

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

(An Autonomous Institution, Affiliated to Bharathiar University, Coimbatore
Approved by Government of Tamilnadu and Accredited by NAAC with 'A++' Grade (3rdCycle)
Dr. N.G.P.- Kalapatti Road, Coimbatore-641048, Tamilnadu, India
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REGULATIONS 2025-26 for Under Graduate Programme

(Outcome Based Education model with Choice Based Credit System)

Bachelor of Computer Applications

(For the students admitted during the academic year 2025-26)

Programme: BCA

Eligibility

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

Programme Educational Objectives

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

- 1. Demonstrating a substantial understanding of concepts in key areas of information technology and its applications.
- 2. Analysis and synthesis involved in computer system, information system and computer applications.
- 3. To develop a software and in its design and implementation for professional competence
- 4. To equip and train the students to meet the requirement of the IT Industries and public sectors.
- 5. To stimulate an interest in computing as an academic discipline with a view to encouraging progression to research and higher studies.

PROGRAMME OUTCOMES

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

PO Number	PO Statement
PO1	Understand the concepts of key areas in Computer Applications.
PO2	Develop student's profession and ethical attitudes, effective communication, team work and logical proficiency.
PO3	Apply knowledge of mathematical, algorithmic and computing skills.
PO4	Make use of modern tools and techniques to develop software.
PO5	Develop practical skills to fulfill the needs of industry and society.

BCA 2025-26 SCHEME

Credit Distribution

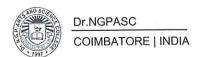
Part	Subjects	No. of Papers	Credit	Semester No.
I (12 Credits)	Tamil / Hindi / French/Malayalam	4	4 x 3 = 12	I - IV
II (12 Credits)	English	4	4 x 3 = 12	I - IV
	Core (Credits 3)	2	2 x 3 = 6	III - IV
	Core (Credits 4)	11	11x4 = 44	I - VI
	Core Practical (Credits 2)	5	5x2=10	I - VI
III (108	Core Practical (Credits 5)	2	2x5=10	III-IV
Credits)	Inter Departmental Course (IDC)	4	4x4=16	I - IV
	Discipline Specific Elective (DSE)	3	3x4=12	V - VI
	Skill Enhancement Course (SEC)	4	4x2=8	III - VI
	Industrial Training	1//	1X2=2	V
	Environmental Studies(AECC)	1	1x2=2	ı
IV	Basic Tamil/Advanced Tamil/Human Rights and Women's Rights (AECC)	1	1x2=2	II
(8 Credits)	Innovation & IPR/ Innovation, IPR & Entrepreneurship (AECC)	1	1x2=2	VI
	Generic Elective(GE)	1	1x2=2	V
V (2 Credits)	NSS/NCC/YRC/RRC/Yoga/Sports/ Clubs/ Health and Wellness	-	2X1=2	I - II
	TOTAL CREDITS		142	

UG CURRICULUM

COMPUTER APPLICATIONS AY: 2025-26

Course	Course Category	Course Name	L	Т	P	Instru Ho		Exam (h)	1	Max N	Aarks	Credits
Code				25		Week	Total		CIA	ESE	Total	
First Semeste	er											
Part– I												
25TLU1TA		Tamil–I		1								
25TLU1HA	340	Hindi-I										
25TLU1MA	Language-I	Malayalam-I	4	1	-	5	60	3	25	75	100	3
25TLU1FA		French –I										
Part– II				-			*					
25ELU1EA	Language-II	English -I	4	-	1	5	60	3	25	75	100	3
Part– III		747						L	<u></u>			L
25AIU1CA	Core -I	Problem Solving and Programming in C	4	1	ē	5	60	3	25	75	100	4
25CAU1CP	Core Practical-I	C Programming		-	4	4	48	3	40	60	100	2
25ITU1CA	Core-II	Digital Computer Fundamentals	4	ge	1	4	48	3	25	75	100	4
25MTU1IC	IDC-I	Numerical Methods and Statistics	4	1	-	5	60	3	25	75	100	4
Part-IV	•					-				4		
25MBU1AA	AECC-I	Environmental Studies	2	-	-	2	24	3	50	-	50	2
Part-V	8							L	2	LL		
25CAU1XA	Extension Activity	NSS/NCC/ YRC/RRC/ Yoga/Sports/ Clubs	-	_	-	-	ie.		50	-	50	1
	a	Total	22	3	5	30	360	-	-	-	700	23

Course	Course		L	T	P		uction ours	Exam (h)	I	Max I	Marks	Credits
Code	Category	Name				Week	Total		CIA	ESE	Total	
Second Seme	ester											
Part-I												
25TLU2TA		Tamil–II	-								25	
25TLU2HA		Hindi-II		241								
25TLU2MA	Language-I	Malayalam-II	4	1	-	5	60	3	25	75	100	3
25TLU2FA] [French –II				,					-	=
Part-II												
25ELU2EA	Language-II	English -II	4	_ 5	1	5	60	3	25	75	100	3
Part-III		1	D.	10		07/8					•	
25CAU2CA	Core - III	Data Structures	4	1		5	60	3	25	75	100	4
25CSU2CA	Core - IV	Object Oriented Programming with C++	4	247		4	48	3	25	75	100	4
25CAU2CP	Core Practical - II	Data Structures		7	4	4	48	3	40	60	100	2
25MTU2IC	IDC - II	Discrete Mathematics	4	1	10/63	5	60	3	25	75	100	4
Part-IV												
25TLU2AA	3	Basic Tamil							4			
25TLU2AB		Advanced Tamil										
25CRU2AA	AECC-II	Human Rights and Women's Rights	2	:-	-	2	24	3 .	50		50	2
Part-V												
25CAU2XA	Extension Activity	NSS/NCC/YRC /RRC/Yoga /Sports/Clubs / Health and Wellness	-	-	-		-	-	50) -	50	1
		Total	22	3	5	30	360	-		. -	700	23



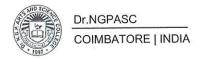
Course	Course	Course Name	L	Т	P	Instru Ho		Exam (h)	N	Iax N	Iarks	Credits
Code	Category					Week	Total		CIA	ESE	T	
Third Seme	ster			L	1				CIA	ESE	Total	
Part - I								1				
25TLU3TA		Tamil–III										
25TLU3HA	7	Hindi-III		2								
25TLU3MA	Τ	Malayalam-III	3	1	■ / ^(/)	4	48	3	25	75	100	3
25TLU3FA	Language-I	French –III				*						
Part-II		- E	100	11	31							
25ELU3EA	Language-II	English -III	3	1	- 6	4	48	3	25	75	100	3
Part-III		/ \ \\\ /\!		10	gre is							
25CAU3CA	Core-V	Database Management Systems	4	-		4	48	3	25	75	100	4
25CTU3CM	Core Practical-III	Java Programming	3		4	7	84	3	40	60	100	5
25CSU3CA	Core-VI	Operating Systems	3			3	36	3	25	75	100	3
25CAU3SP	SEC Practical-I	SQL Programming	-	-	4	4	48	3	40	60	100	2
25PAU3IA	IDC-III	Business Accounting	4	-	_	4	48	3	25	75	100	4
		Total	20	2	8	30	360	-	-	-	700	24

Course	Comman	Course	L	Т	P		uction ours	Exam (h)	N	Aax N	Iarks	Credits
Code	Course Category	Name			Ī	Week	Total					
	W.								CIA	ESE	Total	
Fourth Seme	ester											
Part–I												
25TLU4TA		Tamil–IV										
25TLU4HA	Language-I	Hindi- IV	2				40		0.5	7.5	100	2
25TLU4MA	,	Malayalam- IV	3	1	-	4	48	3	25	75	100	3
25TLU4FA		French – IV										
Part -II								253				
25ELU4EA	Language-II	English -IV	3	1	_	4	48	3	25	75	100	3
Part -III												
25CTU4CA	Core-VII	Computer Networks	4	-	-	4	48	3	25	75	100	4
25CAU4CM	Core Practical - IV	Python Programming	3		4	7	84	3	40	60	100	5
25CAU4CA	Core-VIII	Cyber Security	3	(2	1	3	36	3	25	75	100	3
25CAU4SP	SEC Practical-II	Big Data Technologies	, locality		4	4	48	3	40	60	100	2
25MTU4IC	IDC-IV	Operations Research	4	-		4	48	3	25	75	100	4
		Total	20	2	8	30	360	-	-	-	700	24

Course Code	Course	Course Name	L	Т	P	Но	uction ours	Exam		Aax Aarks		Credits
Code	Category	rvaine				Week	Total		CIA	ESE	Total	
Fifth Semest	er							•				
Part -III		10									ă.	
25CAU5CA	Core- IX	Artificial Intelligence and Expert Systems	4	ı	a).	4	48	3	25	75	100	4
25CAU5CB	Core-X	MongoDB Programming	4	-	-	4	48	3	25	75	100	4
25CAU5CC	Core-XI	Software Engineering Concepts	4	•	.	4	48	3	25	75	100	4
25CAU5CP	Core Practical- V	Software Testing			4	4	48	3	40	60,	100	2
25CAU5CQ	Core Practical- VI	MongoDB Programming	1		4	4	48	3	40	60	100	2
25CAU5SP	SEC Practical - III	Web Design and Development			4	4	48	3	40	60	100	2
25CAU5DA		Computer Graphics		11.5		24	37					
25CAU5DB	DSE –I	Data Mining	4		27_	4	48	3	25	75	100	4
25CAU5DC		Internet of Things and Applications								17		
25CAU5TA	IT	Industrial Training		-	3	_	-	3	40	60	100	2
Part -IV												
25CAU5GA		Spreadsheet Applications	2	-	æ.	2	24	3	50	-	50	2
		Total	18	-	12	30	360	-	_	-	850	26

Course	Course	Course Name	L	Т	P		uction ours	Exam (h)	1	Max N	Marks	Credits
Code	Category					Week	Total		CIA	ESE	Total	
Sixth Semest	er											
Part -III							r	r			,	
25CAU6CA	Core-XII	Open Source Technologies	4	-	-0	4	48	3	25	75	100	4
25CAU6CP	Core Practical - VII	Open Source Technologies	-	-	4	4	48	3	40	60	100	2
25CAU6CV	Core- XIII	Project and Viva Voce	-	-	8	8	96	3	40	60	100	4
25CAU6SP	SEC Practical - IV	Multimedia Technologies) -	4	4	48	3	40	60	100	2
25CAU6DA		Computer Vision					100					=
25CAU6DB	DSE –II	Machine Learning and Applications	4		a _	4	48	3	25	75	100	4
25CAU6DC	5	Cloud Technologies				73)	5/					
25CAU6DD		Augmented Reality and Virtual Reality	3// *		7		7					
25CAU6DE	DSE –III	Deep Learning	4	-	-	4	48	3	25	75	100	4
25CAU6DF		Fundamentals of Blockchain and Applications										
PART IV												
25BCU6AA	AECC -	Innovation, IPR and Entrepreneurship	2	-	-	2	24	3	50	-	50	2
	*	Total	14	-	10	5 30	360	_	-	-	650	22
		Gran	d To	tal							430	0 142

^{*}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	25CAU5DA	Computer Graphics
2	25CAU5DB	Data Mining
3	25CAU5DC	Internet of Things and Applications

Semester VI (Elective II)

List of Elective Courses

S. No.	Course Code	Name of the Course
1	25CAU6DA	Computer Vision
2	25CAU6DB	Machine Learning and Applications
3	25CAU6DC	Cloud Technologies

Semester VI (Elective III)

List of Elective Courses

S. No.	Course Code	Name of the Course
1	25CAU6DD	Augmented Reality and Virtual Reality
2	25CAU6DE	Deep Learning
3	25CAU6DF	Fundamentals of Blockchain and Applications

GENERIC ELECTIVE COURSES (GE)

The following are the courses offered under Generic Elective Course

Semester V (GE)

S. No.	Course Code	Name of the Course
1	25CAU5GA	Spreadsheet Applications

EXTRA CREDIT COURSES

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

Semester III

S. No.	S. No. Course Code Name of the Course			
1.	25CAUSSA	Program Logic and Computer Fundamentals		
2	25CAUSSB	Internet Technologies		

			Semester – I				
		LANG	SUAGE – I: TAM	IL - I			
Semester	Course Code	Course Name	Category	L	T	P	Credits
I	25TLU1TA	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 Tax anomy 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		✓			gr
CO2	F	✓			
CO3		✓		=	
CO4	-	✓			
CO5		✓			

25TLU1TA TAMIL - I Syllabus

Unit	Content	Hrs	Resources
1	மறுமலர்ச்சிக் கவிதைகள் 1. இலக்கிய வரலாறு -மறுமலர்ச்சிக் கவிஞர்களின் தமிழ்ப்பணிகள்		
•	2. பாரததேசம்- பாரதியார்		தமிழ்மொழிப <u>்</u>
	3. படி - பாரதிதாசன்	13	பாடம் முதற்பருவம்
	4. தமிழரின் பெருமை - நாமக்கல் கவிஞர்		2025-2026
	5. தமிழ்க் கொலை புரியாதீர் - புலவர் குழந்தை		https://www.youtube.co
	6. திரைத்தமிழ்		m/watch?v=Up55uhkk9z
	அ) 'விஞ்ஞானத்த வளர்க்கப் போறண்டி' எனத்		<u>.</u>
	தொடங்கும் பாடல் – உடுமலை நாராயண கவி		
	ஆ) 'சும்மா கிடந்த நிலத்தை' எனத் தொடங்கும்		
	பாடல் –		
	பட்டுக்கோட்டை கல்யாண சுந்தரனார்		=
	இ) 'சமரசம் உலாவும் இடமே' எனத் தொடங்கும்		
	பாடல் -மருதகாசி	2.	Ū
	ஈ) 'உன்னை அறிந்தால்' என _{த்} தொடங்கும் பாடல் - கண்ணதாசன்		
2	புதுக்கவிதைகள்		
	1. இலக்கிய வரலாறு - புதுக்கவிதையின் தோற்றமும்		
	வளர்ச்சியும் 2. கடமையைச் செய் - மீரா		தமிழ்மொழிப்
	2. கட்பையைச் செய் - யரா 3. ஓடு ஓடு சங்கிலி - சிற்பி பாலசுப்பிரமணியம்	13	பாடம் முதற்பருவம்
	3. % () % () & MINOR - AIDOI -		2025-2026
	4. ஒப்பிலாத சமுதாயம் - அப்துல் ரகுமான்		https://www.youtube.co
	5. மரங்கள் - மு.மேத்தா		m/watch?v=dX9ZaNJM
	6. கரிக்கிறது தாய்ப்பால் - ஆரூர் தமிழ்நாடன்		<u>co</u>
	7. ஐந்தாம் வகுப்பு 'அ' பிரிவு - நா. முத்துக்குமார்		
	8. ஹைகூ கவிதைகள் - 10 கவிதைகள்		
3	பெண்ணியம்		தமிழ்மொழிப்பா
	1. தொலைந்து போனேன் - தாமரை	10	டம் முதற்பருவம்
	2. நீரில் அலையும் முகம் - அ. வெண்ணிலா 3. தற்காத்தல் - பொன்மணி		2025-2026
	வரமுத்து		https://www.youtube.c
	4. ஏனிந்த வித்தியாசங்கள் ? - மல்லிகா		m/watch?v=DLabokqW
	5. புதையுண்ட வாழ்க்கை - சுகந்தி சுப்ரமணியன்		
4	சிறுகதைகள்		N X

1.இலக்கிய வரலாறு - சிறுகதையின் தோற்றமும் வளர்ச்சியும் 2. கனகாம்பரம் - கு.ப.ராஜகோபாலன் 3. கடிதம்- புதுமைப்பித்தன் 4. பொம்மை - ஜெயகாந்தன் 5. காய்ச்சமரம் - கி. ராஜநாராயணன் 6. காட்டில் ஒருமான் - அம்பை 7.வேட்கை - சூர்யகாந்தன்	14	தமிழ்மொழிப் பாடம் முதற்பருவம் 2025-2026 https://www.youtube.co m/watch?v=78u7iTN30 <u>U8</u>
5 பயிற்சிப் பகுதி அ. இலக்கணம் 1. வல்லின ஒற்று மிகும், மிகா இடங்கள் - ஒற்றுப்பிழை நீக்கிஎழுதுதல் 2. ர,ற-ல,ழ,ள - ண,ந,ன வேறுபாடு - 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 2025-2026 https://www.youtube.co m/watch?v=B3wfM0QL6 N8 https://www.youtube.co m/watch?v=FchTlqAtwB U https://www.youtube.co m/watch?v=gCP3gC- JQU4 https://www.youtube.co m/watch?v=p9QOHD12 Yeo
Total	60	<u>reo</u>

Text book	1.	தமிழ் மொழிப்பாடம் – 2025-2026 தொகுப்பு: தமிழ்த்துறை, டாக்டர்
		என். ஜி. பி. கலை அறிவியல் கல்லூரி, கோயம்புத்தூர் – 641048.
Reference	1.	பேராசிரியர் புலவர் சோம. இளவரசு, தமிழ் இலக்கிய வரலாறு,
Books		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	இலக்கிய இதழ்கள்
E-Resources and Website	https://www.tamilvu.org

Learning Method	Lecture/ Tutorial / Student Seminar/GD/Assignment	

Focus of the Course	Skill Development / Employability



			Semester – I				
		LANG	UAGE –I: HIND	I – I			
Semester	Course Code	Course Name	Category	L	T	P	Credits
I	25TLU1HA	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 O	outcomes (Cos)	
CO.No.	Course Outcomes (COs) Statement	Bloom's Tax anomy 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	Mapping with Program Outcomes:						
Cos / POs	PO1	PO2	PO3	PO4	PO5		
CO1		✓					
CO2		✓			§.		
CO3		✓		,	,		
CO4		✓					
CO5	N	✓					

25TLU1HA HINDI – I

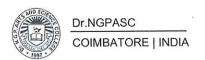
Unit	Content	Hrs	Resources
1	गद्य – नूतन गद्य संग्रह (जयप्रकाश) पाठ1- रजिया पाठ, 2-	13	
	मक्रील पाठ ३- बहता पानी निर्मला		Text Book
	पाठ४- राष्ट्रपिता महात्मा गाँधी		20
2	कहानी कुंज- डाँ वी.पी. 'अमिताभ'(पाठ 1-4)	13	Text Book
3	व्याकरण : शब्दविचार (संज्ञा, सर्वनाम,विशेषण)	12	Text Book
4	अनुच्छेद लेखन	12	Text Book
5	अनुवाद अभ्यास-III (केवल अंग्रेजी से हिन्दी में) (पाठ1 to 10)	10	Text Book
	Total	60	

Text books	1.	प्रकाशकः सुमित्र प्रकाशन 204 लीला अपार्ट्मेंट्स, 15 हेस्टिंग्स रोड'अशोक नगर
		इलाहाबाद-211001
	2.	प्रकाशकः गोविन्द प्रकाशन सदर बाजार, मथुरा उत्तरप्रदेश-281001
	3.	पुस्तक: व्याकरण प्रदिप – रामदेव प्रकाशक: हिन्दी भवन 36 टेगोर नगर इलाहाबाद- 211024
	4.	पुस्तक: व्याकरण प्रदिप – रामदेव प्रकाशक: हिन्दी भवन 36 इलाहाबाद-211024
	5.	प्रकाशकः दक्षिण भारत प्रचार सभा चेनैई -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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		Semes	ster – I				
LANGUAGE-I: MALAYALAM- I							
Semester	Course Code	Course Name	Category	L	Т	P	Credits
I	25TLU1MA	MALAYALAM- I	LANGUAGE- I	48	12	-	3

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
To understand the language Malayalam for communication

Course O	outcomes (Cos)	
CO. No.	Course Outcomes (COs) Statement	Bloom's Tax anomy Knowledge Level
CO1	Learn the fundamentals of novels and stories	K2
CO2	Understand the principles of translation work	КЗ
CO3	Expose the knowledge writing critical views on fiction	К3
CO4	Apply creative ability	K3
CO5	Build the power of creative reading	K4

Mapping wit	h Program O	atcomes:			
Cos/POs	PO1	PO2	PO3	PO4	PO5
CO1		✓			
CO2		✓			
CO3		✓			e
CO4		✓			0
CO5		✓	7		

25TLU1MA MALAYALAM- I

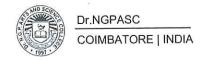
Unit	Content	Hrs	Resources
1	Novel	14	Text book
	PathummayudeAdu		
2	Novel	10	Text book
	PathummayudeAdu		
3	Short Story	14	Text book
	Nalinakanthi		
4	Short Story	10	Text book
	Nalinakanthi		
5	Practical Application	. 12	Text book
	Expansion of ideas, General Essay and Translation		
	Total	60	=

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.
3	2.	MalayalaCherukathaInnale Innu.

Journal and	71991	- "	×	
Magazines				
E-Resources and		-		
Website			19	

Learning Method	Lecture/Tutorial/Student Seminar/GD/Assignment
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Focus of the Course	Skill Development / Employability	
Tocus of the Course	Okin Developinente, Employuemay	



Semester – I							
LANGUAGE-I: FRENCH - I							
Semester	Course Code	Course Name	Category	L	T	P	Credits
I	25TLU1FA	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 Tax anomy Knowledge Level		
CO1	Learn the Basic verbs, numbers and accents	K2		
CO2	Apply the adjectives and the classroom environment in France	КЗ		
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	Đ	✓			
CO5		✓	I		

25TLU1FA

FRENCH - I

Unit		Co	ntent	Hrs	Resources
1	Objectifs de Communic ation	Tâche	Activités de réception et de production orale	14	Text book Salut I
*	• Enter en contact	En cours de cuisine, premiers contacts avec les members d'un groupe	 Comprendre des personnes qui se saluent. Ēchanger pour entrer en contact, se présenter, saluer, s'excuser. Communiquer avec tu ou vous. Comprendre les consignes de classe Ēpeler son nom et son prénom. Computer jusqu'à 10. 	N.	Page 10
2	Demander de se presenter. Présenter quelqu'un .	Dans la classe de français, se presenter et remplir une fiche pour le professeur.	Comprendre les informations essentielles dans un échange en milieu professionnel. Ēchanger pour se presenteret présenterquelqu'un.	12	Text book Enchanté I Page 20
3	Exprimer ses gouts.	Dans un café, participer à une soirée de rencontres rapides et remplir de taches d'appréciation	 Dans une soirée de recontresrapid comprendre des personnes qui échangent sur elles et sur leurs goût Comprendre une personne qui parler 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 passes. 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. • Imaginer et raconter au passé à partir de situations dessinées.	10	Text book Autoévalua tion du module I Page 40 – Préparation au DELF A1 page 42 Tu veux bien page 46
5	Practical App Make in Own			10	-
			Total	60	

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

Journal and	-
Magazines	
E-Resources	-
and Website	

Learning Method Lectu	re/ Tutorial / Student Seminar/GD/Assignment
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Focus of the Course	Skill Development / Employability	
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		SEMESTI	ER – I				
		LANGUAGE II: 1	ENGLISH - I				
Semester Course Course Name Category L T P Cre						Credits	
I	25ELU1EA	ENGLISH - I	LANGUAGE- II	48	-	12	3

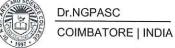
	This course has been designed for students to learn and understand				
	 the effect of dialogue, imagery and varied genres 				
Preamble	 any spontaneous spoken discourse and respond to them with 				
	proper sentence structure				
	 the transactional concept of English language. 				
Prerequisite	Basic comprehension of Language Skills				

Course O	utcomes (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.	К3	
CO3	Construct sentences and convey messages effectively in real life situations.	КЗ	
CO4	Apply different reading strategies with varying speed.	КЗ	
CO5	Prepare modules with their own ideas and present them coherently in a grammatically correct form.	КЗ	

Cos/POs	PO1	PO2	PO3	PO4	PO5
CO1		✓			=
CO2	11	✓			
CO3		✓			
CO4		✓			
CO5		/			

25ELU1EA | ENGLISH - I Syllabus

	Syllabus		
Uni t	Content	Hrs	Resources
I	Mathew Arnold: Dover Beach- Author's Biography- title indications- outline- paraphrasing the poem- context of poem- form- poetic devices- enjambment- techniques- Annotations 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 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 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 Sheila Nayampalli Baruna: Alone - Author's Biographynarrative structure- passage analysis- insight of ideas-cohesion and context- style- language techniques. Listening Skills	12	Text Book
П	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)	13	britishcouncil.org cambridgeenglish .org
III	Speaking Skills 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	11	britishcouncil.org cambridgeenglish .org
IV	Reading Skills Study Skills: Skimming and Scanning- Reading different kinds of texts- Types of reading-Developing a good reading speed, reading aloud, Referencing skill- Word Power (Denotation and Connotation) - Reading comprehension, Data interpretation -Charts, Graphs, Advertisements - Cognitive Skills- Inference Making - Interpretation	12	britishcouncil.org cambridgeenglish .org
V AND SCIEN	Writing Skills Sentence patterns, Note- making and note taking-Strategies -	12	britishcouncil.org



Paragraph	Paragraph writing: Structure and Principles - Academic		cambridgeenglish
Writing - Fo	Writing - Formal and Informal Letters, Report, Book / Movie .org		.org
Review - Inf	ographics Writing) ⁶⁶ :
	Total	60	

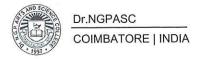
Note: Case studies related to the above topics to be discussed (Examined Internal only)

Text book	1.	https://www.poetryfoundation.org/poems/43588/doverbeach				
	0	https://portal.abuad.edu.ng/lecturer/documents/1586771577our_earth				
	2.	_will_not_die.doc				
	3.	http://l-adam-mekler.com/chucktwo.pdf				
	4.	https://offthewallplays.com/wpontent/uploads/2017/04/1_pdfsam_ A-famed-life-full-with-title-page.pdf				
	5. Nation, I. S. P and Jonathan Newton. 2009. <i>Teaching ESL/EFL Listeni and Speaking</i> . Routledge, New York, United States of America.					
	6.	Prabha, Dr. R. Vithya & S. Nithya Devi. 2019. <i>Sparkle</i> . (1st Edn.) McGraw - Hill Education, Chennai, India.				
Reference Books	1.	Rudzka, Brygida -Ostyn, 2003. Word Power: <i>Phrasal Verbs and Compounds: A Cognitive Approach</i> , Mouton de Gruyter, New York, United States of America.				
	2.	Swales, John M. & Feak, Christine B. 2012. <i>Academic Writing for Graduate Students: Essential Tasks and Skills</i> , University of Michigan Press, Michigan, United States of America.				
2	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/

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

Focus of the Course	Skill Development/ Employability
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	00001	Semester - I					
	CORE I: PI	ROBLEM SOLVING AND PRO	GRAMMIN	IG I	NC		
Semester	Course Code	Course Name Category L T P					Credits
I	25AIU1CA	PROBLEM SOLVING AND PROGRAMMING IN C	CORE	48	12	-	4

Preamble	 This course has been designed for students to learn and understand 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

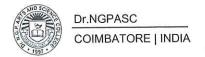
Course O	utcomes (Cos)	
CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	Illustrate the basic principles of programming and problem solving.	K2
CO2	Understand the fundamentals of C Language.	K2
CO3	Implement decision making using branching and looping.	КЗ
CO4	Develop programs using arrays and functions.	КЗ
CO5	Execute programs using pointers, structures and files.	К3

Mapping with	Program Ou	tcomes:		S.	
Cos/POs	PO1	PO2	PO3	PO4	PO5
CO1	√			√	1
CO2	√			√	✓
CO3	√	√	√	√	1
CO4	√	√	√	√	√
CO5	√	√	√	√	√

25AIU1CA PROBLEM SOLVING AND PROGRAMMING IN C Syllabus

Unit	Content	Hrs	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 Books/ Reference Books/ 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 Books/ Reference Books
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 – Preprocessor Directives: Macro substitution – File inclusion – Compiler control directives. Arrays: Introduction – Types of arrays – Declaration and Initialization of Arrays – Dynamic Arrays.	12	Text Books/ Reference Books
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 Books/ Reference Books/ 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 Books/ Reference Books
	Total	60	

Note: Case studies related to the above topics to be discussed (Examined Internal only)



Text	1	Ashok N. Kamthane, 2009, "Programming and Data Structures", 1								
books	1.	Edition, Pearson Education.								
	2.	Byron Gottfried, 2018, "Schaum's Outline of Programming with C", 4th								
	۷.	Edition, McGraw Hill Education.								
Reference	1.	E. Balagurusamy, 2017, "Programming in ANSI C", 7th Edition, TMH.								
Books	2.	H. Schildt, 2000, "C: The Complete Reference", 4th Edition, TMH								
	3.	ReemaThareja, 2015, "Programming in C", 2 nd Edition, Oxford University Press. Anita Goel, Ajay Mittal, 2016, "Computer Fundamentals and Programming in C", 1 st Edition, Pearson.								
	4.									

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

Learning Method	Chalk	and	Talk/Assignment/Seminar/	Group
	Discussi	on/Case	Study	-

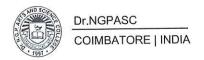
Focus of the Course	Skill	Development/	Employability/	Entrepreneurial
Tocus of the Course	Devel	opment/ Innovati	ions	<u>.</u>



	CC	Semester – I DRE PRACTICAL I : C PRC	GRAMMING				
Semester	Course Code	Course Name	Category	L	Т	P	Credits
I	25CAU1CP	C PROGRAMMING	CORE PRACTICAL	-	-	48	2

Course Or	Course Outcomes (Cos)							
CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level						
CO1	Demonstrate the use of operators and input output statements for solving problems.	К3						
CO2	Apply decision-making and control structures to solve conditional and iterative programming problems.	К3						
CO3	Implement basic data structures and string manipulation techniques.	К3						
CO4	Construct modular programs using user-defined functions, structures, unions, and preprocessor directives.	К3						
CO5	Implement programs using pointers, dynamic memory allocation, file handling, and command-line arguments.	КЗ						

Mapping with	Program Ou	tcomes:			
Cos/POs	PO1	PO2	PO3	PO4	PO5
CO1	✓	✓	✓	✓	✓
CO2	✓	✓	✓	✓	. ✓
CO3	✓		✓	✓	✓
CO4	✓		✓	✓	✓
CO5	1	✓	✓	✓	✓

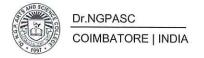


25CAU1CP C PROGRAMMING

S.No	List of Programs
1	Program using Operators.
2	Program to illustrate I/O Statements.
3	Program to perform Conditional Statements.
4	Program to demonstrate Looping Statements.
5	Program to implement Arrays.
6	Program to demonstrate String Handling Functions.
7	Program to demonstrate User Defined Functions.
8	Program to implement Structure and Union.
9	Program to demonstrate Pre-processor Directives.
10	Program to demonstrate Pointers and Dynamic Memory Allocation.
11	Program to implement Files.
12	Program to illustrate Command Line Arguments.

Reference 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", 4 th Edition, McGraw Hill Education.

Learning Method	Demonstration/ Hands on Experiments	<i>a</i>
Focus of the Course	Skill Development/Employability	



a	CORE	Semester – I II: DIGITAL COMPUTER FU	NDAMENTAI	LS			n.
Semester	Course Code	Course Name	Category	L	Т	P	Credits
ı I	25ITU1CA	DIGITAL COMPUTER FUNDAMENTALS	CORE	48	-	_	4

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

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

Cos/POs	PO1	PO2	PO3	PO4	PO5
CO1	✓		√	✓	
CO2	✓			✓	
CO3	√ ·	✓	✓	✓	✓
CO4	✓		✓	✓	
CO5	✓		✓	✓	

25ITU1CA DIGITAL COMPUTER FUNDAMENTALS

Unit	Content	Hrs	Resources
I	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 1 / Reference Book 1
II	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 - Don't care conditions.	08	Text Book 1 /Reference Book 3
III	Adders: Half-Adder, Full-Adder. Subtractors Half-Subtractor, Full-Subtractor. Multilevel NAND Circuits: Universal Gate. Multilevel NOR Circuits: Universal Gate. Binary Parallel Adder- Decimal Adder - BCD Adder. Decoders: Demultiplexers-Encoders - Multiplexer.	10	Text Book 1 / Reference Book 1
IV	Introduction- Flip-flops-Clocked RS Flip-flop - D Flip-flop - JK Flip-flop - Design of Counters- Registers - Ripple Counters. The Memory Unit - Random Access Memories: Integrated-circuit Memory- Magnetic-core Memory.	10	Text Book 1 & NPTEL
V	Introduction – Microprocessor- Microcomputer- Architecture of Microprocessors- History- Evolution- Microprocessor Applications- Evolution of Microcontrollers- Application of Microcontrollers. Architecture of 8085 Microprocessor- Pin diagram of 8085 Microprocessor.	10	Text Book 2 /Reference Book 4 & YouTube Videos
	Total	48	

Text book	1	M.Morris Mano, 2019, "Digital Logic and Computer Design", Pearson
	1.	India Education.
		Soumitra Kumar Mandal, 2018, "Microprocessors and Microcontrollers
	2.	- Architecture, Programming and Interfacing using 8085, 8086, 8051",
		15th Edition, Tata Mc Graw Hill Education.
Reference S. Salivahanan and S Arivazhag		S. Salivahanan and S Arivazhagan, 2018, "Digital Circuits and Design",
Books	1.	5th Edition, Oxford University Press, Noida.
	_	Thomas Floyd L., 2015, "Digital Fundamentals", 11th Edition, Pearson
	2.	Publication Ltd, New Delhi.
	_	M Morris Mano, 2016, "Digital Logic and Computer Design", 5th Edition,
	3.	Pearson.
		Aditya P Mathur, 2016, "Introduction to Microprocessor", 3rd Edition,
	4.	McGraw Hill Education.

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

Larning Method	Lecture/Simulation/Demo/Mind Mapping
Learning Method	Lecture, Sintalation, Berns, 112211-11-17

Focus of the Course	Skill Development/Employability

	IDC I: I	Semester – I NUMERICAL METHODS ANI	O STATIST	ICS			
Semester	Course Code	Course Name	Category	L	Т	P	Credits
I	25MTU1IC	NUMERICAL METHODS AND STATISTICS	IDC	48	12	-	4

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

Course O	Course Outcomes (Cos)				
CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level			
CO1	recognize the direct and indirect methods for solving algebraic equations.	K1			
CO2	discuss the method of solving differential and integral problems.	K2			
CO3	define the parameters of central tendencies and dispersion.	K1			
CO4	demonstrate the applications of correlation and regression.	K2			
CO5	analyze the validity of the values of parameters through hypothesis testing.	КЗ			

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

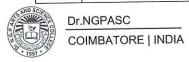


25MTU1IC | NUMERICAL METHODS AND STATISTICS

Syllabus

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

Note: 20% Theory and 80% Problem



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

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

Learning Method	Chalk and Talk/Assignment/Seminar	
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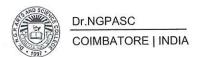
Focus of the Course	Skill Development/ Employability	

Semester – I
AECC I: ENVIRONMENTAL STUDIES

Semester	Course Code	Course Name	Category	L	T	p	Credits
I	25MBU1AA	ENVIRONMENTAL STUDIES	AECC	24	_	-	2

Preamble	 This course has been designed for students to learn and understand 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 Outco	mes (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	К3
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

Cos/POs	PO1	PO2	PO3	PO4	PO5
CO1		1			
CO2		✓ ,			
CO3					
CO4		✓			
CO5		✓			



25MBU1AA - ENVIRONMENTAL STUDIES 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
п	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; Indigenous knowledge used for sustainable forest use.	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.	Carson, R. 2002. Silent Spring. Houghton Mifflin Harcourt
1 CX1 DOOK	1.	
	2.	Gadgil, M., & Guha, R.1993. This Fissured Land: An Ecological History
		of India. Univ. of California Press.
Reference	1.	Gleeson, B. and Low, N. (eds.) 1999. Global Ethics and Environment,
Books		London, Routledge.
	2.	Gleick, P.H. 1993. Water in Crisis. Pacific Institute for Studies in Dev.,
		Environment & Security. Stockholm Env. Institute, Oxford Univ. Press.
	3.	Groom, Martha J. Gary K. Meffe, and Carl Ronald carroll. 2006, Principles
067		of Conservation Biology. Sunderland: Sinauer Associates.
*	4.	Grumbine, R. Edward, and Pandit, M.K. 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	(8)

Learning Methods	Chalk and Talk/ Seminar/ Assignment	

Focus of the Course	Skill Development/Employability/Social Awareness and Environment
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