.	
I	I	LC 1	23K1T1	செய்யுள் (இக்கால இலக்கியம்),	6	3	3	25	75	100
	II	ELC 1	23K1E1	English Made Easy – I	6	3	3	25	75	100
	III	CC 1	23K1CS01	Python Programming	5	5	3	25	75	100
		CC 2 (P)	23K1CS02P	Python Programming Lab	3	3	3	25	75	100
		EC1	23K1CH/P/CSEC	Algebra and Calculus	4	4	3	25	75	100
			23K1CH/P/CSEC	Numerical Methods with						
		EC2		Differential Equations and	2	-	-	-	-	-
				Number Theory						
	IV	SEC1	23K1CSSEC1	Introduction to HTML	2	2	3	25	75	100
		FC	23K1CSFC	Foundation Course	2	2	3	25	75	100
			Total		30	22	-	-	-	700
II	I	LC 2	23K2T2	இலக்கியம், புதினம், தமிழில்	6	3	3	25	75	100
	II	ELC 2	23K2E2	English Made Easy – II	4	3	3	25	75	100
	III	CC 3	23K2CS03	Data Structure and	5	5	3	25	75	100
		CC 4 (P)	23K2CS04P	Data Structure and	3	3	3	25	75	100
		EC2	23K2CH/P/CSEC	Differential Equations and	2	2	3	25	75	100
			23K2CH/P/CSEC	Number Theory						
		EC3	23K2CH/P/CSEC	Discrete Mathematics	4	3	3	25	75	100
			23K2CH/P/CSEC	Mathematical Statistics						
	IV	SEC2	23K2CSSEC2	PHP Programming	2	2	3	25	75	100
		SEC3	23K2CSSEC3	Office Automation	2	2	3	25	75	100
		NM	23K2NM	Overview of English	2	2	-	25	75	100
			23K2NMOCS	Web Designing			3			
			Total		30	25				900
III	I	LC 3	23K3T3	உரைநடை, அலுவல்முறை	6	3	3	25	75	100
	II	ELC 3	23K3E3	Fluency in English – I	6	3	3	25	75	100
	III	CC 5	23K3CS05	Microprocessor and	5	5	3	25	75	100
		CC 6 (P)	23K3CS06P	Microprocessor and	3	3	3	25	75	100
		EC4	23K3CSECP4:1	Allied Physics - I	4	4	3	25	75	100
			23K3CSECP4:2	Applied Physics - I						
		EC5		Allied Physical Practical	2	-	-	-	-	-
	IV	SEC4	23K3CSSEC4	Advanced Excel	1	1	3	25	75	100
		ES		Environmental Studies	1	-	-	-	-	-
		ECC1	23K3CSECC1:1	Competitive Skills	-	3	3	-	-	100
			23K3CSECC1:2	MOOC (Valued Added)						
		ECC2	23K3CSECC2	Add-On Course	-	4	-	-	-	-
		NM	23K3NMCS	Full - Stack Front End Development	2	2	-	25	75	100
			23K3NMOCS	Cyber Forensics			3			
			Total		30	21	-	-	-	700

IV	I	LC 4	23K4T4	இலக்கிய வரலாறு, நாடகம்,	6	3	3	25	75	100
	II	ELC 4	23K4E4	Fluency in English – II	6	3	3	25	75	100
	III	CC 7	23K4CS07	Java Programming	4	4	3	25	75	100
		CC 8(P)	23K4CS08P	Java Programming Lab	3	3	3	25	75	100
		EC5	23K4CSECP5P	Allied Physics Practical	2	2	3	25	75	100
		EC6	23K4CSECP6:1	Allied Physics - II	4	3	3	25	75	100
	23K4CSECP6:2		Applied Physics - II							
	IV	SEC5	23K4CSSEC5	Software Testing	2	2	3	25	75	100
		SEC6	23K4CSSEC6	Pattern Recognition	2	2	3	25	75	100
		ES	23K4EVS	Environmental Studies	1	2	3	25	75	100
		ECC3	22K4CSECC3:1	Reasoning Ability	-	3	3	-	-	100
22K4CSECC3:2			MOOC (Valued Added)							
		Total			30	24	-	-	-	900

V	III	CC 9	23K5CS09	Software Engineering	6	5	3	25	75	100
		CC 10	23K5CS10	Database Management	6	5	3	25	75	100
		CC 11(P)	23K5CS11P	Database Management	6	5	3	25	75	100
		CC12P	23K5CS12PW	Core /Project with Viva	6	4	-	-	100	100
		EC7	23K5CSECCS7:1	Cloud Computing	4	3	3	25	75	100
			23K5CSECCS7:2	Human Computer						
	IV	VE	23K5VE	Value Education	2	2	3	25	75	100
			23K5I	Internship / Industrial	-	2				
			Total			30	26			

VI	III	CC 13	23K6CS13	Computer Networks	7	6	3	25	75	100	
		CC 14	23K6CS14	.NET Programming	7	6	3	25	75	100	
		CC 15(P)	23K6CS15P	.NET Programming Lab	7	6	3	25	75	100	
		EC8	23K6CSECCS8:1	Fuzzy Logic	6	3	3	25	75	100	
			23K6CSECCS8:2	Artificial Neural Networks							
	IV	SEC7	23K6CSSEC7	Quantitative Aptitude	2	2	3	25	75	100	
	V	Extn. Act.	23K6EA	Extension Activity	-	1	-	-	-	-	
		GS	23K6GS	Gender Studies	1	1	3	25	75	100	
			Total			30	25				600
	Grand Total					180	143				4400

to be signed 10/7/2024



Kunthavai Naacchiyaar Govt. Arts College for Women (Autonomous), Thanjavur - 7.

B.Sc. Computer Science Course Structure under CBCS

(For the candidates admitted from the academic year 2023 - 2024 onwards)

Seme ster	Part	Course	Subject Code	Title of the Paper	Inst. Hrs.	Credit	Exam. Hrs.	Marks		Total
								Int.	Ext.	
I	I	LC 1	23K1T1	செய்யுள் (இக்கால இலக்கியம்),	6	3	3	25	75	100
	II	ELC 1	23K1E1	English Made Easy – I	6	3	3	25	75	100
	III	CC 1	23K1CS01	Python Programming	5	5	3	25	75	100
		CC 2 (P)	23K1CS02P	Python Programming Lab	3	3	3	25	75	100
		EC1	23K1CH/P/CSECM 1:1	Algebra and Calculus	4	4	3	25	75	100
			23K1CH/P/CSECM 1:2	Numerical Methods with Applications						
		EC2		Differential Equations and Number Theory	2	-	-	-	-	-
	IV	SEC1	23K1CSSEC1	Introduction to HTML	2	2	3	25	75	100
		FC	23K1CSFC	Foundation Course	2	2	3	25	75	100
				Total	30	22	-	-	-	700
II	I	LC 2	23K2T2	புதினம், தமிழில் பிறசொல் கலப்பு,	6	3	3	25	75	100
	II	ELC 2	23K2E2	English Made Easy – II	4	3	3	25	75	100
	III	CC 3	23K2CS03	Data Structure and	5	5	3	25	75	100
		CC 4 (P)	23K2CS04P	Data Structure and	3	3	3	25	75	100
		EC2	23K2CH/P/CSECM 2:1	Differential Equations and Laplace Transforms	2	2	3	25	75	100
			23K2CH/P/CSECM 2:2	Number Theory						
		EC3	23K2CH/P/CSECM 3:1	Discrete Mathematics	4	3	3	25	75	100
			23K2CH/P/CSECM 3:2	Mathematical Statistics						
	IV	SEC2	23K2CSSEC2	PHP Programming	2	2	3	25	75	100
		SEC3	23K2CSSEC3	Office Automation	2	2	3	25	75	100
		NM	23K2NM	Overview of English	2	2	-	25	75	100
			23K2NMOCS	Web Designing			3			
				Total	30	25				900
III	I	LC 3	23K3T3	உரைநடை, அலுவல்முறை	6	3	3	25	75	100
	II	ELC 3	23K3E3	Fluency in English – I	6	3	3	25	75	100
	III	CC 5	23K3CS05	Microprocessor and	5	5	3	25	75	100
		CC 6 (P)	23K3CS06P	Microprocessor and	3	3	3	25	75	100
		EC4	23K3CSECP4:1	Allied Physics - I	4	4	3	25	75	100
			23K3CSECP4:2	Applied Physics - I						
	IV	EC5		Allied Physical Practical	2	-	-	-	-	-
		SEC4	23K3CSSEC4	Advanced Excel	1	1	3	25	75	100
		ES		Environmental Studies	1	-	-	-	-	-
		ECC1	23K3CSECC1:1	Competitive Skills	-	3	3	-	-	100
			23K3CSECC1:2	MOOC (Valued Added)						
		ECC2	23K3CSECC2	Add-On Course	-	4	-	-	-	-
		NM	23K3NMCS	Foundation of Coding with	2	2	-	25	75	100
			23K3NMOCS	Cyber Forensics			3			
				Total	30	21	-	-	-	700

IV	I	LC 4	23K4T4	இலக்கிய வரலாறு, நாடகம்,	6	3	3	25	75	100
	II	ELC 4	23K4E4	Fluency in English – II	6	3	3	25	75	100
	III	CC 7	23K4CS07	Java Programming	4	4	3	25	75	100
		CC 8(P)	23K4CS08P	Java Programming Lab	3	3	3	25	75	100
		EC5	23K4CSECP5P	Allied Physics Practical	2	2	3	25	75	100
		EC6	23K4CSECP6:1	Allied Physics - II	4	3	3	25	75	100
	23K4CSECP6:2		Applied Physics - II							
	IV	SEC5	23K4CSSEC5	Software Testing	2	2	3	25	75	100
		ES	23K4EVS	Environmental Studies	1	2	3	25	75	100
		ECC3	23K4CSECC3:1	Reasoning Ability	-	3	3	-	-	100
			23K4CSECC3:2	MOOC (Valued Added)						
		NM	23K4NMCS	Fundamentals of Web	2	2	3	25	75	100
			23K4NMOCS	Pattern Recognition						
		Total			30	24	-	-	-	900

V	III	CC 9	23K5CS09	Software Engineering	5	5	3	25	75	100
		CC 10	23K5CS10	Database Management	5	5	3	25	75	100
		CC	23K5CS11P	Database Management	6	5	3	25	75	100
		CC12P	23K5CS12PW	Core /Project with Viva voce	6	4	-	-	-	100
		EC7	23K5CSEC7:1	Cloud Computing	4	3	3	25	75	100
	23K5CSEC7:2		Human Computer Interaction							
	IV	VE	23K5VE	Value Education	2	2	3	25	75	100
			23K5I	Internship / Industrial	-	2				
		NM	23K5NM	Career Skill Enhancement and Employability Readiness	2	2	-	25	75	100
			23K5NMOCS	Programming with C++			3			
		Total			30	28				700

VI	III	CC 13	23K6CS13	Computer Networks	7	6	3	25	75	100	
		CC 14	23K6CS14	.NET Programming	7	6	3	25	75	100	
		CC	23K6CS15P	.NET Programming Lab	7	6	3	25	75	100	
		EC8	23K6CSEC8:1	Fuzzy Logic	6	3	3	25	75	100	
			23K6CSEC8:2	Artificial Neural Networks							
	IV	SEC6	23K6CSSEC6	Quantitative Aptitude	2	2	3	25	75	100	
	V	Extn.	23K6EA	Extension Activity	-	1	-	-	-	-	
		GS	23K6GS	Gender Studies	1	1	3	25	75	100	
			Total			30	25				600
	Grand Total					180	145				4500

16. July 2017/2018

Subject Code	Subject Name	Category	L	T	P	S	Credits	Inst. Hours	Marks		
23K3NMOCS			CIA	External	Total						
	Cyber Forensics		2	-	-	-	2	2	25	75	100
Learning Objectives											
LO1	Understand the definition of computer forensics fundamentals.										
LO2	To study about the Types of Computer Forensics Evidence										
LO3	Understand and apply the concepts of Duplication and Preservation of Digital Evidence										
LO4	Understand the concepts of Electronic Evidence and Identification of Data										
LO5	To study about the Digital Detective, Network Forensics Scenario, Damaging Computer Evidence.										
UNIT	Contents									No. of Hours	
I	Overview of Computer Forensics Technology: Computer Forensics Fundamentals: What is Computer Forensics Use of ComputerForensics in Law Enforcement, Computer Forensics Assistance to HumanResources/Employment Proceedings, Computer Forensics Services, Benefits of professionalForensics Methodology, Steps taken by Computer Forensics Specialists. Types of Computer.Forensics Technology: Types of Business Computer Forensic, Technology–Types ofMilitary Computer Forensic Technology–Types of Law Enforcement–Computer Forensic. Technology–Types of Business Computer Forensic Technology.									6	
II	Computer Forensics Evidence and capture: Data Recovery: Data Recovery Defined, Data Back–up and Recovery, The Role of Back –up in Data Recovery, The Data –Recovery Solution. Evidence Collection and Data Seizure: Collection Options, Obstacles, Types of Evidence, The Rules of Evidence, Volatile Evidence, General Procedure, Collection and Archiving, Methods of Collections, Artefacts, Collection Steps, Controlling Contamination: The chain of custody.									6	

III	Duplication and Preservation of Digital Evidence: Processing steps, Legal Aspects of collecting and Preserving Computerforensic Evidence. Computer image Verification and Authentication: Special needs of Evidential Authentication, Practical Consideration, Practical Implementation.	6
IV	Computer Forensics Analysis: Discovery of Electronic Evidence: ElectronicDocument Discovery: A Powerful New Litigation Tool. Identification of Data: Time Travel, Forensic Identification and Analysis of Technical Surveillance Devices.	6
V	Reconstructing Past Events: How to Become a Digital Detective, Useable File Formats,Unusable File Formats, Converting Files.Networks: Network Forensics Scenario, a technical approach, Destruction Of E-Mail, Damaging Computer Evidence, DocumentingThe Intrusion on Destruction of Data, System Testing.	6
Total		30
Course Outcomes		Programme Outcomes
CO	On completion of this course, students will	
CO1	Understand the definition of computer forensics fundamentals.	PO1
CO2	Evaluate the different types of computer forensics technology.	PO1, PO2
CO3	Analyze various computer forensics systems.	PO4, PO6
CO4	Apply the methods for data recovery, evidence collection and data seizure.	PO4, PO5, PO6
CO5	Gain your knowledge of duplication and preservation of digital evidence.	PO3, PO8
Text Book		
1	John R. Vacca, "Computer Forensics: Computer Crime Investigation", 3/E ,Firewall Media, New Delhi, 2002.	
Reference Books		
1.	Nelson, Phillips Enfinger, Steuart, "Computer Forensics and Investigations" Enfinger, Steuart, CENGAGE Learning, 2004.	
2.	Anthony Sammes and Brian Jenkinson, "Forensic Computing: A Practitioner's Guide", Second Edition, Springer-Verlag London Limited, 2007.	

3.	.Robert M.Slade," Software Forensics Collecting Evidence from the Scene of a Digital Crime", TMH 2005.
Web Resources	
1.	https://www.vskills.in
2.	https://www.hackingarticles.in/best-of-computer-forensics-tutorials/

Mapping with Programme Outcomes:

MAPPING TABLE						
CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	3	1	2	2	2	2
CO2	2	3	2	3	3	1
CO3	3	2	2	3	3	2
CO4	3	3	1	3	3	2
CO5	3	3	2	3	3	3
Weightage of course contributed to each PSO	14	12	9	14	14	10

Strong-3 M-Medium-2 L-Low-1

W. Aug 10/7/2018

Semester – V

Hours - 2

Credit - 2

Programming with C++ (23K5NMOCS)

Objective: *To provide knowledge in object oriented programming concept.*

Unit - I: Overview of C: History of C - Importance of C - Basic structure of C programs. Constants, Variables and Data Types - Operators and Expressions: Arithmetic, Relational, Logical, Assignment, Increment, Decrement, Conditional, Bitwise, Special Operators - Arithmetic Expressions - Evaluation of Expressions - Type Conversion - Operator Precedence and Associativity.

Unit - II: Beginning with C++ - Applications of C++ - More C++ Statements - Structure of C++ Program. Tokens, Expressions and Control Structures: Tokens - Keywords - Identifiers and Constants - Basic Data Types - Declaration and Dynamic Initialization of variables - Operators in C++ - Expressions and their types - Operator Precedence - Control Structures.

Unit - III: Functions in C++: Introduction – The Main Function – Function Prototyping – Call by Reference – Return by Reference - Inline Functions – Default Arguments – const Arguments - Function Overloading - Friend and Virtual Functions - Math Library Functions.

Unit - IV: Classes and Objects: Introduction - Specifying a Class - Defining Member Functions - Nesting of Member Functions - Private Member Functions - Arrays within a class - Memory Allocation for objects - Arrays of Objects - Objects as Function Arguments - Friendly Functions – Returning Objects - Local Classes.

Unit - V: Constructors and Destructors: Constructors – Parameterized Constructors – Multiple Constructors – Dynamic Initialization of Objects – Copy Constructors – Destructors. Exception Handling: Introduction – Basics of Exception Handling - Exception Handling Mechanism – Throwing Mechanism - Catching mechanism - Rethrowing an Exception - Specifying Exceptions.

Unit – VI: **(For Internal Exam only)** New Features of ANSI C++ Standard: Introduction – New Data Types - New Operators – Class Implementation - Namespace Scope – Operator Keywords – New Keywords – New Headers.

Text:

1. "Programming in ANSI C", E. Balagurusamy, McGraw Hill Education (India) Pvt. Ltd., Seventh Edition, Fourth Reprint 2017.

Unit - I: Chapters: 1, 2, 3.

2. "Object Oriented Programming with C++", E. Balagurusamy, McGraw Hill Education (India) Pvt. Ltd., Seventh Edition, 2018.

Unit - II to V: Chapters: 2, 3, 4, 5.1 - 5.10, 5.13 - 5.17, 5.19, 6.1 - 6.7, 6.11, 13.

Unit – VI: **(For Internal Exam only)** Chapter: 16

Reference:

1. "C++ Programming", Mike McGrath, Easy Step, Fifth Edition, 2017.
2. "Object Oriented Programming with C++", Hanumanth Ladwa, 2021.
3. "An Introduction to programming with C++", Daine Zak, Cengage Learning., Eighth Edition, 2016.

Course outcome:

COs	Statements	Bloom's Level
CO1	Describe the concept of constants, variables and Data types.	L2
CO2	Determine the concept of Object-oriented programming.	L3
CO3	Classify the concepts of functions.	L2
CO4	Categorize the class hierarchies using the Object-oriented design process.	L2
CO5	Express the use of Exception Handling mechanism in C++.	L3

CO-PO Mapping:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	2	1	2	2	-	2	-	-	-	1	3
CO2	1	2	2	-	2	1	1	1	-	2	-	2
CO3	1	2	2	1	2	2	2	1	-	2	1	1
CO4	2	2	2	-	2	2	1	2	-	-	2	3
CO5	1	2	1	1	1	-	2	2	-	2	2	3

Question Pattern:

Section A: Answer ALL the Questions: (20 x 1 = 20 marks)

Section B: Answer ALL the Questions: (5 x 5 = 25 marks)

Section C: Answer ANY THREE Questions: (3 x 10 = 30 marks)

10. Aug 15/7/2024

Kunthavai Naacchiyaar Govt Arts College for Women (Autonomous)

Department of Computer Science

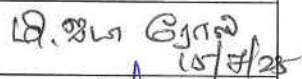
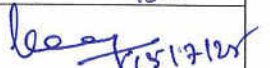
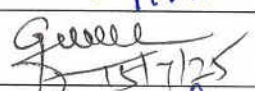
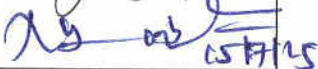
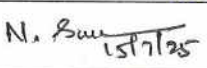
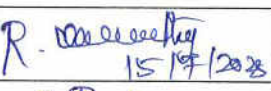
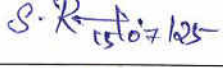
Minutes of PG Internal Board of Studies Meeting

Date: 15.07.2025

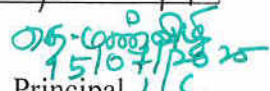
The M.Sc Computer Science Internal Board of studies meeting for the academic year 2025 – 2026 was held on 15.07.2025 forenoon at the department of computer science. All the faculties of the department attended the meeting.

1. Naan Muthalvan classes are not being conducted for first year and second year M.Sc students, therefore no corrections need to be carried out.

Staff Member List:

S.No	Name of the Faculty	Signature
1	Chair Person: Dr. V. Kayalvizhy, M.Sc., M.Phil., M.C.A., Ph.D., UGC-NET Head & Asst. Professor, Dept. of Computer Science, KNGAC, Thanjavur -07.	
2	Mrs. M. Ida Rose, M.Sc., B.Ed., M.Phil., UGC-NET Assistant Professor	
3	Mr. V.Chezhiyan, M.Sc., M. Phil., Assistant Professor	
4	Dr. A. Thirumalairaj, M.C.A., M.Phil., Ph.D., Assistant Professor	
5	Mrs G.Umarani, M.C.A., M.Phil., TNSET, UGC-NET Guest Lecturer	
6	Mrs. N. Baby Kala, M.Sc., M.Phil., M.C.A., TNSET., UGC-NET Guest Lecturer	
7	Mrs. N.Subha, M.Sc., M.Phil., M.C.A., TNSET Guest Lecturer	
8	Mrs. R.Valarmathy, M.Sc., M. Phil., Guest Lecturer	
9	Mrs. S.Ramya, M.Sc., M.Phil., TNSET, UGC-NET Guest Lecturer	
10	Mrs. K.Sharmila, M.Sc., M.Phil., TNSET Guest Lecturer	
11	Dr. G.Muthamizselvi, M.Sc., M.Phil., Ph.D., UGC-NET Guest Lecturer	
12	Mrs. J.Shanmugapriya, M.Sc., M.Phil., B.Ed., TNSET Guest Lecturer	
13	Mrs. N.Anuradha, M.Sc., M.Phil., TNSET Guest Lecturer	


Head, Dept. of Computer Science


Principal

**KUNTHAVAI NAACCHIYAAR GOVT. ARTS COLLEGE FOR WOMEN
(AUTONOMOUS) THANJAVUR**

PG Programme - M.Sc., Computer Science – Course Structure

(applicable to the candidates admitted from the academic year 2023–2024 onwards)

Sem.	Course	Subject Code	Course Title	Ins. Hr/ week	Credit	Exam Hours	Marks		Total
							Int.	Ext.	
I	CCI	23KP1CS01	Analysis & Design of Algorithms	7	5	3	25	75	100
	CCII	23KP1CS02	Object Oriented Analysis and Design & C++	7	5	3	25	75	100
	CCIII	23KP1CS03	Python Programming	6	4	3	25	75	100
	ECI	23KP1CSECCS1:1	Advanced Software Engineering	5	3	3	25	75	100
		23KP1CSECCS1:2	Embedded Systems						
	EC II	23KP1CSECCS2P	Algorithm and OOPS Lab	5	3	3	40	60	100
	TOTAL			30	20	15	140	360	500
II	CC IV	23KP2CS04	Data Mining and Warehousing	6	5	3	25	75	100
	CCV	23KP2CS05	Advanced Operating Systems	6	5	3	25	75	100
	CCVI	23KP2CS06	Advanced Java Programming	6	4	3	25	75	100
	EC III	23KP2CSECCS3:1	Artificial Intelligence & Machine Learning	4	3	3	25	75	100
		23KP2CSECCS3:2	Robotic Process Automation for Business						
	EC IV	23KP2CSECCS4P	Advanced Java Lab	4	3	3	40	60	100
	SEC I	23KP2CSSEC1	Multimedia and its Applications	4	2	3	25	75	100
	ECC I	23KP2CSECC1:1	Cognitive Ability	-	3	3	-	100	100
		23KP2CSECC1:2	MOOC (Value Added)						
	ECC II	23KP2CSECC2	Add-on Course	-	4	-	-	-	-
	TOTAL			30	22	21	165	535	600

III	CCVII	23KP3CS07	Digital Image Processing	6	5	3	25	75	100
	CCVIII	23KP3CS08	Cloud Computing	6	5	3	25	75	100
	CC IX	23KP3CS09	Network Security and Cryptography	6	5	3	25	75	100
	CCX	23KP3CS10	Data Science & Analytics	6	4	3	25	75	100
	EC V	23KP3CSECCS5P	Digital Image Processing Lab	3	3	3	40	60	100
	SEC II	23KP3CSSEC2	Mobile Computing	3	2	3	25	75	100
		23KP3I	Internship Industrial Activity	-	2	-			
	ECC III	23KP3CSECC3:1	Core Competence	-	3	3	-	100	100
		23KP3CSECC3:2	MOOC (Value Added)						
TOTAL				30	26	21	165	535	600
IV	CCXI	23KP4CS11P	Python Programming Lab	6	5	3	40	60	100
	CCXII	23KP4CS12P	Web Application development & hosting Lab	6	5	3	40	60	100
	CCXIII	23KP4CSPW	Project work and Viva-Voce	10	7	3	-	-	100
	EC VI	23KP4CSECCS6:1	Internet of Things	4	3	3	25	75	100
		23KP4CSECCS6:2	Block Chain Technology						
	SEC III	23KP4CSSEC3	Skill Enhancement Course - Professional Competency Skill	4	2	3	25	75	100
		23KP4EA	Extension Activity	-	1				
	TOTAL				30	23	15	130	270
GRANDTOTAL				120	91				2200

Note:

*¹Credit provided for successfully completed SYAYAM / MOOCs Courses.

*2 Credit provided for successfully completed Add on Course offered by varies departments.

^{*3} Internship / Industrial Activities shall be done after the end of the second semester (Summer Vacation) and the credits will be provided in the third semester.

*⁴ 20% theory and 80% practical.

for M. J. G. Ross
18/7/25