

NALLAMUTHU GOUNDER MAHALINGAM COLLEGE (AUTONOMOUS)-POLLACHI

578	B.Sc. Botany	Major Practical - IV (For VI Sem Theory Papers)	22UBY615	2022
579	B.Sc. Botany	Project & Viva-voce	22UBY616	2022
580	B. Sc. Zoology	Non Major Elective I Practical Skill in Human Health	22UZY3N2	2022
581	B. Sc. Zoology	Skill based Elective -II Biofarming	22UZY6S3	2022
582	B. Sc. Zoology	Advanced Learner Course-II Zoology for competitive Exams	22UZY6AL	2022
583	B. Sc. Zoology	Project	22UZY616	2022
584	M.Sc. Mathematics	Core VI: Mathematical Statistics	22PMS206	2022
585	M.Com	Business Environment	22PCO102	2022
586	M.Com	Investment Management	22PCO2N1	2022
587	M.Com	Fundamentals of Marketing	22PCO2N2	2022
588	Tamil Aided	Tamil Paper I	22UTL101	2022
589	Tamil Aided	Tamil Paper II	22UTL202	2022
590	Tamil Aided	Tamil Paper III	22UTL303	2022
591	Tamil Aided	Tamil Paper IV	22UTL404	2022
592	B.A Tamil	IKKALA ILAKKIYAM	22UTM101	2022
593	B.A Tamil	ARA ILAKKIYAM	22UTM102	2022
594	B.A Tamil	Allied - I TAMILAGA VARALARUM PANBADUM	22UTM1A1	2022
595	B.A Tamil	SITRILAKKIYAM	22UTM204	2022
596	B.A Tamil	TAMIL ILAKKIYA VARALARU	22UTM2A2	2022
597	B.A Tamil	NANNOOL SOLLATHIGARAM	21UTM305	2022
598	B.A Tamil	BAKTHI ILAKKIYAM	21UTM306	2022
599	B.A Tamil	KAAPPIYANGAL	20UTM509	2022
600	B.A Tamil	SANGA ILAKKIYAM ETTUTHOGAI	20UTM613	2022
601	B.A Tamil	SANGA ILAKKIYAM PATHUPAATTU	20UTM614	2022
602	B.Sc Computer Science	Computing Fundamentals and C Programming	22UCS101	2022
603	B.Sc Computer Science	Allied-1: Mathematics(Statistical Methodes and Linear Algebra)	22UCS1A1	2022

BOS HIGHLIGHTED



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NALLAMUTHU GOUNDER MAHALINGAM COLLEGE (AUTONOMOUS)-POLLACHI

604	B.Sc Computer Science	C++ Programming		
605	B.Sc Computer Science	Java Programming	22UCS204	2022
606	B.Sc Computer Science	Android Programming	22UCS307	2022
607	B.Sc. CT	Operations Research	22UCS518	2022
608	B.Sc. CT	Python Programming	22UCT2A2	2022
609	B.Sc. CT	Core Lab V – Python Programming Lab	22UCT412	2022
610	B.Sc. CT	Core Elective I – Fundamentals of Block Chain Technology and Digital Currency	22UCT415	2022
611	B.Sc. CT	R Programming	22UCT5E3	2022
612	B.Sc. CT	Scripting Language	22UCT5S1	2022
613	B.Sc. CT	Core Elective III – Ethical Hacking	22UCT5S2	2022
614	B.Sc. CT	Machine Learning Techniques	22UCT6E5	2022
615	B.Sc. CT	Digital Marketing	22UCT6E6	2022
616	B.Sc. CT	Desktop Publishing Lab	22UCT6AL	2022
617	B.Sc. CT	Animation Lab	22UCT6S1	2022
618	BCA	Visual Basic Programming Lab	22UCT6S2	2022
619	BCA	ASP.Net	22UBC312	2022
620	BCA	Visual Programming Lab	22UBC413	2022
621	BCA	Software Testing Lab	22UBC416	2022
622	BCA	Internet of Things	22UBC522	2022
623	BCA	Information Security	22UBC5S2	2022
624	BCA	PhP Programming	22UBC6E3	2022
625	BCA	Mobile Application Development	22UBC624	2022
626	BCA	PhP Programming Lab	22UBC625	2022
627	BCA	Mobile Application Development Lab	22UBC626	2022
628	BCA	Cloud Computing Lab	22UBC627	2022
			22UBC6E5	2022



New Course Introduced

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NALLAMUTHU GOUNDER MAHALINGAM COLLEGE
POLLACHI

22nd Board of Studies Meeting in the Department of Computer Science

Date & Time: 04.06.2022 at 10.30 AM

Agenda

BoS / CS22.1	:	Welcome address and Opening Remarks by Chairman, Board of studies in the DEPARTMENT OF COMPUTER SCIENCE
BoS / CS22.2	:	Confirmation of the Minutes of the 22 nd Previous meeting of Board of studies in the DEPARTMENT OF COMPUTER SCIENCE held on 04.06.2022 and Action taken report of 11 th meeting of Board of studies
BoS / CS22.3	:	22.3.1 Syllabus of I BSc COMPUTER SCIENCE under Regulation 2022
	:	22.3.2 Syllabus of II BSc COMPUTER SCIENCE under Regulation 2021
	:	22.3.3 Syllabus of III BSc COMPUTER SCIENCE under Regulation 2020
	:	Any other Discussions if any
BoS / CS22.4	:	Suggestion given by BOS Members
BoS / CS22.5	:	Any other items

NALLAMUTHU GOUNDER MAHALINGAM COLLEGE

POLLACHI

DEPARTMENT OF COMPUTER SCIENCE

MINUTES OF BOS MEETING

The 22nd Meeting of the Board of Studies of the Department of Computer Science was held on 04.06.2022 at 10.30 a.m. in the Common Research Center, Nallamuthu Gounder Mahalingam College, Pollachi.

1. The following members were present:

1	Dr. R. Manicka chezian Associate Professor	Internal Members
2	Mr. K. Srinivasan Associate Professor	
3	Dr. Aruchamy Rajini Assistant Professor	
4	Dr. M. Sakthi Associate Professor	
5	Dr. E. Ramadevi Associate Professor	
6	Dr. R. Rathamani Assistant Professor	
7	Ms. M. Malathi Assistant Professor	
8	Dr. R. Nandhakumar Assistant Professor	
9	Ms. M. Dhavapriya Assistant Professor	
10	Ms. S. Sharmila Assistant Professor	
11	Ms. N. Yasodha Assistant Professor	
12	Ms. M. Meena Kiruthika Assistant Professor	
13	Mr. N. Arul Kumar Assistant Professor	
14	Mr. N. Karthikeyan Assistant Professor	
15	Dr. A. Kanagaraj Assistant Professor	
16	Ms. P. Jaya Priya Assistant Professor	
17	Ms. G. Angayarkanni Assistant Professor	

18	Dr. R. A. Roseline Associate Professor & Head, Department of Computer Science, Govt.Arts College, Coimbatore	University Nominee
19	Dr. K. Karthikeyan, Assistant Professor & Head, Department of Computer Science, Puratchi Thalaivi Amma Govt.Arts & Science College, Palladam	Academic Experts
20	Dr. A. Anbarasi, Assistant Professor, Department of Computer Science, LRG Govt.Arts College for Women, Thirupur.	Academic Auditor
21	Mr.V. Bharathan, Wipro Limited, Bangalore - 560037	Industrial Expert
22	Mr. N. Dhanabal, Tata Consultancy Service Limited, Kochi - 682042	Alumnus nominated by Principal / HoD
23	Ms. B. Kouslaya Devi, Meritorious Student in Computer Science, Nallamuthu Gounder Mahalingam College, Pollachi.	Student Members

2. The following members could not attend the meeting due to their prior commitments and unavoidable reasons and they were granted leave of absence.

1	Dr. Antony Selvadoss Thanamani Associate Professor & Head Department of Computer Science, Nallamuthu Gounder Mahalingam College, Pollachi	Chairman
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BoS/CS12.1 WELCOME ADDRESS AND OPENING REMARKS

Dr.R.Manicka chezian, The Internal Member of BoS, Department of Computer Science welcomed and introduced the members of 22nd Board of Studies and thanked each one of them for sparing their valuable time to attend the meeting.

BoS/CS 12.2 TO CONFIRM THE MINUTES OF <<PREVIOUS BOS MEETING NO>> BOS MEETING HELD ON DD MONTH YEAR. The minutes of the <<PREVIOUS BOS MEETING NO>> Board of Studies meeting held on DD MONTH YEAR were communicated to the members. The comments received have been incorporated and placed for confirmation. The same was approved by the PREVIOUS ACADEMIC MEETING NO Academic council.

Action Taken Report (Enclosed in Annexure 1)

BoS/CS 12.3

BoS/CS 12.3.1

BSc COMPUTER SCIENCE (I to VI SEMESTER)

The Following Papers from B. Sc Computer Science were accepted by the experts without no modification:

Course Code	
22UCS102	Core II: Digital Computer fundamentals and organization
22UCS1A2	Allied -1: Advance Mathematics and Applied Statistics
22UCS205	Core IV: Data and File Structure
22UCS2A1/ 22UCS2A2	Allied -2:Discrete Mathematics Level-I Allied-2:Discrete Mathematical Structure Level-II
22UCS308	Core VI: Relational Database Management System
22UCS309	Core VII: System Software and Operating System
22UCS3A3	Allied -3 : Computer Based Optimization Techniques
22UCS311	Core Lab IV: Programming Lab in RDBMS
22UCS3N1 / 22UCS3N2	Non-Major Elective Paper-I Photoshop Lab/ Advanced Applications in MS Excel Lab
22UCS412	Core VIII: Python Programming
22UCS413	Core IX: Open Source Technologies
22UCS414	Core X: Data Communication and Computer Networks

22UCS415	Core Lab V: Programming Lab using Python
22UCS416	Core Lab VI: Web Programming using Open Source Technologies
22UCS4N1 / 22UCS4N2	Non-Major Elective Paper-II Flash Lab/ Internet Services and Applications Lab
22UCS517	Core XI: Linux and Shell Programming
22UCS519	Core XIII: Cyber Security
22UCS5E1	Data mining and Warehousing
22UCS5E2	Data Engineering with Google Cloud
22UCS5E3	Mobile Application Development
22UCS520	Core Lab VII: Linux: shell and Socket Programming Lab
22UCS5S1	Word Press
22UCS5S2	Dream Weaver
22UCS5S3	Quantitative Aptitude Skills
22UCS622	Core XIV: R Programming(SEP)
22UCS6E4	Artificial Intelligence and Machine Learning
22UCS6E5	Front End Development with React
22UCS6E6	MongoDB
22UCS6E7	Information Retrieval
22UCS6E8	HTML, Javascript and JQuery for Web Designing
22UCS6E9	Angular NodeJS
22UCS624	Core Lab IX: R Programming Lab
22UCS625	Core Lab X: Advanced Applications in MS Excel Lab
22UCS6A L	Advanced Learner Course - II (Optional) - Self Study
22UCS6S4	Joomla
22UCS6S5	Macromedia Director
22UCS6S6	Advanced Soft Skills

The presented syllabus was accepted by the experts and a **few suggestions** were given as follows:

Course Code	Course Name	Reason for adding New Courses
22UCS101	Computing Fundamentals and C Programming	Based on the Students Feedback.
22UCS204	C++ Programming	Based on the Students Feedback.

22UCS307	Java Programming	Based on the Students Feedback.
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New Courses Added

Course Code	Course Name	Reason for adding New Courses
22UCS1A1	Allied1-Mathematics(Statistical Methods and Linear Algebra)	Feedback from Faculty
22UCS518	Android Programming	Feedback from Faculty
22UCS521	Programming Lab in Android	Feedback from Faculty
22UCS3VA	Google Workspace	Feedback from Faculty
22UCS623	Internet of Things	Feedback from Faculty

For Advanced Learners new courses were introduced and as follows

Course Code	Course Name
22UCS5AL	Robotic Process and Automation
22UCS6AL	Advanced Data Analysis using R

These changes have been made effect for the students admitted in 2022 with Semesters I to VI accordingly.

The board of studies has approved the Syllabi pattern of the first two Semesters for the two newcourses

1. B.Sc Computer Science with Artificial Intelligence & Machine Learning
 2. B.Sc Computer Science with Data Analytics
- for the forth-coming Academic year (2022).

The Scheme of Syllabus for B.Sc Computer Science with Artificial Intelligence & Machine Learning and B.Sc Computer Science with Data Analytics for the first two semesters has been attached

BoS/CS12.4 SUGGESTIONS GIVEN BY THE BoS MEMBERS

The members had a brainstorming discussion and interaction among themselves. After discussion, fruitful suggestions were incorporated appropriately in the Curriculum and Syllabi.

- a) It is Suggested to replace Mathematics I Syllabus due to Highly Enrichment of the Syllabus also to complete Syllabus in Stipulated Hours
- b) If any Student completed Online Courses in MOOC, NPTEL, E-Patahshala, TCS ION etc, the Course Credit can be included in existing Credit and Students can opt out equivalent credit course in the existing elective course.
- c) In IV semester Mini Project should be Included, and that project is based on Open Source Technology

Based on the suggestions given by the members, BOS resolved to recommend the following to the Academic Council for further approval.

ANNEXURE I

Minutes of the 21st Previous Meeting – Action Taken Report

S.No	Suggestion given by Expert Members	Action Taken
1	Latest Books may be given as Text Books or Reference Books to all the possible courses	Latest Books is given as text book or Reference Books for all the course

**List of Courses having focus on Local, National, Regional, Global Developmental needs
offered by the B.Sc Computer Science**

B.Sc Computer Science						
Programme : B.Sc Computer Science						Year : 2022
Course Code	Course Title	Need				Rationale
		Local	National	Regional	Global	
22UCS101	Core I:C Programming				✓	
22UCS102	Core II: Digital Computer fundamentals and organization				✓	
22UCS1A1 22UCS1A2	Allied-1: Mathematics (statistical Methods & Linear Algebra) Allied -1: Mathematics and Applied and Statistics		✓			
22UCS103	Core Lab I: Programming Lab in C		✓			
22UCS204	Core III: C++ Programming				✓	
22UCS205	Core IV: Data and File Structure				✓	
22UCS2A1/ 22UCS2A2	Allied -2: Discrete Mathematics Level-I Allied-2: Discrete Mathematical Structure Level-II		✓			
22UCS206	Core Lab II: Programming Lab in C++				✓	
22UCS307	Core V: Java Programming				✓	
22UCS308	Core VI: Relational Database Management System				✓	
22UCS309	Core VII: System Software and Operating System				✓	
22UCS3A3	Allied -3 : Computer Based Optimization Techniques		✓			
22UCS310	Core Lab III: Programming Lab in Java				✓	

22UCS311	Core Lab IV: Programming Lab in RDBMS				✓	
22UCS3N1 / 22UCS3N2	Non-Major Elective Paper-I Photoshop Lab/ Advanced Applications in MS Excel Lab				✓	
22UCS412	Core VIII: Python Programming				✓	
22UCS413	Core IX: Open Source Technologies				✓	
22UCS414	Core X: Data Communication and Computer Networks				✓	
22UCS415	Core Lab V: Programming Lab using Python				✓	
22UCS416	Core Lab VI: Web Programming using Open Source Technologies				✓	
22UCS4N1 / 22UCS4N2	Non-Major Elective Paper-II Flash Lab/ Internet Services and Applications Lab				✓	
22UCS517	Core XI: Linux and Shell Programming				✓	
22UCS518	Core XII: Android Programming				✓	
22UCS519	Core XIII: Cyber Security				✓	
22UCS5E1	Data mining and Warehousing				✓	
22UCS5E2	Data Engineering with Google Cloud				✓	
22UCS5E3	Mobile Application Development				✓	
22UCS520	Core Lab VII: Linux: shell and Socket Programming Lab				✓	
22UCS521	Core Lab VIII: Programming Lab in Android				✓	
22UCS5S1	Word Press				✓	
22UCS5S2	Dream Weaver				✓	
22UCS5S3	Quantitative Aptitude Skills				✓	

22UCS622	Core XIV: R Programming(SEP)				✓	
22UCS623	Core XV: Internet of Things					
22UCS6E4	Artificial Intelligence and Machine Learning				✓	
22UCS6E5	Front End Development with React				✓	
22UCS6E6	MongoDB				✓	
22UCS6E7	Information Retrieval				✓	
22UCS6E8	HTML, Javascript and JQuery for Web Designing				✓	
22UCS6E9	Angular NodeJS				✓	
22UCS624	Core Lab IX: R Programming Lab				✓	
22UCS625	Core Lab X: Advanced Applications in MS Excel Lab				✓	
22UCS6S4	Joomla				✓	
22UCS6S5	Macromedia Director				✓	
22UCS6S6	Advanced Soft Skills				✓	

List of Courses having focus on employability/ entrepreneurship/ skill development offered by the Department of Computer Science

DEPARTMENT OF COMPUTER SCIENCE						
Programme: B.Sc., Computer Science					Year:2022	
Course Code	Course Title	Employability (EM) / Entrepreneurship (EN) / Skill Development (SD)			Focus	Year of Introduction
		EM	EN	SD		
22UCS101	Core I: C Programming	EM		SD	robotics, Artificial intelligence, machine learning	2022
22UCS102	Core II: Digital Computer fundamentals and organization	EM		SD	Manufacturing of digital circuits	2013
22UCS1A1	Allied-1: Mathematics	EM		SD	Data Analytics	

	(Statistical Methods & Linear Algebra)					
22UCS103	Core Lab I: Programming Lab in C	EM		SD	robotics, Artificial intelligence, machine learning	2013
22UCS204	Core III: C++ Programming	EM		SD	Embedded Systems	2014
22UCS205	Core IV: Data and File Structure	EM		SD		2013
22UCS2A1/ 22UCS2A2	Allied -2:Discrete Mathematics Level-I Allied-2:Discrete Mathematical Structure Level-II	EM		SD		
22UCS206	Core Lab II: Programming Lab in C++	EM		SD		
22UCS307	Core V: Java Programming	EM		SD		2014
22UCS308	Core VI: Relational Database Management System	EM		SD		
22UCS309	Core VII: System Software and Operating System	EM		SD		
22UCS3A3	Allied -3 : Computer Based Optimization Techniques	EM		SD		
22UCS310	Core Lab III: Programming Lab in Java	EM		SD		2014
22UCS311	Core Lab IV: Programming Lab in RDBMS	EM		SD		
22UCS3N1 / 22UCS3N2	Non-Major Elective Paper-I Photoshop Lab/ Advanced Applications in MS Excel Lab	EM	ED	SD		
22UCS412	Core VIII: Python Programming	EM		SD		
22UCS413	Core IX: Open Source Technologies	EM	ED	SD		
22UCS414	Core X: Data Communication and Computer Networks	EM		SD		
22UCS415	Core Lab V: Programming Lab using Python	EM		SD		
22UCS416	Core Lab VI:Web Programming using Open Source Technologies	EM		SD		
22UCS4N1 / 22UCS4N2	Non-Major Elective Paper-II Flash Lab/ Internet Services	EM	ED	SD		

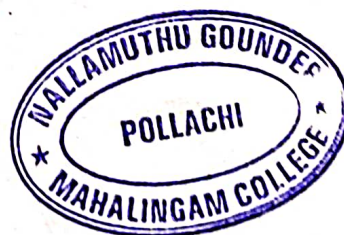
	and Applications Lab					
22UCS517	Core XI: Linux and Shell Programming	EM		SD		
22UCS518	Core XII: Android Programming	EM		SD		2017
22UCS519	Core XIII: Cyber Security	EM		SD		2015
22UCS5E1	Data mining and Warehousing	EM		SD		2015
22UCS5E2	Data Engineering with Google Cloud	EM	ED	SD		
22UCS5E3	Mobile Application Development	EM		SD		
22UCS520	Core Lab VII: Linux: shell and Socket Programming Lab	EM		SD		
22UCS521	Core Lab VIII: Programming Lab in Android	EM	ED	SD		
22UCS5S1	Word Press	EM	ED	SD		
22UCS5S2	Dream Weaver	EM	ED	SD		
22UCS5S3	Quantitative Aptitude Skills	EM		SD		
22UCS622	Core XIV: R Programming(SEP)	EM		SD		
22UCS6E4	Artificial Intelligence and Machine Learning	EM		SD		
22UCS6E5	Front End Development with React	EM	ED	SD		
22UCS6E6	MongoDB	EM		SD		
22UCS6E7	Information Retrieval	EM		SD		
22UCS6E8	HTML, Javascript and JQuery for Web Designing	EM	ED	SD		
22UCS6E9	Angular NodeJS	EM		SD		
22UCS623	Core Lab IX: R Programming Lab	EM		SD		
22UCS624	Core Lab X: Advanced Applications in MS Excel Lab	EM		SD		
22UCS626	Core Lab XI: Software Engineering Lab	EM		SD		
22UCS6A L2	Advanced Learner Course - II (Optional) - Self Study	EM		SD		
22UCS6S4	Joomla	EM		SD		
22UCS6S5	Macromedia Director	EM	ED	SD		

DEPARTMENT OF COMPUTER SCIENCE

S. No	Course Code	Course Title	Change Details	% of Changes	Content Deleted	Content Updated	Reason for Change
1	22UCS101	Computing Fundamentals and C Programming	This Course is replacing Programming in C and C++	60%	Unit – III,IV,V	Unit – I, III,IV,V	Alumni, Students, Course Teachers
2	22UCS1A1	Allied-1: Mathematics(Statistical Methodes and Linear Algebra)	This Course is replacing Allied-1: Mathematics(Statistica l and Numerical Methods)	100%			Course Teacher
3	22UCS204	C++ Programming	This Course is replacing Java Programming	100%			Alumni, Students
4	22UCS307	Java Programming	Latest Content Added	20%	Unit IV – Swing,Ja v beans, Servelets	Unit IV – JDBC	Course Teacher
5	22UCS518	Android Programming	This Course Replacing Kotlin Programming	100%			Course Teacher

M. Sany.
HoD

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Principal

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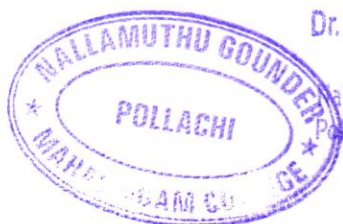
B.Sc. – COMPUTER SCIENCE DEGREE COURSE
(FOR THE CANDIDATES ADMITTED FROM THE ACADEMIC YEAR 2022 ONWARDS)
I to VI SEMESTERS: SCHEME OF EXAMINATIONS

Part	Course Code	COURSE NAME	Hrs/ Week		Exam Hrs	MAX.MARKS			Credits
			T	P		CIA	ESE	Total	
I SEMESTER									
I	22UTL101/ 22UHN101/ 22UFR101	Tamil Paper-I/ Hindi Paper-I/ French Paper-I	6		3	50	50	100	3
II	22UEN101	English Paper-I	5		3	50	50	100	3
III	22UCS101	Core I: C Programming	4		3	50	50	100	4
	22UCS102	Core II: Digital Computer fundamentals and organization	4		3	50	50	100	4
	22UCS1A1/ 22UCS1A2	Allied-I: Mathematics (Statistical Methods & Linear Algebra) / Allied-I: Advanced Mathematics and applied Statistics	4		3	50	50	100	4
	22UCS103	Core Lab I: Programming Lab in C		5	3	25	25	50	2
IV	22HEC101	Human Excellence: Personal Values& SKY Yoga Practice-I		1	2	25	25	50	1
	22UHR101	Human Rights in India	1		2	-	50	50	2
V		Extension Activities (NSS, NCC, Sports & Games, etc.,)	-	-	-	-	-	-	-
EC	22CFE101	Communicative English (Fluency) – I	-	-	-	-	-	-	-
		Online Course (Optional) (MOOC / NPTEL/SWAYAM)	-	-	-	-	-	-	Grade
Total			30					650	23



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II SEMESTER									
Part	Course Code	COURSE NAME	Hrs/Week		Exam Hrs	MAX.MARKS			Credits
			T	P		CIA	ESE	Total	
I	22UTL202/ 22UHN202/ 22UFR202	Tamil Paper-II/ Hindi Paper-II/French Paper-II	6		3	50	50	100	3
II	22UEN202	English Paper – II	5		3	50	50	100	3
III	22UCS204	Core III: C++ Programming	4		3	50	50	100	3
	22UCS205	Core IV: Data and File Structure	4		3	50	50	100	4
	22UCS2A1/ 22UCS2A2	Allied -2:Discrete Mathematics Level-I / Allied-2:Discrete Mathematical Structure Level-II	4		3	50	50	100	4
	22UCS206	Core Lab II: Programming Lab in C++		4	3	25	25	50	2
IV	22HEC202	Human Excellence: Family Values & SKY Yoga Practice-II		1	2	25	25	50	1
	22EVS201	Environmental Studies	2		2	-	50	50	2
V		Extension Activities (NSS, NCC, Sports & Games, etc.,)	-	-	-	-	-	-	-
EC	22CFE202	Communicative English (Fluency) – II	-	-	-	-	-	-	-
	22CMM201	Manaiyiyal Mahathuvam-I	1	-	2	-	50	50	Grade
	22CUB201	Uzhavu Bharatham – I	1	-	2	-	50	50	Grade
		Online Course (Optional) (MOOC / NPTEL / SWAYAM)	-	-	-	-	-	-	-
Total			30					650	22



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Part	Course Code	COURSE NAME	Hrs/ Week		Exam Hrs	MAX.MARKS			Credits
			T	P		CIA	ESE	Total	
III SEMESTER									
I	22UTL3C3	Tamil Paper-III (B)	3		3	50	50	100	3
	22UHN3C3	Hindi Paper-III							
	22UFR3C3	French Paper-III							
II	22UEN3C3	Communication Skills – III	3		3	50	50	100	3
III	22UCS307	CC V: Java Programming	4		3	50	50	100	4
	22UCS308	CC VI: Operating System Concepts and Linux	5		3	50	50	100	4
	22UCS3A1 / 22UCS3A2	GE III – Allied III: Computer Based Optimization Techniques / Resource Management Techniques	5		3	50	50	100	4
	22UCS309	CC Lab III: Programming Lab in Java		4	3	25	25	50	2
	22UCS310	CC Lab IV: Programming Lab in Linux		4	3	25	25	50	2
IV	22HEC303	Human Excellence Paper: Professional Values& SKY Yoga Practice -III	1		2	25	25	50	1
	22UCS3N1 / 22UCS3N2	Non-Major Elective I: Photoshop Lab/ Advanced Applications in MS Excel Lab		1	2	-	50	50	2
V		Extension Activities (NSS, NCC, Sports & Games, etc.,)	-	-	-	-	-	-	-
EC	22CMM302	Manaiyiyal Mahathuvam-II	15 Hrs.		2	-	50	50	Grade
	22CUB302	Uzhavu Bharatham – II	15 Hrs.		2	-	50	50	Grade
Total			30					700	25

EC – Extra Credit Course / Certificate Course / Co-scholastic Course / Job Oriented Course

CC – Core Course; GE – Generic Elective; VAC-Department Specific Value Added Course;

*Extra Credits;



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Part	Course Code	COURSE NAME	Hrs/ Week		Exam hrs	MAX.MARKS			Credits
			T	P		CIA	ESE	Total	
IV SEMESTER									
I	22UTL4C4	Tamil Paper-IV (B)	3		3	50	50	100	3
	22UHN4C4	Hindi Paper-IV							
	22UFR4C4	French Paper-IV							
II	22UEN4C4	Communication Skills – IV	3		3	50	50	100	3
III	22UCS411	CC VII: Python Programming	4		3	50	50	100	3
	22UCS412	CC VIII: Relational Database Management Systems	4		3	50	50	100	3
	22UCS4A1 / 22UCS4A2	GE IV – Allied IV: Accountancy for Decision Making / Financial Accounting	5		3	50	50	100	3
	22UCS413	CC Lab V: Programming Lab in Python		4	3	25	25	50	2
	22UCS414	CC Lab VI: Programming Lab in RDBMS		3	3	25	25	50	2
	22UCS4S1 / 22UCS4S2	SEC I: Naan Mudhalvan: Industry 4.0 / Aptitude for Placements		2	2		50	50	2
IV	22HEC404	Human Excellence : Social Values & SKY Yoga Practice -IV	1		2	25	25	50	1
	22UCS4N1 / 22UCS4N2	Non-Major Elective Paper -II : Flash Lab/ Internet Services and Applications Lab		1	2	-	50	50	2
V		Extension Activities (NSS, NCC, Sports & Games,etc.,)		-	-	-	-	50	1
EC	22CMM403	Manaiyiyal Mahathuvam-III	15 Hrs.		2	-	50	50	Grade
	22CUB403	Uzhavu Bharatham – III	15 Hrs.		2	-	50	50	Grade
	22UCS4VA	VAC I: Python for Data Analytics	30 Hrs.						2*
Total			30					800	25

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Part	Course Code	COURSE NAME	Hrs/ Week		Exam Hrs	MAX.MARKS			Credits
			T	P		CIA	ESE	Total	
V SEMESTER									
III	22UCS515	CC IX: Open Source Technologies	5		3	50	50	100	5
	22UCS516	CC X: Cyber Security	5		3	50	50	100	5
	22UCS5E1/ 22UCS5E2/ 22UCS5E3	DSE -I: Data Mining and Warehousing/ Data Engineering with Google Cloud / Mobile Application Development	6		3	50	50	100	5
	22UCS517	CC Lab VII: Programming Lab in .NET		5	3	25	25	50	2
	22UCS518	CC Lab VIII: Programming Lab in PHP & MySQL		5	3	25	25	50	2
	22UCS5S1 / 22UCS5S2	SEC II: Azure Fundamentals / DevOps Foundation	3	-	2	-	50	50	2
IV	22HEC505	Human Excellence: National Values& SKY Yoga Practice-V	1		2	25	25	50	1
EC	22CSD501	Soft Skills Development – I	-		-	-	-	-	Grade
	22GKL501	General Knowledge	SS		2	-	50	50	Grade
	22UCS5AL	Advanced Learner Course (ALC) – I (Optional) - Self Study: Cloud Computing	SS				100	100	2**
Total			30					500	22

EC – Extra Credit Course / Certificate Course / Co-scholastic Course / Job Oriented Course

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ALC-Advanced Learner Course (Optional)

*Extra Credits;**Credits – Based on course content maximum of 4 credits



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Part	Course Code	COURSE NAME	Hrs/ Week		Exam/ Hrs	MAX.MARKS			Credits	
			T	P		CIA	ESE	Total		
VI SEMESTER										
III	22UCS619	Core XI :R Programming	5		3	50	50	100	3	
	22UCS6E4/ 22UCS6E5/ 22UCS6E6	DSE–II: Artificial Intelligence and Machine Learning Front End Development with React MongoDB	4	2	3	50	50	100	5	
	22UCS6E7/ 22UCS6E8/ 22UCS6E9	DSE–III: Information Retrieval / HTML, Javascript and JQuery for Web Designing Angular and NodeJS	4	2	3	50	50	100	5	
	22UCS620	CC Lab IX: R Programming Lab		4	3	25	25	50	2	
	22UCS621	CC Lab X: Programming Lab in Android		5	3	25	25	50	2	
	22UCS6S1/ 22UCS6S2	SEC III: Naan Mudhalvan: Programming, Data Structures and Algorithms using Python / Data Science Foundation	3	-	2	-	50	50	2	
	22UCS622	Project	-	-	-	50	50	100	3	
	IV	22HEC606	Human Excellence Paper: Global Values & SKY Yoga Practice-VI	1		2	25	25	50	1
EC	22CSD602	Soft Skills Development–II	-		-	-	-	-	Grade	
	22UCS6AL	Advanced Learner Course(ALC) -II (Optional)-Self Study: Advanced Data Analysis using R	SS				100	100	2**	
Total			30					600	23	
Grand Total									3900	140

EC – Extra Credit Course / Certificate Course / Co-scholastic Course / Job Oriented Course

CC – Core Course; DSE – Discipline-Specific Elective; SEC – Skill Enhancement Course

ALC-Advanced Learner Course (Optional)

*Extra Credits;**Credits – Based on course content maximum of 4 credits

List of Abbreviations:

CC – Core Course

GE – Generic Elective

AECC –Ability Enhancement Compulsory Course

SEC – Skill Enhancement Course

DSE – Discipline-Specific Elective

VAC –Value Added Course

ALC – Advanced Learner Course



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Grand Total = 3900; Total Credits = 140

Programme Code:	B.Sc.			Programme Title:	Bachelor of Science (Computer Science)	
Course Code:	22UCS1A1			Title	Batch:	2022 - 2025
Lecture Hrs./Week or Practical Hrs./Week	4	Tutorial Hrs./Sem.	5	Allied-1: Mathematics(Statistical Methods & Linear Algebra)	Semester:	I
					Credits:	4

Course Objective

- To apply the computational aspects of basic statistical measures and to enable the students to solve linear system of equations and integration using numerical methods.
- To present the concept of theoretical probability to acquaint the knowledge of testing of small and large samples which plays an important role in real life problems

Course Outcomes

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level
CO1	Understand the definition of matrix and determinants and apply various operations on it	K3
CO2	Understand the statistical formula and apply them in various data analysis	K3
CO3	Understand the concept of most powerful test and analyze the samples based on most powerful test like 't' and 'F' distributions	K4
CO4	Understand the concepts of probability and apply to solve real life situations	K3
CO5	Obtain numerical solutions of algebraic equations and compute the integrals by using the appropriate technique	K4

Mapping

PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2
CO												
CO1	M	M	H	L	H	M	L	L	L	M	H	M
CO2	H	M	H	L	H	M	M	M	M	H	H	M
CO3	M	M	H	L	H	M	M	M	M	H	H	M
CO4	H	M	H	L	H	H	H	M	H	H	H	H
CO5	M	M	H	L	H	H	L	M	M	M	H	H

H-High; M-Medium; L-Low

Units	Content	Hrs
Unit I	Statistics: Measure of Central Tendency - Mean, Median, Mode - Measure of Dispersion -Range, Quartile Deviation, Standard Deviation – Correlation: Definition, Rank Correlation, Co-efficient of Correlation - Regression.	12
Unit II	Large Sample test: Standard error- Test of Significance of Large Samples – Tests for (i) single proportion (ii) Difference of two proportions (iii) difference of two means (iv) difference of two standard deviations. Small sample test based on t, – t-test for (i) single mean (ii) Difference of two means (iii) Observed sample correlation co-efficient. F-Variance Ratio Test.	12
Unit III	Probability: Permutation, combination, trail, event, sample space, mutually exclusive cases, exhaustive events, Independent events and dependent events, simple and compound events. Measurement: Classical, relative frequency, theory of probability, Limitations, personality view of probability and Axiomatic Approach of probability, addition and multiplication theorem, odds, miscellaneous illustrations question	12
Unit IV	Linear Algebra: Introduction – Vectors and Matrices – Length and Dot Products – Solving Linear Equations – Linear Equations – The Idea of Elimination – Elimination Using Matrices – Rules for Matrix Operations – Inverse Matrices – Transposes and Permutations	12
Unit V	Determinants – The Properties of Determinants – Permutations and Cofactors – Cramer's Rule, Inverse, and Volumes – Eigen values and Eigenvectors – Introduction to Eigen values – Diagonalizing a Matrix – Applications to Differential Equations – Symmetric Matrices – Positive Definite Matrices – Similar Matrices	12
	Total Contact Hrs	60

Pedagogy and Assessment Methods:

Direct Instruction, Digital Presentation, Digital Assignments, OnlineQuiz, Group Talk (APS), Seminar, Numerical Exercises.

Programme Code:	B.Sc			Programme Title:	Bachelor of Science (Computer Science)	
Course Code:	22UCS518			Title	Batch:	2023 - 2026
Practical Hrs./Week	5	Practical Hrs./Sem.	-	CC Lab VIII: Programming Lab in PHP & MySQL	Semester:	V
					Credits:	2

Course Objective

To learn about creating dynamic web pages using different open source technology like PHP, MYSQL and Apache.

Course Outcomes

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level
CO1	To remember PHP basic syntax for variables types, operators and flow controls	K1
CO2	To understand PHP functions and arrays	K2
CO3	To analyze basic MySQL commands	K4
CO4	To apply MYSQL commands to create and connect PHP application	K3
CO5	To evaluate application accessing restrictions, logging and monitoring Apache web server activity, optimizing and tuning MYSQL	K5

Mapping

PO / PSO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P010	PSO1	PSO2
CO1	M	H	L	L	M	M	H	L	M	L	M	L
CO2	H	M	L	L	M	H	L	L	M	M	H	L
CO3	H	H	H	M	M	M	M	M	L	M	H	M
CO4	H	H	H	M	H	H	M	H	M	L	M	M
CO5	M	M	H	H	H	M	M	M	M	H	M	M

H-High; M-Medium; L-Low

Units	Contents	Hrs
	Set A - Write a PHP program to check student grade based on the marks using if-else statement. - Write a PHP program to convert a string into uppercase. - Write a PHP program to reverse the string. - Write a PHP program to count the words in the string. - Write a Program to create following pattern with * using for loops.  - Write a PHP program using nested for loop that creates a chess board. - Write a PHP program to find factorial of a number using recursive function. - Write a PHP program for shopping cart. - Create a table and implement all DCL commands. - Write a query to get the first 3 characters of first name from employees table - Write a query to get unique department ID from employee table. - Write a query to get the firstname, lastname who joined in the month of June. Set B - Write a PHP program for students marklist preparation using database connection. - Write a PHP program to check if a person is eligible to vote or not. - write a program in PHP to remove specific element by value from an array using PHP program. - Write a simple calculator program in PHP using switch case - Create a table and implement all DDL Commands. - Create a table and implement all DML commands. - Write a SQL statement to create a table named jobs including columns	75

	job_id, job_title, min_salary, max_salary and check whether the max_salary amount exceeding the upper limit 25000. - Write a SQL statement to create a table named countries including columns country_id, country_name and region_id and make sure that the country_id column will be a key field which will not contain any duplicate data at the time of insertion. - Write a SQL statement to increase the minimum and maximum salary of PU_CLERK by 2000 as well as the salary for those employees by 20% and commission percent by 10. - Create salesman table with fields like salesman_id, name, city, commission and create customer table with column names like customer_id, cust_name, city, grade, salesman_id. Write a SQL statement to prepare a list with salesman name, customer name and their cities for the salesmen and customer who belongs to the same city. - Create salesman table with fields like salesman_id, name, city, commission and create customer table with column names like customer_id, cust_name, city, grade, salesman_id. Write a SQL statement to know which salesman are working for which customer. - Create a MYSQL database for electricity bill processing. - Create salesman table with fields like salesman_id, name, city, commission and create customer table with column names like customer_id, cust_name, city, grade, salesman_id. Write a query to display all salesmen and customer located in London. INTERNAL MARK (25 Marks) EXTERNAL MARK (25 Marks)	
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Course Designed by	Verified by HOD	Checked by	Approved by
Name and Signature	Name with Signature	CDC	COE
Dr.M.Malathi	Name: Dr.R.Manicka Chezian	Name: Mr. K.Srinivasan	Name: Dr.R.Manicka Chezian
P.Jayapriya	Signature:	Signature:	Signature:

Programme code:	B.Sc			Programme Title :	Bachelor of Science (Computer Science)	
Course Code:	22UCS621			Title :	Batch :	2023-2026
Hrs/Week:	5	Tutorial Hrs./Sem	-	CC Lab X: Programming Lab in Android	Semester:	VI
		.			Credits:	2

Course Objective

The objective of this course is to make the students to understand the Android platform's organization, patterns and programming mechanisms and be able to use them effectively to develop their own Android applications.

Course Outcomes (CO)

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level
CO1	Understand Android OS, gradle, Android Studio	K3
CO2	Design and develop an application using Database	K4
CO3	Develop UI based Mobile Application using Android Studio	K5

Mapping

POs, PSOs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2
CO1	H	H	H	M	H	L	H	H	M	H	M	H
CO2	H	H	M	H	H	H	H	M	M	M	H	H
CO3	M	H	H	H	H	H	H	H	H	M	H	H

H - High; M-Medium; L-Low

Syllabus

	SET A 1. Develop an application that uses Layout Managers. 2. Develop an application that uses event listeners. 3. Develop an application that uses Adapters, Toast. 4. Develop an application that uses Spinner 5. Design an android application Using Radiobuttons. SET B 6. Develop an application that makes use of database. 7. Write a mobile application that creates alarm clock. 8. Design an android application Send SMS using Intent. 9. Create an android application using Fragments 10. Design an android application for menu. INTERNAL MARK (25 Marks) EXTERNAL MARK (25 Marks)	Total Hours
		75

Course Designed by	Verified by HOD	Checked by	Approved by
Name and Signature	Name with Signature	CDC	COE
Dr. M.Malathi	Name: Dr.R.Manicka Chezian	Name:Mr.K.Srinivasan	Name: Dr.R.Manicka Chezian
Ms M.Dhavapriya Signature:	Signature:	Signature:	Signature: