



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. - Kalapatti Road, Coimbatore-641048, Tamil Nadu, India

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REGULATIONS 2024-25 for Undergraduate Programme

(Outcome Based Education model with Choice Based Credit System)

Bachelor of Science in Computer Science with Cyber Security Degree

(For the students admitted during the academic year 2024-25)

Programme: B.Sc. Computer Science with Cyber Security.

Eligibility

Candidates for admission to the first year of the **Bachelor of Science (Computer Science with Cyber Security)** 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 thereto 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.

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

1. To have a strong foundation of computer science principles which will provide a promising professional career in real world industry.
2. To be able to equip themselves in research and development, entrepreneurship, and start-up initiator as an individual or collaborative manner utilizing interpersonal skills.
3. To contribute to society and the cyber security community by participating in outreach programs, creating awareness and educating the public about safe computing practices.



PROGRAMME OUTCOMES

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

PO Number	PO Statement
PO1	To have a strong understanding of fundamental concepts of computer science and its related disciplines.
PO2	To develop viable solutions for IT enabled services by applying analytic and programming skills.
PO3	To exhibit the ability in adapting evolving technologies and new problem domains thus fostering creativity and innovation in cyber security discipline.
PO4	To engage in continuous learning, keeping pace with emerging trends, technologies, and threats in the field of cyber security.
PO5	To demonstrate social responsibility through ethics and values and environmental studies related activities in the society.



**B.Sc. Computer Science with Cyber Security
Credit Distribution**

Part	Subjects	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 (Credits 4)	11	11 x 4 = 44	I to VI
	Core (Credits 3)	2	2 x 3 = 6	I to VI
	Core Practical (Credits 5)	2	2 x 5 = 10	III to IV
	Core Project (Credits 4)	1	1 x 4 = 4	VI
	Core Practical (Credits 2)	3	3 x 2 = 6	I to VI
	Inter Departmental Course (IDC)	4	4 x 4 = 16	I to IV
	Discipline Specific Elective (DSE)	3	3 x 4 = 12	V & VI
	Skill Enhancement Course (SEC)	4	4 x 2 = 8	III, IV, V&VI
	Industrial Training	1	1 x 2 = 2	V
IV (8 Credits)	Environmental Studies (AECC)	1	2	I
	Basic Tamil/Advance Tamil/Human Rights, & Women's Rights (AECC)	1	2	II
	Generic Elective (GE)	1	2	V
	Innovation & IPR/ Innovation, IPR & Entrepreneurship (AECC)	1	2	VI
V (2 Credits)	NSS/NCC/YRC/RRC/Yoga/Sports	-	2	I - II
TOTAL CREDITS			142	



CURRICULUM

B.Sc. Computer Science with Cyber Security A.Y:24-25

Course Code	Course Category	Course Name	L	T	P	Instruction Hours		Exam (h)	Max Marks			Credits
						Week	Total		CIA	ESE	Total	
First Semester												
Part – I												
24TLU1TA	Language - I	Tamil-I	4	1	-	5	60	3	25	75	100	3
24TLU1HA		Hindi-I				5	60					
24TLU1MA		Malayalam-I				5	60					
24TLU1FA		French – I				5	60					
Part – II												
24ELU1EA	Language - II	English-I	4	-	1	5	60	3	25	75	100	3
Part – III												
24AIU1CA	Core - I	Problem Solving and Programming in C	4	1	-	5	60	3	25	75	100	4
24CYU1CA	Core -II	Digital Logic Design	4	-	-	4	48	3	25	75	100	4
24CYU1CP	Core Practical - I	Programming in C	-	-	4	4	48	3	40	60	100	2
24MTU1ID	IDC-I	Mathematics for Computing I	4	1	-	5	60	3	25	75	100	4
Part – IV												
24MBU1AA	AECC-I	Environmental Studies	2	-	-	2	24	-	50	-	50	2
Part – V												
24CYU1XA	Extension Activity	NSS/NCC/ YRC/RRC/ Yoga/Sports/ Club	-	-	-	-	-	-	50	-	50	1
Total			22	3	5	30	360				700	23



Course Code	Course Category	Course Name	L	T	P	Instruction Hours		Exam (h)	Max Marks			Credits
						Week	Total		CIA	ESE	Total	
Second Semester												
Part – I												
24TLU2TA	Language - I	Tamil-II	4	1	-	5	60	3	25	75	100	3
24TLU2HA		Hindi-II				5	60					
24TLU2MA		Malayalam-II				5	60					
24TLU2FA		French – II				5	60					
Part – II												
24ELU2EA	Language - II	English-II	4	-	1	5	60	3	25	75	100	3
Part – III												
24CAU2CA	Core - III	Data Structures	4	1	-	5	60	3	25	75	100	4
24CSU2CA	Core -IV	Object Oriented Programming with C++	4	-	-	4	48	3	25	75	100	4
24CYU2CP	Core Practical - II	Data Structures using C++	-	-	4	4	48	3	40	60	100	2
24MTU2ID	IDC-II	Mathematics for Computing II	4	1	-	5	60	3	25	75	100	4
Part – IV												
24TLU2AA	AECC-II	Basic Tamil	2	-	-	2	24	-	50	-	50	2
24TLU2AB		Advance Tamil										
24CRU2AA		Human Rights & Women's Rights										
Part – V												
24CYU2XA	Extension Activity	NSS/NCC/ YRC/RRC/ Yoga/Sports/ Club	-	-	-	-	-	-	50	-	50	1
Total			22	3	5	30	360				700	23



Course Code	Course Category	Course Name	L	T	P	Instruction Hours		Exam (h)	Max Marks			Credits
						Week	Total		CIA	ESE	Total	
Third Semester												
Part – I												
24TLU3TA	Language - I	Tamil-III	3	1	-	4	48	3	25	75	100	3
24TLU3HA		Hindi-III				4	48					
24TLU3MA		Malayalam-III				4	48					
24TLU3FA		French – III				4	48					
Part – II												
24ELU2EA	Language - II	English-III	3	1	-	4	48	3	25	75	100	3
Part – III												
24CYU3CA	Core - V	Computer Architecture	4	-	-	4	48	3	25	75	100	4
24CYU3CB	Core -VI	Operating Systems Fundamentals	3	-	-	3	36	3	25	75	100	3
24CYU3CM	Core Practical III	Database Design Concepts	3	-	4	7	84	3	40	60	100	5
24CYU2CP	SEC-I	Python Programming	-	-	4	4	48	3	40	60	100	2
24MTU3ID	IDC-III	Discrete Mathematics	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	Instruction Hours		Exam (h)	Max Marks			Credits
						Week	Total		CIA	ESE	Total	
Fourth Semester												
Part – I												
24TLU4TA	Language I	Tamil-IV	3	1	-	4	48	3	25	75	100	3
24TLU4HA		Hindi-IV				4	48					
24TLU4MA		Malayalam-IV				4	48					
24TLU4FA		French – IV				4	48					
Part – II												
24ELU2EA	Language - II	English-IV	3	1	-	4	48	3	25	75	100	3
Part – III												
24CYU4CA	Core -VII	Computer Networks	4	-	-	4	48	3	25	75	100	4
24CYU4CB	Core VIII	Principles of Cyber Security	3	-	-	3	36	3	25	75	100	3
24CYU4CM	Core Practical -IV	Java Programming	3	-	4	7	84	3	40	60	100	5
24CYU4SP	SEC-II	Networking Lab	-	-	4	4	48	3	40	60	100	2
24FIU4IA	IDC -IV	Financial Crime 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	Instruction Hours		Exam (h)	Max Marks			Credits
						Week	Total		CIA	ESE	Total	
Fifth Semester												
Part – III												
24CYU5CA	Core - IX	Machine Learning	4	1	-	5	60	3	25	75	100	4
24CYU5CB	Core -X	Software Engineering	4	1	-	5	60	3	25	75	100	4
24CYU5CC	Core -XI	Cloud Computing	4	1	-	5	60	3	25	75	100	4
24CYU5CP	Core Practical -V	Machine Learning using Python	-	-	4	4	48	3	40	60	100	2
24CYU5SP	SEC -III	Linux Programming	-	-	4	4	48	3	40	60	100	2
24CYU5DA	DSE-I	Network Security and Cryptography	4	1	-	5	60	3	25	75	100	4
24CYU5DB		Cyber Forensics										
24CYU5DC		Data Warehousing and Mining										
24CYU5TA	IT	Industrial Training	-	-	-	-	-	3	40	60	100	2
Part – IV												
	GE-I		2	-	-	2	24	3	50	-	50	2
Total			18	4	8	30	360				750	24



Course Code	Course Category	Course Name	L	T	P	Instruction Hours		Exam (h)	Max Marks			Credits
						Week	Total		CIA	ESE	Total	
Sixth Semester												
Part – III												
24CYU6CA	Core - XII	Web Application Development	4	-	-	4	48	3	25	75	100	4
24CYU6CB	Core - XIII	Internet of Things	4	-	-	4	48	3	25	75	100	4
24CYU6SP	SEC-IV	Web Application and Security	-	-	4	4	48	3	40	60	100	2
24CYU6CV	Core – XIV	Project	-	-	8	8	96	3	40	60	100	4
24CYU6DA	DSE –II	Multimedia Security	4	-	-	4	48	3	25	75	100	4
24CYU6DB		Ethical Hacking and Systems Defense										
24CYU6DC		Big Data Analytics										
24CYU6DD	DSE –III	Information Retrieval Systems	4	-	-	4	48	3	25	75	100	4
24CYU6DE		Block Chain Technology										
24CYU6DF		Deep Learning										
Part – IV												
24BCU6AA	AECC III	Innovation, IPR and Entrepreneurship	2	-	-	2	24	3	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 & VI

Semester V (Elective I)**List of Elective Courses**

S. No.	Course Code	Name of the Course
1.	24CYU5DA	Network Security and Cryptography
2.	24CYU5DB	Cyber Forensics
3.	24CYU5DC	Data Warehousing and Mining

Semester VI (Elective II)**List of Elective Courses**

S. No.	Course Code	Name of the Course
1.	24CYU6DA	Multimedia Security
2.	24CYU6DB	Ethical Hacking and Systems Defense
3.	24CYU6DC	Big Data Analytics

Semester VI (Elective III)**List of Elective Courses**

S. No.	Course Code	Name of the Course
1.	24CYU6DD	Information Retrieval Systems
2.	24CYU6DE	Block Chain Technology
3.	24CYU6DF	Deep Learning

GENERIC ELECTIVE COURSES(GE)

The following is the course offered under Generic Elective Course

Semester V (GE)

S. No.	Course Code	Name of the Course
1	24CYU5GA	Basics of Cyber Security

EXTRA CREDIT COURSES

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

Semester III

S. No.	Course Code	Name of the Course
1	24CYUSSA	Web Essentials
2	24CYUSSB	Digital Marketing



BoS Chairman / HoD

Dept. of Computer Science with Cyber Security
Dr. N.G.P. Arts and Science College
Coimbatore - 641 048.



Dr.NGPASC

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APPROVED		
BoS - /SE 4/4/24	AC - 17th 17/4/24	GB -



Semester – I

TAMIL - I

Semester	Course Code	Course Name	Category	L	T	P	Credits
I	24TLU1TA	TAMIL - I	LANGUAGE- I	48	12	-	3

Preamble	மொழிப்பாடங்களின் வாயிலாக தமிழரின் பண்பாடுநாகரீகம், பகுத்தறிவு ஆகியவற்றை அறியச் செய்தல்
	கலை மற்றும் மரபுகளை அறியச் செய்தல்
	மாணவர்களின் படைப்பாக்கத்திறன்களை ஊக்குவித்தல்
Prerequisite	தமிழ் மொழி எழுதி படிக்கும் திறன்

Course Outcomes (Cos)		
CO.No.	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	வாழ்க்கைத்திறன்கள் (Life Skills)- மாணவர்களின் செயலாக்கத்திறனை ஊக்குவித்தல்	K2
CO2	மதிப்புக்கல்வி (Attitude and Value education)	K3
CO3	பாடஇணைச்செயல்பாடுகள் (Co-curricular activities)	K3
CO4	சூழலியல் ஆக்கம் (Ecology)	K4
CO5	மொழி அறிவு (Tamil knowledge)	K4

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



Syllabus:

Unit	Content	Hrs	Resources
1	<p>மறுமலர்ச்சிக் கவிதைகள்</p> <ol style="list-style-type: none"> இலக்கிய வரலாறு -மறுமலர்ச்சிக் கவிஞர்களின்தமிழ்ப்பணிகள் பாரததேசம்- பாரதியார் படி - பாரதிதாசன் தமிழரின் பெருமை- நாமக்கல்கவிஞர் தமிழ்க் கொலை புரியாதீர்- புலவர் குழந்தை திரைத்தமிழ் <p>அ) 'விஞ்ஞானத்த வளர்க்கப் போறண்டி' எனத்தொடங்கும் பாடல் - உடுமலை நாராயண கவி</p> <p>ஆ) 'சும்மா கிடந்த நிலத்தை' எனத்தொடங்கும் பாடல் - பட்டுக்கோட்டை கல்யாண சுந்தரனார்</p> <p>இ) 'சமரசம் உலாவும் இடமே' எனத்தொடங்கும் பாடல் - மருதகாசி</p> <p>ஈ) 'உன்னை அறிந்தால்' எனத்தொடங்கும் பாடல்- கண்ணதாசன்</p>	13	<p>தமிழ்மொழிப் பாடம் முதற்பருவம் 2024-2025 https://www.youtube.com/watch?v=Up55uhkk9zl</p>
2	<p>புதுக்கவிதைகள்</p> <ol style="list-style-type: none"> இலக்கிய வரலாறு- புதுக்கவிதையின் தோற்றமும் வளர்ச்சியும் கடமையைச் செய்- மீரா ஓடு ஓடு சங்கிலி - சிற்பி பாலசுப்பிரமணியம் ஓப்பிலாத சமுதாயம் - அப்துல் ரகுமான் மரங்கள் - மு.மேத்தா கரிக்கிறது தாய்ப்பால்- ஆரூர் தமிழ்நாடன் ஐந்தாம் வகுப்பு 'அ' பிரிவு - நா. முத்துக்குமார் ஹைகூ. கவிதைகள் - 10 கவிதைகள் 	13	<p>தமிழ்மொழிப் பாடம் முதற்பருவம் 2024-2025 https://www.youtube.com/watch?v=dX9ZaNJMa co</p>
3	<p>பெண்ணியம்</p> <ol style="list-style-type: none"> தொலைந்து போனேன் - தாமரை நீரில் அலையும் முகம் - அ. வெண்ணிலா தற்காத்தல் - பொன்மணி வைரமுத்து ஏனிந்த வித்தியாசங்கள்? - மல்லிகா புதையுண்ட வாழ்க்கை - சுகந்தி சுப்ரமணியன் 	10	<p>தமிழ்மொழிப்பாடம் முதற்பருவம் 2024-2025 https://www.youtube.com/watch?v=DLabokqWE dg</p>
4	<ol style="list-style-type: none"> இலக்கிய வரலாறு-சிறுகதையின் தோற்றமும் வளர்ச்சியும் கனகாம்பரம்- கு.ப.ராஜகோபாலன் கடிதம்- புதுமைப்பித்தன் 	14	<p>தமிழ்மொழிப் பாடம் முதற்பருவம்</p>



	4. பொம்மை - ஜெயகாந்தன் 5. காய்ச்சமரம் - கி. ராஜநாராயணன் 6. காட்டில் ஒருமான்- அம்பை 7.வேட்கை - சூர்யகாந்தன்		2024-2025 https://www.youtube.com/watch?v=78u7iTN3OU8
5	பயிற்சிப் பகுதி அ. இலக்கணம் 1. வல்லின ஒற்று மிகும், மிகா இடங்கள் - ஒற்றுப்பிழை நீக்கிஎழுதுதல் 2. ர,ற-ல,ழ,ள - ண,ந,னவேறுபாடு - ஒலிப்பு நெறி, சொற்பொருள் வேறுபாடு அறிதல் ஆ. படைப்பாக்கம் 1. கவிதை- எழுதுதல் (15 வரிகள் முதல் 30 வரிகள் வரை) 2.சிறுகதை - எழுதுதல் (குறைந்தது 3 பக்கங்கள்)	10	தமிழ்மொழிப் பாடம் முதற்பருவம் 2024-2025 https://www.youtube.com/watch?v=B3wfM0QL6N8 https://www.youtube.com/watch?v=FchTlqAtwBU https://www.youtube.com/watch?v=gCP3gC-JQU4 https://www.youtube.com/watch?v=p9QOHD12Yeo
	Total	60	

Text book	1.	தமிழ் மொழிப்பாடம் - 2024-2025தொகுப்பு: தமிழ்த்துறை, டாக்டர்என்.ஜி.பி. கலைஅறிவியல்கல்லூரி, கோயம்புத்தூர் - 641048.
Reference Books	1.	பேராசிரியர் புலவர் சோம. இளவரசு, தமிழ் இலக்கிய வரலாறு, எட்டாம் பதிப்பு - 2024, மணிவாசகர் பதிப்பகம், சென்னை - 600 108.
	2.	பேராசிரியர் முனைவர் பாக்கியமேரி, முதற் பதிப்பு - 2023, இலக்கணம், இலக்கியவரலாறு , மொழித்திறன் - பூவேந்தன் பதிப்பகம், சென்னை - 600 004.

Journal and Magazines	இலக்கியஇதழ்கள்
E-Resources and Website	https://www.tamilvu.org

Learning Method	Lecture/ Tutorial / Student Seminar/GD/Assignment
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Focus of the Course	Skill Development / Employability
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Semester – I							
HINDI – I							
Semester	Course Code	Course Name	Category	L	T	P	Credits
I	24TLU1HA	HINDI – I	LANGUAGE- I	48	12	-	3

Preamble	The writing ability and develop reading skill
	The various concepts and techniques for criticizing literature
	The techniques for expansion of ideas and translation process
Prerequisite	To understand the language Hindi for communication

Course Outcomes (Cos)		
CO. No.	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	Learn the fundamentals of novels and stories	K2
CO2	Understand the principles of translation work	K3
CO3	Expose the knowledge writing critical views on fiction	K3
CO4	Build creative ability	K3
CO5	Apply the power of creative reading	K4

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



Syllabus:

Unit	Content	Hrs	Resources
1	गद्य – नूतनगद्यसंग्रह (जयप्रकाश)पाठ1- रजियापाठ2- मक्रीलपाठ3- बहतापानीनिर्मला पाठ4- राष्ट्रपितामहात्मागाँधी	13	Text Book
2	कहानीकुंज- डॉ.वी.पी. 'अमिताभ'(पाठ 1-4)	13	Text Book
3	व्याकरण : शब्दविचार (संज्ञा, सर्वनाम,विशेषण)	12	Text Book
4	अनुच्छेदलेखन	12	Text Book
5	अनुवादअभ्यास-III (केवलअंग्रेजीसेहिन्दीमें) (पाठ1 to 10)	10	Text Book
	Total	60	

Text books	1.	प्रकाशक: सुमित्रप्रकाशन 204 लीलाअपार्टमेंट्स, 15 हेस्टिंग्सरोड' अशोकनगरइलाहाबाद-211001
	2.	प्रकाशक: गोविन्दप्रकाशनसदरबाजार, मथुराउत्तरप्रदेश-281001
	3.	पुस्तक: व्याकरण प्रदिप - रामदेवप्रकाशक: हिन्दी भवन 36 टेगोर नगर इलाहाबाद-211024
	4.	पुस्तक: व्याकरण प्रदिप - रामदेवप्रकाशक: हिन्दी भवन 36 इलाहाबाद-211024
	5.	प्रकाशक: दक्षिण भारत प्रचार सभा चेन्नई -17
Reference Books		-

Journal and Magazines	-
E-Resources and Website	-

Learning Method	Lecture/ Tutorial / Student Seminar/GD/Assignment
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Focus of the Course	Skill Development / Employability
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Semester – I

MALAYALAM- I

Semester	Course Code	Course Name	Category	L	T	P	Credits
I	24TLU1MA	MALAYALAM- I	LANGUAGE- I	48	12	-	3

Preamble	The writing ability and develop reading skill
	The various concepts and techniques for criticizing literature, to learn the techniques for expansion of ideas and translation process
	The competency in translating simple Malayalam sentences into English and vice versa
Prerequisite	To understand the language Malayalam for communication

Course Outcomes (Cos)		
CO. No.	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	Learn the fundamentals of novels and stories	K2
CO2	Understand the principles of translation work	K3
CO3	Expose the knowledge writing critical views on fiction	K3
CO4	Apply creative ability	K3
CO5	Build the power of creative reading	K4

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



Syllabus:

Unit	Content	Hrs	Resources
1	Novel PathummayudeAdu	14	Text book
2	Novel PathummayudeAdu	10	Text book
3	Short Story Nalinakanthi	14	Text book
4	Short Story Nalinakanthi	10	Text book
5	Practical Application Expansion of ideas, General Essay and Translation	12	Text book
	Total	60	

Text books	1.	Vaikkam Muhammed Basheer, "PathummayudeAdu" (NOVEL), DC Books & Kottayam
	2.	T.Padmanabhan, "Nalinakanthi" (Short Story), DC Books & Kottayam.
Reference Books	1.	MalayalaNovel Sahithyam.
	2.	MalayalaCherukathaInnale Innu.

Journal and Magazines	-
E-Resources and Website	-

Learning Method	Lecture/ Tutorial / Student Seminar/GD/Assignment
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Focus of the Course	Skill Development / Employability
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Semester – I

FRENCH - I

Semester	Course Code	Course Name	Category	L	T	P	Credits
I	24TLU1FA	FRENCH - I	LANGUAGE-I	48	12	-	3

Preamble	The competence in general communication skills with oral, written and comprehension & expression
	The culture, life style and the civilization aspects of the French people as well as of France
	The students to acquire competency in translating simple French sentences into English and vice versa
Prerequisite	To understand the language French for communication

Course Outcomes (Cos)		
CO. No.	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	Learn the Basic verbs, numbers and accents	K2
CO2	Apply the adjectives and the classroom environment in France	K3
CO3	Select the Plural, Articles and the Hobbies	K3
CO4	Measure the Cultural Activity in France	K3
CO5	Evaluate the sentiments, life style of the French people and the usage of the conditional tense	K4

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



Syllabus:

Unit	Content			Hrs	Resources
1	Objectifs de Communication <ul style="list-style-type: none"> • Saluer • Entrer en contact avec quelqu'un. • Se présenter. • S'excuser 	Tâche En cours de cuisine, premiers contacts avec les membres d'un groupe	Activités de réception et de production orale <ul style="list-style-type: none"> • Comprendre des personnes qui se saluent. • Échanger pour entrer en contact, se présenter, saluer, s'excuser. • Communiquer avec <i>tu</i> ou <i>vous</i>. • Comprendre les consignes de classe • Épeler son nom et son prénom. Computer jusqu'à 10	14	Text book Salut I Page 10
2	<ul style="list-style-type: none"> • Demander de se présenter. • Présenter quelqu'un 	Dans la classe de français, se présenter et remplir une fiche pour le professeur.	<ul style="list-style-type: none"> • Comprendre les informations essentielles dans un échange en milieu professionnel. Échanger pour se présenter et présenter quelqu'un	12	Text book Enchanté I Page 20
3	<ul style="list-style-type: none"> • Exprimer ses goûts. 	Dans un café, participer à une soirée de rencontres rapides et remplir de tâches d'appréciation	<ul style="list-style-type: none"> • Dans une soirée de rencontres rapides comprendre des personnes qui échantent sur elles et sur leurs goûts • Comprendre une personne qui parle des goûts de quelqu'un d'autre 	14	Text book J'adore I Page 30
4	Demander à quelqu'un de faire quelque chose. Demander poliment. Parler d'actions passées. Tu veux bien?	Organiser un programme d'activités pour accueillir une personne importante	Comprendre une personne demande un service à quelqu'un. Demander à quelqu'un de faire quelque chose. <ul style="list-style-type: none"> • Imaginer et raconter au passé à partir de situations dessinées. 	10	Text book Autoévaluation du module I Page 40 – Préparation au DELF A1 page 42 Tu veux bien page 46
5	Practical Application Make in Own Sentences			10	-
Total				60	



Text book	1.	Regine Merieux, Yves Loiseau. 2012. LATITUDES – 1: Méthode de français (Page No: 9-55) Les Editions Dider, Paris, Imprimee en Roumanie par Canale en Janvier
Reference Book	1.	-

Journal and Magazines	-
E-Resources and Website	-

Learning Method	Lecture/ Tutorial / Student Seminar/GD/Assignment
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Focus of the Course	Skill Development / Employability
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Semester – I

ENGLISH – I

Semester	Course Code	Course Name	Category	L	T	P	Credits
I	24ELU1EA	ENGLISH - I	LANGUAGE- II	48	-	12	3

Preamble	This course has been designed for students to learn and understand <ul style="list-style-type: none"> the effect of dialogue, imagery and varied genres any spontaneous spoken discourse and respond to them with proper sentence structure the transactional concept of English language
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Prerequisite Basic comprehension of Language Skills

Course Outcomes (COs)

CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	Identify the various aspects in poetry	K2
CO2	Infer linguistic and non-linguistic features of the context for understanding and interpreting	K3
CO3	Construct sentences and convey messages effectively in real life situations	K3
CO4	Apply different reading strategies with varying speed	K3
CO5	Prepare modules with their own ideas and present them coherently in a grammatically correct form	K3

Mapping with Program Outcomes:

COs / POs	PO1	PO2	PO3	PO4	PO5
CO1	✓	✓	✓		✓
CO2		✓	✓		
CO3	✓		✓	✓	✓
CO4		✓		✓	
CO5	✓		✓		✓



Syllabus

Unit	Content	Hours	E-Contents / Resources
I	<p>Genre Studies</p> <p>Mathew Arnold: Dover Beach- Author's Biography- title indications- outline- paraphrasing the poem- context of poem- form- poetic devices- enjambment- techniques- Annotations</p> <p>Niyi Osundare: Our Earth Will Not Die- Author's Biography- title indications-outline- paraphrasing the poem- context of poem- form- poetic devices-enjambment- techniques- Annotations</p> <p>Charles Lamb: Christ's Hospital Five and Thirty Years Ago- Author's biography- Narrative structure- Exploration of the text- passage analysis- insight of ideas- cohesion and context- style- language techniques- Annotation</p> <p>James Hanson: A Famed Life - Ten Minute Comedy for Two Women - Author's Biography- Plot Summary- Detailed summary and Analysis- Themes- Important Quotations- Characters- Description - analysis- Terms- Symbols- Critical analysis</p> <p>Sheila Nayampalli Baruna: Alone - Author's Biography- narrative structure- passage analysis- insight of ideas- cohesion and context- style- language techniques</p>	12	Text Book
II	<p>Listening Skills</p> <p>Listening vs. hearing- Types of listening, Tips to enhance Listening Skills, Non-verbal and Verbal signs of active listening- Comprehensive Listening- Listening to pre-recorded audios on speeches, interviews and conversations- Listening Activities- Listening and responding to complaints (formal situation), Listening to problems and offering solutions (informal)</p>	13	britishcouncil.org cambridgeenglish.org
III	<p>Speaking Skills</p> <p>Formal occasions- Introducing oneself, Introducing others, Enquiries and Seeking permission, neural speaking -Making short presentations- Informal occasions- Requests, Offering help, Congratulating, Farewell party, graduation speech- Giving instructions to do a task and to use a device, Giving and asking directions</p>	11	britishcouncil.org cambridgeenglish.org
IV	<p>Reading Skills</p> <p>Study Skills: Skimming and Scanning- Reading different kinds of texts- Types of reading-Developing a good</p>	12	britishcouncil.org cambridgeenglish.org



	reading speed, reading aloud, Referencing skill- Word Power (Denotation and Connotation) - Reading comprehension, Data interpretation –Charts, Graphs, Advertisements - Cognitive Skills- Inference Making - Interpretation		
V	Writing Skills Sentence patterns, Note- making and note taking- Strategies - Paragraph writing: Structure and Principles - Academic Writing - Formal and Informal Letters, Report, Book /Movie Review - Infographics Writing	12	britishcouncil.org cambridgeenglish.org
	Total	60	

Text Books	1.	https://www.poetryfoundation.org/poems/43588/dover-beach
	2.	https://portal.abuad.edu.ng/lecturer/documents/1586771577our_earth_will_not_die.doc
	3.	http://l-adam-mekler.com/chucktwo.pdf
	4.	https://offthewallplays.com/wp-content/uploads/2017/04/1_pdfsam_A-famed-life-full-with-title-page.pdf
	5.	Nation, I. S. P and Jonathan Newton. 2009. Teaching ESL/EFL Listening and Speaking. Routledge, New York, United States of America.
	6.	Prabha, Dr. R. Vithya& S. Nithya Devi. 2019. Sparkle. (1st Edn.) McGraw - Hill Education, Chennai, India.
Reference Books	1.	Rudzka, Brygida -Ostyn, 2003. Word Power: Phrasal Verbs and Compounds: A Cognitive Approach, Mouton de Gruyter, New York, United States of America.
	2.	Swales, John M. & Feak, Christine B. 2012. Academic Writing for Graduate Students: Essential Tasks and Skills, University of Michigan Press, Michigan, United States of America.
	3.	Sen, Leena. 2007. Communication Skills, Second Edition, Prentice Hall India Learning Private Limited, New Delhi, India.
	4.	O. Greene, John. 2021. Essentials of Communication Skill and Skill Enhancement: A Primer for Students and Professionals, Routledge publishers, United Kingdom.

Journal and Magazines	https://academic.oup.com/journals
E-Resources and Website	https://learnenglish.britishcouncil.org/ https://www.cambridgeenglish.org/learning-english/activities-for-learners/

Learning Method	Chalk and Talk/Assignment/Seminar/ Interactive session
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Focus of the Course	Skill Development/Employability
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SEMESTER - I

CORE - I: PROBLEM SOLVING AND PROGRAMMING IN C

Semester	Course Code	Course Name	Category	L	T	P	Credits
I	24AIU1CA	PROBLEM SOLVING AND PROGRAMMING IN C	CORE	48	12	-	4

Preamble	This course has been designed for students to learn and understand <ul style="list-style-type: none"> the fundamental aspects of programming and problem solving the C language fundamentals the representation and working of arrays, pointers, functions and files 	
Prerequisite	Knowledge on Logical Thinking	
Course Outcomes (COs)		
CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	Illustrate the basic principles of programming and problem solving	K2
CO2	Understand the fundamentals of C Language	K2
CO3	Implement decision making using branching and looping.	K3
CO4	Develop programs using arrays and functions	K3
CO5	Execute programs using pointers, structures and files	K3

Mapping with Program Outcomes:

COs / POs	PO1	PO2	PO3	PO4	PO5
CO1	✓	✓	✓	✓	✓
CO2	✓	✓			✓
CO3	✓			✓	✓
CO4	✓		✓	✓	✓
CO5	✓			✓	✓



Syllabus

Unit	Content	Hours	E-Contents / Resources
I	Introduction: Types of Programming Languages – High level Languages – Assembly Languages – Machine Level Languages – System Software – Operating Systems – Compiler – Linker and Interpreter. Problem Solving Strategies: Steps involved in problem solving - Algorithms - Flow Charts - Symbols used in Flow Charts - Pseudo Codes – Structured Programming - Sequence – Selection – Repetition – Modular Programming.	12	Text Book/ Reference Book/ NPTEL
II	C Language Fundamentals: Introduction to C - Basic Structure of C Program – Constants – Variables – Data Types - Operators – Expressions – Evaluation of Expressions - Operator Precedence and Associativity - Managing the Input and Output – Formatted I/O – Unformatted I/O – Storage classes- Simple programs for logic building.	12	Text Book/ Reference Book
III	Branching: Simple if Statement – if-else statement – elseif Ladder – Switch statement – goto, break and continue statements. Looping: while loop – do-while loop -for loop-nested for loop – Pre-processor Directives: Macro substitution – File inclusion – Compiler control directives. Arrays: Introduction – Types of arrays – Declaration and Initialization of Arrays – Dynamic Arrays.	12	Text Book/ Reference Book
IV	Strings: Declaring and initializing the string variables – String handling functions. Functions – Need for functions – Elements of functions – Category of functions – Passing arrays to functions - Recursion. Pointers: Understanding Pointers – Declaration and Initialization of pointer variables – Accessing variables through pointers – Pointers and arrays.	12	Text Book/ Reference Book/ NPTEL
V	Structures: Defining a structure – Declaring structure variables – Accessing structure members – Array of structures - Structure within structures -Unions. Files: Defining and opening a File – Closing a file – I/O Operations on files - Dynamic memory allocation - Command Line Arguments.	12	Text Book/ Reference Book
Total		60	

Text Books	1.	Ashok N. Kamthane, 2009, "Programming and Data Structures", 1st Edition, Pearson Education.
	2.	Byron Gottfried, 2018, "Schaum's Outline of Programming with C", 4th Edition, McGraw Hill Education.
	1.	E. Balagurusamy, 2017, "Programming in ANSI C", 7th Edition, TMH.
	2.	H. Schildt, 2000, "C: The Complete Reference", 4th Edition, TMH



Reference Books	3.	ReemaThareja , 2015, "Programming in C", 2nd Edition, Oxford University Press.
	4.	Anita Goel, Ajay Mittal, 2016,"Computer Fundamentals and Programming in C",1st Edition, Pearson

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

Learning Methods	Lecture, Demonstration, Online Compilers, Coding Platforms
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Focus of the Course	Skill Development/Employability
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SEMESTER I
CORE II: DIGITAL LOGIC DESIGN

Semester	Course Code	Course Name	Category	L	T	P	Credits
I	24CYU1CA	DIGITAL LOGIC DESIGN	CORE	48	-	-	4

Preamble	This course has been designed for students to learn and understand <ul style="list-style-type: none"> • The fundamental digital logic concepts. • The combinational logic circuits and sequential logic circuits. • The concepts behind memory design and its memory types 	
Prerequisite	A basic understanding of mathematics and logical reasoning	
Course Outcomes (COs)		
CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	Demonstrate proficiency in binary number representation, base conversions, and operations	K2
CO2	Understanding the functionality and truth tables of basic logic gates	K2
CO3	Analyze and optimize the combinational logic circuits	K4
CO4	Understand the fundamental concepts of flip-flops and registers	K2
CO5	Analyze the basic concepts of memory hierarchy and its components	K4

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



Syllabus

Unit	Content	Hours	E-Contents / Resources
I	Number System and Boolean Algebra Binary Numbers- Number base conversions- Octal and Hexadecimal conversions- Compliments- Binary codes - Decimal codes. Basic Definitions-Boolean functions- Canonical standard forms: Minterms and Maxterms - Sum of Minterms-Product of Minterms-conversion between canonical forms	10	Text Book
II	Logic Gates and Boolean functions Digital Logic Gates: 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 – NAND and NOR Implementation- Don't care conditions.	10	Text 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
IV	Sequential Logic Introduction- Flip-flops-Clocked RS Flip-flop - D Flip-flop - JK Flip-flop - Design of Counters- Registers -Shift registers- Ripple Counters- Synchronous Counters- Error Correcting Codes.	10	Text Book
V	Memory Organization Memory Hierarchy- Main memory- Auxiliary memory- Associative Memory- Cache Memory- Virtual memory- Memory Management Hardware.	8	Reference Book
	Total	48	

Text Book	1.	1 M. Morris Mano, 2019, "Digital Logic and Computer Design", Pearson India Education.
Reference Books	1.	.M. Morris Mano, 2022, "Computer System Architecture", 3rd edition, Pearson India Education
	2.	S. Salivahanan and S Arivazhagan, 2018, "Digital Circuits and Design", 5th Edition, Oxford University Press, Noida
	3.	Thomas Floyd L., 2015, "Digital Fundamentals", 11th Edition, Pearson Publication Ltd, New Delhi.



24CYU1CP	CORE PRACTICAL: C PROGRAMMING	SEMESTER I
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Total Credits: 2
Total Instructions Hours: 48 h

S.No	Contents
1	Develop a program to understand the concept of data types and variables.
2	Develop programs to familiarize the different types of operators.
3	Implement the concept of branching statements using simple programs.
4	Develop programs to practice the concepts of looping statements.
5	Implement the concepts of one- and two-dimensional arrays.
6	Develop a program to sort the given set of numbers using arrays
7	Demonstrate the operations of strings variables and functions.
8	Using functions demonstrate the concept of code reusability.
9	Implement the concept of structures.
	Compute the following operations using Pointers:
10	i. Addition of two matrices ii. Multiplication of two matrices
11	Using File Operations display the contents of a file.
12	Develop a program to copy the contents of one file to another



Semester - I
IDC 1: MATHEMATICS FOR COMPUTING I

Semester	Course Code	Course Name	Category	L	T	P	Credits
I	24MTU1ID	MATHEMATICS FOR COMPUTING - I	IDC	60	-	-	4

Preamble	This course has been designed for students to learn and understand <ul style="list-style-type: none"> • the concepts of matrices and linear systems • the technique of obtaining eigen values and eigen vectors • the method of solving linear system of equations 	
Prerequisite	Knowledge on Basic Mathematics	
Course Outcomes (COs)		
CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	define the various terms of matrices and the operations involved in it	K1
CO2	Discuss the real life applications of linear systems in various fields	K2
CO3	identify the determinant value of matrices	K1
CO4	determine the eigen values and eigen vectors through different methods	K3
CO5	recognize the direct and indirect methods for solving algebraic equations	K1

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



Semester - I
IDC 1: MATHEMATICS FOR COMPUTING I

Semester	Course Code	Course Name	Category	L	T	P	Credits
I	24MTU1ID	MATHEMATICS FOR COMPUTING - I	IDC	48	12	-	4

Preamble	This course has been designed for students to learn and understand <ul style="list-style-type: none"> • the concepts of matrices and linear systems • the technique of obtaining eigen values and eigen vectors • the method of solving linear system of equations
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Prerequisite Knowledge on Basic Mathematics

Course Outcomes (COs)

CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	define the various terms of matrices and the operations involved in it	K1
CO2	Discuss the real life applications of linear systems in various fields	K2
CO3	identify the determinant value of matrices	K1
CO4	determine the eigen values and eigen vectors through different methods	K3
CO5	recognize the direct and indirect methods for solving algebraic equations	K1

Mapping with Program Outcomes:

COs / POs	PO1	PO2	PO3	PO4	PO5
CO1	✓	✓	✓	✓	
CO2	✓	✓			
CO3			✓		
CO4	✓	✓			
CO5	✓		✓	✓	✓



Syllabus

Unit	Content	Hours	E-Contents / Resources
I	<p>Systems of Linear Equations:</p> <p>Introduction to system of linear equations- - linear systems in two and three unknown - augmented matrices and elementary row operations - Gaussian elimination- Matrices and Matrix operations - inverses - algebraic properties of matrices - elementary matrices - method for finding A^{-1}- invertible matrices</p>	13	Text Book
II	<p>Matrix Transformations and Applications:</p> <p>Diagonal matrices - triangular matrices - symmetric matrices - Matrix Transformations - Network Analysis - Electrical Circuits - Balancing Chemical Equations - Polynomial Interpolation - Leontief Input-Output Models</p>	12	Text Book
III	<p>Determinants:</p> <p>Introduction - determinants by cofactor expansion- minors and cofactors - technique for evaluating 2×2 and 3×3 determinants - evaluating determinants by row reduction - elementary row operations - Matrices with proportional rows or columns - properties of determinants - Cramer's rule.</p>	12	Text Book
IV	<p>Eigenvalues and Eigenvectors:</p> <p>Definition of eigenvalues and eigenvectors - computing eigenvalues and eigenvectors - Diagonalization - Geometric and Algebraic multiplicity - complex vector spaces - vectors in C^n - differential equations - first order linear systems - solution by diagonalization</p>	10	Text Book
V	<p>Solution of Algebraic, Transcendental Equations and Linear Systems:</p> <p>Introduction - Newton-Raphson method - Direct methods - Matrix inversion method - Gaussian elimination method - Gauss Jordan method - Iterative methods - Gauss Seidel Method - Gauss Jacobi method</p>	13	Reference Book
	Total	60	



Text Book	1.	Howard Anton and Chris Rorres, 2015 "Elementary Linear Algebra with Supplemental Applications", 11th Edition, Wiley India Pvt. Ltd, New Delhi. (Unit I to IV). Sastry, S.S, 2012, " Introductory methods of Numerical Analysis", Prentice- Hall of India. New Delhi. (Unit V)
Reference Books	1.	Partha Karmakar, Chandan Bikash Das, Pabitra kumar Gouri, 2021 "Introduction to Linear Algebra", 1st Edition, Books and Allied(P) Ltd, Kolkata
	2.	Gilbert Strang, 2005, "Linear Algebra and its Applications", 4th Edition, Brooks/Cole, Noida.
	3.	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.
	4.	Venkataraman M.K. 2004,"Numerical Methods in Science and Engineering", 4th Edition, NPC

Journal and Magazines	https://www.ijream.org/papers/ICRTET0062.pdf
E-Resources and Website	Matrices: Definition, Properties, Types, Formulas, and Examples (geeksforgeeks.org) https://nptel.ac.in

Learning Method	Chalk and Talk/Assignment/Seminar
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Focus of the Course	Skill Development
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Semester – I

AECC I: ENVIRONMENTAL STUDIES

Semester	Course Code	Course Name	Category	L	T	P	Credits
I	24MBU1AA	ENVIRONMENTAL STUDIES	AECC	24	-	-	2

Preamble	This course has been designed for students to learn and understand <ul style="list-style-type: none"> • Multi-disciplinary aspects of Environmental studies • Importance to conserve the biodiversity • Causes of Pollution and its control 	
Prerequisite	Aware the basics of environmental components	
Course Outcomes (Cos)		
CO Number	Course Outcomes (Cos) Statement	Bloom's Taxonomy Knowledge Level
CO1	To understand the importance of natural resources in order to conserve for the future	K1
CO2	To impart knowledge on Natural resources and its conservation	K2
CO3	To impart knowledge on Biodiversity and its conservation	K3
CO4	To create awareness on effects, causes and control of air, water, soil and noise pollution etc.,	K4
CO5	To build awareness about sustainable development and Environmental protection	K1

Mapping with Programme Outcomes					
Cos/POs	PO1	PO2	PO3	PO4	PO5
CO1	✓			✓	✓
CO2	✓	✓	✓	✓	✓
CO3	✓	✓		✓	✓
CO4	✓	✓	✓	✓	
CO5	✓	✓	✓	✓	✓



Syllabus

Unit	Content	Hours	E-Contents / Resources
I	Introduction to Environmental studies & Ecosystems: components of environment – atmosphere, hydrosphere, lithosphere and biosphere. Scope and importance - Energy flow in an ecosystem: food chain, food web and ecological succession.	5	Text book and Website
II	Natural Resources: Renewable and Non-renewable Resources: Land Resources and land use - Deforestation: Causes and impacts due to mining, dam building on environment, forests, biodiversity and tribal populations. Conflicts over water (international & inter-state). Energy resources: Renewable and non-renewable energy sources, use of alternate energy sources, growing energy needs.	5	Text book and Website
III	Biodiversity and Conservation: Global biodiversity hot spots. India as a mega-biodiversity nation; Endangered and endemic species of India. Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.	4	Text book and Website
IV	Environmental Pollution: types, causes, effects and controls; Air, water, soil, chemical and noise pollution. Nuclear hazards and human health risks. Environment Laws: Environment Protection Act; Prevention & Control of Pollution Act – Air & Water. Wildlife Protection Act; Forest Conservation Act;	5	Text book and Website
V	Environmental ethics: Role of Indian and other religions and cultures in environmental conservation. Role of Information Technology in Environment and human health. Role of the Colleges, Teachers and Students in village adoption towards clean, green and make in villages in various aspects.	5	Text book and Website
	Total	24	




Text Book	1.	<i>Carson, R.</i> 2002. Silent Spring. Houghton Mifflin Harcourt
	2.	<i>Gadgil, M., & Guha, R.</i> 1993. This Fissured Land: An Ecological History of India. Univ. of California Press.
Reference Books	1.	<i>Gleeson, B. and Low, N. (eds.)</i> 1999. Global Ethics and Environment, London, Routledge.
	2.	<i>Gleick, P.H.</i> 1993. Water in Crisis. Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env. Institute, Oxford Univ. Press.
	3.	<i>Groom, Martha J. Gary K. Meffe, and Carl Ronald carroll.</i> 2006, Principles of Conservation Biology. Sunderland: Sinauer Associates.
	4.	<i>Grumbine, R. Edward, and Pandit, M.K.</i> 2013. Threats from India's Himalaya dams. Science, 339: 36-37.

Journal and Magazines	https://www.hzu.edu.in/bed/E%20V%20S.pdf
E-Resource and Websites	https://www.ugc.gov.in/oldpdf/modelcurriculum/env.pdf

Learning Methods	Chalk and Talk/ Seminar/ Assignment
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Focus of the Course	Skill Development/Employability/Social Awareness and Environment
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[Signature]
 BoS Chairman / HoD
 Dept. of Computer Science with Cyber Security
 Dr. N.G.P. Arts and Science College
 Coimbatore - 641 048.

 Dr.N.G.P. Arts and Science College		
APPROVED		
BoS - 1st 4/4/24	AC - 1st 17/4/24	GB -

