2.6 Students Performance and Learning Outcomes

2.6.1 Program Outcomes,Program Specific outcomes and Course Outcomes for all Programs Offered by the Institution

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Department of BA ENGLISH 2021-2022

Programme Outcome(POs)

Upon Completion of the degree requirements,students will be able

S.No.	PO Number	PO Statements
1	PO1	An understanding English Literature
2	PO2	Providing english as a Global language
3	PO3	Developing language skill
4	PO4	learning LSRW
5	PO5	Involves a lot of writing

Programme Specific Outcome(PSO)

S.No.	POS Number	POS Statements
1	PSO1	Acquiring KNOWLEDGE about literature
2	PSO2	Ability to understand the literary genere
3	PSO3	Demonstrate effectively oral and written communication

4	PSO4	Demonstrate ability to linguastics and phonetics							
5	PSO5	writing and editing, jounalism among others.							
Course Outcome(Cos)									
Semster		Course	Title of the Course			Course Outcome			LEVEL
SEM 1		Core I	Indian writing in english			CO1: To know about Indian writer and their poems, plays, and novels			K1
						CO2: Accuring knowledge and skill about indian culture			K3,K4
						CO3 : To know about indian famous writers and their unique qualities			K2
						CO4: To know traditional concepts in Indian English			K4
						CO5: To understand the value of myth of Indian culture			K1
		Core II	Advanced English Grammar			CO1 : To know the basic grammar and usage			K4
						CO2 : To give knowledge of parts of speeach,sentence pattern and articles			K1
						CO3 : To knowthe way of usage grammar and rules. Teach about modern grammar			K5
						CO4: To know rules and application in day today life			K4
						CO5: The usage of important grammars in working days			K5
						CO1: To provide the knoweledge of literary genere.			K1,K3

I	Allied	Literary forms and terms	CO2: Enable students to acquire and exibit knowledge skills in literature.	K3,K1
			CO3 : To give insight on figures of speeach and various types of genere.	K2,K3
			CO4: Find the difference between tragedy and comedy	K1
			CO5: To know different images used by poet in his poetry	K1,K2
	Core II	Environmental Studies	CO1 : Understand and evaluate the globalscale of environmental problems	K2,K3
			CO2 : Communicate complex environmental information to both technical and non - technical audiences	K6
			CO3 : Articulate interconnected and interdisciplinary nature of environment studies	K5
			CO4; To know the value of ECO system of world	K2,K3
			CO5; To find impact of soil pollution	K4,K5
			CO1: To understand importance of listening	K2,K3

	Core I	Communicative English	CO2: To find different between formal and informal writing	K5
			CO3 : To find difference between skimming and scanning	K1
			CO4: To know the function of verb	K3,K1
			CO5: To understand the importance of speaking in working place	K2
	Core I	Professional English	CO1: To the art of speaking	K4
			CO2: To find different between formal and informal letter	K3,K5,K6
			CO3; To understand the value of technical speaking	K5,K6
			CO4: To know the art of facial interview	K6
			CO5: To understand the key points for writing poem	K2

S.No.	PO Num	PO Statements
1	PO1	An understanding of american literature
2	PO2	Providing social history of england
3	PO3	To know about British literature and important writers
4	PO4	Providing british and american poem and theme
5	PO5	To know about American literature

Programme Specific Outcome(PSO)

S.No.	POS Num	POS Statements
1	PSO1	Acquiring knoweldge of american writers and theirs poems

2	PSO2	Ability to analyze American culture and the life of people
3	PSO3	To know about british culture and people life
4	PSO4	To know about various revelutions and history of england
5	PSO5	To know the historical informtion of England

Course Outcome(Cos)

Semster	Course	Title of the Course	Course Outcome	LEVEL
II	Core I	British Literature	CO1 : Explain the general purposes of British Literature and culture.	K1
			CO2 : Explain the differences between British Literatre and American Literature	K2,K3
			CO3 : Describe the main elements of British Poetry and culture.	K4
			CO4: To find different between Indian British Literature	K2,K3
			CO5: To know aesthetic sense in British poetry	K4
	Core II	American Literature	CO1 : To know current literary trends in literature.	K1
			CO2 :Critically evaluate the poems american writers and their life	K4
			CO3 : Accuring the knowledge of american culture and movement of literature	K1
			CO4: To find different between American and British Literature	K5
			CO5: To know aesthetic sense in American poetry	K4

II		Value Education	CO1 : Students will understand the importance of value based living.	K5
			CO2 : Students will gain deeper understanding about the purpose of their life.	K1,K3
			CO3 : Students will understand and start applying the essential steps to become good leaders	K3,K1
			CO4:To know the value of moral story	K2,K3
			CO5: To find the value of in present society	K1
		Soft Skill	CO1 : Effectively communicate through verbal/oral communication and improve the listening skills	K1,K2
			CO2 : Write precise briefs or reports and technical documents	K2,K3
			CO3 : Actively participate in group discussion / meetings .	K6
II	Allied	Social History of England	CO1 : To know about england history and people life	K5
			CO2 : To provide revolution of england. To know about victorian age and the refoms bills.	K2,K3
			CO3 : To distinguish among various levels of Revolutions and life of senenties and Eighties.	K4,K5
			CO4: To know the ruler of England	K2,K3
			CO5: To know different of acts of England Parliament	K5
			CO1: To understand importance of listening	K1
			CO2: To find different between formal and informal writing	K3,K1

II	Language	Communicative English	CO3 : To find difference between skimming and scanning	K5
			CO4: To know the function of verb	K4
			CO5: To understand the importance of speaking in working place	K6
	Language	Professional English	CO1: To the art of speaking	K2,K3
			CO2: To find different between formal and informal letter	K4
			CO3; To understand the value of technical speaking	K5
			CO4: To know the art of facial interview	K6,K4
			CO5: To understand the key points for writing poem	K6

S.No.	PO Num	PO Statements
1	PO1	To expose the students to the neo-classical tradition in literature
2	PO2	to enable them to explore the remarkable changes in literary forms
3	PO3	To expose and train them literature
4	PO4	Literary expression of the particular period
5	PO5	To know the authors from British Literature

Programme Specific Outcome(PSO)

S.No.	POS Num	POS Statements
1	PO1	Acquiring knowledge about Neo-classical age
2	PO2	Ability to analyze literary forms

3	PO3	Demonstrate the remarkable change of literature and literary forms
4	PO4	to know about neo-classical poems and novels
5	PO5	To know about Classical poems and novels

Course Outcome(Cos)

Semster	Course	Title of the Course	Course Outcome	LEVEL
III	Core I	British Literature II	CO1 : students know about classical poems and thems.	K4
			CO2 : Analyze and evaluate prose amd poetry in neo-classical age	K1
			CO3 : theme of neo-classical novels and poetry	K4
			CO4: To know about the British Drama	K1
			CO5: To know about the melodrama	K5
	Core II	American Literature II	CO1 : Acquire conceptual knowledge of american writers and theirs works	K4
			CO2 : Identify the american life of people and culture in prose and plays.	K5
			CO3 : Describe the role of prose and poetry.	K1,K3
			CO4: To know about the American Drama	K3,K1
			CO5: To know about the American writing	K2,K3
	Allied	History of English Literature I	CO1 : students knows various age of writers and their themes	K1
			CO2 :Discuss the major works shakespeare and his plays	K1,K2
			CO3 : Discuss the life of Milton and Dryden	K2,K3

III			CO4: To know about the chronolgical orders of England	K6
			CO5: To know about the different ages in English Literature	K5
	Elective	Soft Skill	CO1 : Understand the basic concepts of oral communication	K2,K3
			CO2 : To understand LSRW	K4,K5
			CO3 : Learn the basics of documentation and reading strategies	K2,K3
	ll based sub	Internet its Application	CO1 : To know about word.word process and data entering.	K5
			CO2 : To understand the email and web quest.	K1
			CO3 : To understand the concept of searching engine	K3,K1

S.No.	PO Num	PO Statements
1	PO1	An understanding the roots of romantic literature
2	PO2	Providing outstanding writers of the period of romantic age
3	PO3	Developing Critical and Analytical Thinking of romantic writers
4	PO4	To know about romantic poems
5	PO5	To know the origin of English Language

Programme Specific Outcome(PSO)

S.No.	POS Num	POS Statements
1	PO1	Acquiring knoweledge of romantic poems
2	PO2	Ability to analyze variuos poems of romantic age

3	PO3	To know about romantic writers knoweledge
4	PO4	the theme of romantic poems and love
4	PO4	the theme of restoration poems and love

Course Outcome(Cos)

Semster	Course	Title of the Course	Course Outcome	LEVEL
IV	Core I	British Literature III	CO1 : To understand the romantic writers and works	K2
			CO2 : To know about the life of romatic writers and the style	K2,K5
			CO3 : Identify, study, compare, and evaluate the prose and poetry in romantic age.	K5
			CO4: To know landscape of England	K4
			CO5: to understand the theme of british poems	K1
	Core II	History of English Language	CO1 : Acquire conceptual knowledge of origin of english language.	K3
			CO2 : Identify the Ino-eropean family language	K2
			CO3 : Develop the skill of Pronunciation ,spelling,and vocabulary.	K4
			CO4: To find standard English Meaning	K1
			CO5: To know the contribution os Shakespeare	K3
	Allied	History of English Literature I	CO1 : To know about the age of Pope and Johanson	K2
			CO2 : To know about the age of wordsworth and Tennyson	K4
			CO3 : To know about the age of hardy and present age	K1

IV			CO4: To know the meaning of Romantic Age	K2,K3
			CO5: To find the drama from Restoration Age	K4
		Skill for Employment	CO1 : Understanding the basic concepts of Interpersonal communicatior	K2,K3
			CO2 : To know about body language and facial language	K4
			CO3 : To know about job application and interview and resume.	K1
IV	Non Major Elective	Internet it applications II	CO1 : To develop an understanding of internet and process	K4
			CO2 : To provide knoweledge about internet programes	K1
			CO3 : To understand the concept web and web sources.	K5

S.No.	PO Num	PO Statements
1	PO1	An understanding the roots of victorian literature
2	PO2	Providing outstanding writers of the period victorian age
3	PO3	Developing Critical and Analytical Thinking of victorian writers
4	PO4	To know about victorian poems

Programme Specific Outcome(PSO)

S.No.	POS Num	POS Statements
1	PO1	Acquiring knoweledge of victorian poems

2	PO2	Ability to analyze literature
3	PO3	Demonstrate effectively analysis of literature
4	PO4	Demonstrate ability to know about novel and plays

Course Outcome(Cos)

Semster	Course	Title of the Course	Course Outcome	LEVEL
V	Core I	British Literature IV	CO1 : Students will be know strong conceptual knowledge in the british literature.	K2
			CO2 : Students will demonstrate effective understanding of prose and drama	K1
			CO3 : Students know about fiction and critical ananlysis of literature	K3
			CO4: Students know about literary theory	K1,K4
			CO5: To know about the Criticism	K4
	Core II	Language and Linguistics	CO1 : Explain the concepts of language and linguastics	K2
			CO2 : Apply the global business language of english in communication	K4
			CO3 : Analyse the principle of communication process and barriers to communication. Verbal and non-verbal communication	K1
			CO4: To demonstrate the language principles	K4

			CO5: To know about the morphology and phonology	K1
V	Core II	ntroduction to Literary Criticisr	CO1 : Acquire conceptual knowledge of basic literary criticism	K5
			CO2 : Identify classical criticism and modern criticism and their works	K4
			CO3 : Identify and analyze the romantic criticism and diffrence between classical and modern criticism	K5
			CO4: To understand the Structaralism	K1,K3
			CO5: To know about the Surrealism	K3,K1
	Core II	Indian Literature In Translation	CO1 : key concepts of Translation	K2,K5
			CO2 : Develop, interpret, and express ideas through written communication and growth of translation.	K5
			CO3 : Analyze, evaluate, and synthesize of translation and communication	K4
	Elective	rnalism and Mass Communicat	CO1 : To develop the understanding of the concept journalism and mass communication	K1
			CO2 : To develop necessary skill for writing journalism and news	K3
			CO3 : To analyse the strategic issues and strategies required to editig and report writing in journalism	K2
			CO4: To know about the Newspaper Editing	K4
			CO5: To find the importance of Media	K1

V	Skill Based Subject	Conversational English	CO1 : Understand the basic concepts and technologies used in the field of conversation and english language	K3
			CO2 : the knowledge of the different types of asking permission and making request.	K2
			CO3 : Understand the processes of developing and implementing information systems;	K4
			CO4 : Analyze, evaluate, and synthesize of translation and communication	K1
			CO5 : To understand the LSRW	K5

S.No.	PO Num	PO Statements
1	PO1	To enable the students to read the plays
2	PO2	critical approach of plays
3	PO3	the review of tradional concepts of genre
4	PO4	Tragedy and the Romantic comedy
5	PO5	TO Know about Igbo Cultre

Programme Specific Outcome(PSO)

S.No.	POS Num	POS Statements
1	PO1	Acquiring knoweledge of commedy and tragedy

2	PO2	Ability to analyze modern writers
3	PO3	To know about techenical writing
4	PO4	To know about editing and journalism
5	PO5	To know about the editing process in a book

Course Outcome(Cos)

Semster	Course	Title of the Course	Course Outcome	LEVEL
VI	Core I	Shakespeare	CO1 : The students should able to know abput shakespeare life and his works	K1,K2
			CO2 : To know about comedy and tragedy of shakespeare plays	K2
			CO3 : Students should able to know about theaters and characters of shakespeare plays	K4
			CO4: To know about the Shakespeare writing style	K1,K3
			CO5: To understand Shakespeare Sonnet	K3,K1
	Core II	British Literature V	CO1 : To know about modern writers poems and life style.	K2,K5
			CO2 :Understand the 20th century poet and their works.	K5
			CO3 : To give the students knowledge of literature.	K4
			CO4: To know about the style of Jane Austen	K1
			CO5: To understand personal elements of Charles Lamb	K3

VI	Core II	New Literature in English	CO1 : Understand about modern poems and novels of Africa	K2
			CO2 : Understand the life African peple and their culture.	K4
			CO3 : Analyze the learning and understand Afro-American literature.	K1
			CO4: To know about the African Culture	K3
			CO5: To know about the landscape of Canada	K2
	Core II	English Languae Teacging	CO1 : To analysis of problems of the teaching of english and teaching of poetry.	K4
			CO2 : students know about teaching of prose and grammar.	K1
			CO3 : Methods of teaching of english and teaching compotions	K5
VI	Elective	Technology mediated English	CO1 : Explain the concept of fundamental NET and WWW	K2,K5
			CO2 : To give practice of writing of News and projects	K5,K6
			CO3 : review of text book and Puzzle maker and online games.	K4
			CO4: To know about the Email	K6
			CO5: To know about the VAN network	K3,K6
	l Based Sub	Copy Editing and Proof Reading	CO1 : To know about the rule of copy editing and legal aspects	K1,K5
			CO2 : Apply capital letters and using traditional methods.	K6
			CO3 : To know about headlines and title page and running leters	K5

			CO4; To know the use of Capital Letters writing	K4
			CO5 ; To understand about the Editing	K2

2.6 Students Performance and Learning Outcomes

2.6.1 Program Outcomes,Program Specific outcomes and Course Outcomes for all Programs Offered by the Institution

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Department of

Programme Outcome(POs)

Upon Completion of the degree requirements,students will be able

S.No.	PO Number	PO Statements
1	PO1	தாய்மொழியின் சிறப்புகளை அறிதல்
2	PO2	படைப்பாற்றலை வளர்த்தல்
3	PO3	அடிப்படைத் திறன்களை அறிதல்
4	PO4	சிந்தனை வளத்தை மேம்படுத்தல்
5	PO5	மொழிப்பற்றை வளர்த்தல்

Programme Specific Outcome(PSO)

S.No.	POS Number	POS Statements
1	PSO1	தாய்மொழியின் சிறப்புகளை திறனாய்வு செய்யும் ஆற்றல் பெறுதல்.
2	PSO2	தமிழ்மொழியின் இலக்கணங்களை அறிதல்
3	PSO3	சிந்தனையை வலுப்படுத்துதல்
4	PSO4	ஆற்றல்களை வெளிக்கொணருதல்
5	PSO5	சமுகப் பண்பாட்டு மரபினை அறிதல்

DR.R.K.Shanmugham College of Arts and Science			
Dept of Tamil (BA TAMIL)			
Semster	**Course**	**TitleThe Course**	**Course Outcome**

1	Core-1	இக்கால இலக்கியம்-1	1.காலந்தோறும் தமிழ் இலக்கிய வளர்ச்சியின் அடிப்படையில் தற்கால தமிழ் இலக்கிய வளர் நிலையை அறிதல் . 2.சமகாலத்துக் கவிதை உரைநடையின் தலையாய பண்பு நலன்களை உணர்தல். 3. நடைமுறை சமுதாயத்தின் பிரச்சினைகளையும் அதன் தீர்வுகளையும் அறிவதற்கும் அது தொடர்பான சிந்தனை மேம்பாட்டிற்கும் வழி ஏற்படுத்துதல். 4.சமுதாய படிநிலை பகுப்புகளையும் சிக்கல்களையும் அறிதல். 5.இலக்கிய படைப்பாக்கத்தின் புதிய உத்திகளை உணர்ந்து படைப்பாற்றலை ஊக்குவித்தல்
	Core-2	நன்னூல் - எழுத்ததிகாரம்	1.நன்னூலின் எழுத்திலக்கணம் சொல்லிலக்கணத்தின் சிறப்பு இயல்புகளை கற்பித்தல். 2.தொல்காப்பிய எழுத்தியல் சொல்லியல் பார்வையுடன் ஒப்பிட்டு கற்பித்தல்.3. பதத்தின் இலக்கண வகையை அறிதல்.4. புணர்ச்சியின் இலக்கணத்தை முழுமையாக கற்பித்தல். 5.கல்வி கற்கும் முறை போன்ற தலைப்புகள் அடங்கிய பாயிரவியல் முழுமையும் கற்பித்தல்
	Allied -1	தமிழக வரலாறும் பண்பாடும்-1	1.தமிழக வரலாற்றை இந்திய வரலாற்றின் பின்புலத்திலிருந்து கற்பித்தல். 2.தமிழ் பண்பாட்டின் தொன்மை தொடர்ச்சிகளை வரலாற்று நிலையில் உணர்த்துதல். 3.சங்க காலத்தில் தமிழ் மொழியின் நிலையை பற்றி கற்பித்தல்.4.நிலவியல் கூறுகளை பற்றி கற்பித்தல். 5.மன்னர்கள் கால ஆட்சி முறை பற்றி உணர்த்துதல்.
	Core-3	இக்கால இலக்கியம்-2	1. நவீன இலக்கிய வகைகளை அறிந்து கொள்ளுதல் 2. நவீன இலக்கிய மரபுகளை தெரிந்து கொள்வர்.3 நவீன இலக்கிய உத்திகளை புரிந்து கொள்ளல் . 4.நவீன இலக்கிய மரபுகள் குறித்த விமர்சனப் பார்வை பெறல் . 5.படைப்பாக்க முயற்சியில் ஈடுபட ஆர்வம் கொள்ளல்.

II	Core-4	நன்னூல்-சொல்லதிகாரம்	1.நன்னூலில் சொல்லதிகார அமைப்பின் நுட்பங்களை விரிவாகக் கற்பித்தல் .2.தொல்காப்பிய சொல்லதிகாரப் போக்குடன் ஒப்பிட்டு விளக்கல். 3.பொதுவியல் வழி இலக்கணத்தின் பொது நிலையை கற்றல்.4.பெயரியல் அடிப்படையில் பல்வேறு வகையான பெயர்களை கற்பித்தல். 5.வினையின் அடிப்படையில் வினையியல் முழுமையும் கற்பித்தல்
	Allied -2	தமிழகவரலாறும்பண்பாடும்-2	1.தமிழக வரலாற்றை இந்திய வரலாற்றின் பின்புலத்திலிருந்து கற்பித்தல். 2.தமிழ் பண்பாட்டின் தொன்மை தொடர்ச்சிகளை வரலாற்று நிலையில் உணர்த்துதல். 3.மன்னர்களின் கால முறைப்படி ஆட்சி முறையை கற்பித்தல். 4.அயலாரின் தலையீடு பற்றி உணர்த்துதல். 5.வாணிபம் பற்றி மாணவர்களுக்கு ஊக்குவித்தல்.
III	Core-5	இலக்கியம் 3 சமயப்பாடல்களும், சிற்றிலக்கியங்களும்	1.இறைப்பற்றோடு தூய எண்ணங்கள் நற்செயல்கள் ஆகியவற்றில் ஈடுபடுதல். 2.சைவசமய குரவர்களின் வரலாற்றினை அறிதல். 3.தல வரலாற்றினை அறிதல். 4.சமயம்தொடர்பான சிந்தனைகளை அறிந்து கொள்ளல். 5.அறநிலைசார்ந்த அரசு தேர்விற்கு ஊக்குவித்தல்.
	Core-6	இலக்கணம்-3 யாப்பருங்கலக்காரிகை	1.செய்யுள் உறுப்புகளை அறிந்து கொள்ளுதல். 2.செய்யுளில் அசைபிரிக்கும் முறையைக் கற்றுக்கொள்ளுதல். 3.சீர்,தளை,அடி,தொடை வகைகளை கண்டறியும் முறையை தெரிந்து கொள்ளல். 4.பாவகைகள்,பாவினங்களை அறிந்து கொள்ளல். 5.மரபுக்கவிதை படைக்கும் திறனை பெறுதல்

	Allied -3	தமிழ் இலக்கிய வரலாறு -I	1.தமிழ் மற்றும் தமிழர்களின் சிறப்பு குறித்து அறிந்து கொள்ளுதல். 2.சங்கமருவியகால இலக்கியம் அறிந்து கொள்ளுதல். 3.இலக்கியங்களின்வழி அரசிந்தனைகளை உணரவைத்தல். 4.இலக்கணநூல்கள்,சமணபௌத்தபடைப்புகளை அறிந்து கொள்ளுதல். 5.அரசுபோட்டி தேர்வில் பங்குபெற செய்தல்
	skill-1	பயன்பாட்டுத் தமிழ்	1. கடித முறைகளை அறிதல். 2. செய்தித்தாள்களில் இடம் பெறும் விளம்பரங்களை குறித்து அறிதல். 3. புத்தகத்தில் உள்ள பிழை திருத்தங்களை அறிந்து கொள்ளுதல். 4. இதழ்களில் தலையங்கம் குறித்த செய்திகளை அறிந்து கொள்ளுதல். 5. இதழ் ஆசிரியர் உள்ளிட்டோருக்கு கடிதம் எழுதும் முறையை தெரிந்து கொள்ளல்.
IV	Core-7	இலக்கியம்-4 காப்பியங்கள்	1.இக்கதைகள் மூலம் மாணவர்களிடத்தில் நன்னெறியை வளர்த்தல். 2.காப்பியங்கள்வழி கற்பு நெறி மற்றும் பக்திநெறியை அறிந்து கொள்ளல். 3.இலக்கியநயங்கள் குறித்து அறிந்து கொள்ளுதல். 4.அன்பின் உயிர்நிலையை அறிதல். 5.அரசியல்,அறச்செயல்,நல்லொழுக்கம் ஆகியவற்றை உணர்த்தல்.
	Core-8	இலக்கணம்-4 தண்டியலங் காரம்	1.செய்யுளில் வெளிப்படும் அணிகள் மற்றும் அதன் வகைகளை அறிதல். 2.அணி இலக்கணத்தின் தொன்மையை அறிதல். 3.காப்பியத்திற்குரிய இலக்கணம் தகுதிகளை கற்றுக் கொள்ளுதல். 4.அணிகளின் நுட்பமான வேறுபாடுகளை அறிந்து கொள்ளுதல். 5.தத்தம் படைப்பாக்கங்களில் பல்வேறு அணிகளை பயன்படுத்துதல்.

	Allied -4	தமிழ் இலக்கிய வரலாறு - 2	1.சங்ககால மக்களின் வாழ்க்கை நிலையோடு இக்கால மக்களை பொருத்தி பார்த்தல். 2.இலக்கியவகைகளை அறிந்து கொள்ளல். 3.உரைநடையின் வகைகளை அறிந்து கொள்ளல். 4.சமய இலக்கியங்களின் தன்மையை அறிந்து கொள்ளல்.
	skill-2	படைப்பிலக்கியமும் மொழிபெயர்ப்பும்	1. மரபுக் கவிதை எழுதும் முறையை தெரிந்து கொள்ளல். 2. புதுக்கவிதை எழுத்தாளர்களையும் புதுக்கவிதை எழுதும் முறையும் தெரிந்து கொள்ளல். 3. சிறுகதை எழுதும் முறையை அறிந்து கொள்ளல். 4. ஓரங்க நாடகம் எழுதும் முறையை அறிந்து கொள்ளல். 5. மொழிபெயர்ப்பின் அவசியத்தை அறிந்து கொள்ளல்.
	Core-9	சங்க இலக்கியம் (அகம்)	1.தமிழர்களின் பண்பாட்டு உணர்வினை பெறுதல். 2.களவு,கற்பு வாழ்க்கை பற்றி அறிதல். 3.சங்ககால மக்களின் கொடைதன்மையை அறிதல். 3.பழங்கவிதை மரபையும் பாடுபொருள் தன்மையையும் மாணவர்கள் அறிதல். 4.சங்ககால புலவர்களின் தனித்தன்மையை புரிந்து கொள்ளுதல்.
	Core-10	இலக்கணம் – 5 (அகம்)	1.இல்லறவாழ்வின் சிறப்பை அறிந்து கொள்ளல். 2.களவுவாழ்க்கையை இலக்கிய முறைப்படி அறிந்து கொள்ளல். 3.அகத்திணை ஒழுக்கங்களை அறிந்து கொள்ளல். 4.போட்டி தேர்வுகளுக்கு தயாராகுதல். 5.இயற்கையோடு இயைந்த வாழ்வின் அவசியம், பிறர் உணர்வுகளுக்கு மதிப்பளித்தல் ஆகியவற்றைஅக இலக்கணவழி உணர்ந்துக்கொள்ளல்.

V	Core-11	தமிழ் மொழி வரலாறு	1.மொழியின் இன்றியமையாமை ,தோற்றம் வளர்ச்சிகளை அறிதல். 2.மொழியில் காலந்தோறும் ஏற்படும் மாற்றங்களை அறியச்செய்தல். 3.மாணவர்கள் மொழிநடை செப்பம் அடைதல். 4.திராவிடமொழிகளின் வகைகளை அறிதல்.
	Core-12	இலக்கியத்திறனாய்வு	1.இலக்கியங்களின் வழி ஆய்வு திறன்களை அறிதல். 2.திறனாய்வு பார்வையை மாணவர்களுக்கு உருவாக்குதல். 3.இலக்கியத்தில் உள்ள அறிவியல் கருத்துக்களை உணர்தல். 4.சிறுகதைகள்,நாவல் இவற்றின் வளர்ச்சியை அறிந்து கொள்ளல். 5.திறனாய்வின் வகைகளை அறிதல்.
	Elective -1	நாட்டுப்புறவியல்	1.நாட்டுப்புறப்பாடல்களின் வடிவங்களைப் புரிந்து கொள்ளுதல். 2.கதை கதைப்பாடல்களின் வழி பண்டைய தமிழர்களின் வாழ்க்கை முறையை அறிந்து கொள்ளல். 3.நாட்டுப்புற மக்களின் பண்பாடு மற்றும் பழக்கவழக்கங்கள் அறிதல். 4.நம்பிக்கைகளின் மூலமாக நாட்டுப்புற மக்களின் மன உணர்வுகளை உணர்தல். 5.நாட்டுப்புற மக்களின் சமூக சூழலை உணர்தல்.
	skil-3	கல்வெட்டியல்	1. கல்வெட்டின் முக்கியத்துவத்தை புரிந்து கொள்ளல். 2. சோழர் கால கல்வெட்டுகளில் உள்ள எழுத்தின் வடிவங்களை அறிதல். 3. தமிழக கோயில்களில் உள்ள கல்வெட்டுகளை அறிந்து கொள்ளல். 4. கல்வெட்டுகள் காணப்படும் எழுத்துக்களின் உருவம் மாற்றத்தை புரிந்து கொள்ளல்.

VI	Core-13	சங்க இலக்கியம் (புறம்)	1. பண்டைய இலக்கியங்களை அறிந்து கொள்ளுதல். 2. ஆற்றுப்படை இலக்கியங்களின் வனங்களை அறிதல் . 3.சங்கத்தமிழ் இலக்கியங்களின் பொருள் வளங்களை அஅறிதல். 3.சங்க கால தமிழ் மக்களின் வாழ்வியல் பண்பாட்டினை தெரிந்து கொள்ளுதல் . 4.சங்ககால மன்னர்களின் போர் முறைகளை அறிதல்.
	Core-14	இலக்கணம் – 6 (புறம்)	1.மன்னர்களின் ஆட்சி சிறப்பை மற்றும் ஆட்சி சிறப்பை அறிதல். 2.போர்விதிமுறைகளைத் தெரிந்து கொள்ளுதல். 3.புறத்திணைகளின் நிலையை அறிந்து கொள்ளுதல். 4.இறந்தோர்க்கு நடுகல் வைத்து வழிபடும் வழக்கத்தையும் பண்பையும் அறிந்து கொள்ளல். 5.அரசுபோட்டித்தேர்வுகளில் பங்கேற்க செய்தல்
	Core-15	திராவிட மொழிகளின் ஒப்பிலக்கணம்	1. திராவிட மக்களின் வாழ்க்கையை அறிதல். 2. திராவிட மொழிகளின் வகைகளை அறிதல். 3. சொற்பொருள் மாற்றத்தை புரிந்து கொள்ளல். 4. கால்டுவெல்லின் தமிழ் பற்றினை உணர்தல். 5. திராவிட மொழிகள் பேசப்படும் இடத்தினை அறிதல்.
	Elective -2	இதழியல்	1.இதழ்கள் தொடங்குவதற்கு வழிமுறைகளை அறிந்து கொள்ளுதல். 2.பத்திரிக்கைச்சட்டங்கள் குறித்து தெரிந்து கொள்ளுதல். 3.அரசியல்,நீதி,அறிவியல்,பொருளாதாரம்,சொற்பொழிவுகள் குறித்து அறிதல். 4.புகைப்பட,புலனாய்வு செய்திகளை உணர்தல். 5.இதழியல் தொழில் சார்ந்த வாய்ப்புகள் பத்திரிக்கை சுதந்திரம் குறித்து அறிதல்.

	Elective -3	சுற்றுலாவியல்	1.சுற்றுலாவின் பொருளாதார முக்கியத்துவத்தை அறிந்து கொள்ளுதல். 2.சுற்றுலாவின் நோக்கம் மற்றும் வகைகளை அறிந்து கொள்ளுதல். 3.பயணமுகவர்களின் பணிகுறித்து அறிதல். 4.சுற்றுலாசார்ந்த விளம்பரபணிகளைத் தெரிந்து கொள்ளுதல். 5.சுற்றுலாசெல்வதற்குரிய இடங்கள்,தமிழக சுற்றுலாத்தலங்கள் அறிந்து கொள்ளுதல்.
	skill-4	தகவல் தொடர்பியல்	1.தகவல்தொடர்பியலின் வளர்ச்சியால் சமுதாயம் அடைந்த மாற்றத்தை தெரிந்து கொள்ளல். 2.வேலைவாய்ப்பு பெறுதல். 3.நாளிதழ்,வானொலி,தொலைகாட்சி வழி செய்தி அளிக்கும் முறையை அறிந்து கொள்ளுதல். 4.நாளிதழ்,வானொலி,தொலைகாட்சி,திரைப்படம் ஆகிய துறைகளில் எவ்வாறு ஈடுபட வேண்டும் என மாணவர்கள் புரிந்து கொள்ளல்.

MA TAMIL

S.No.	PO Number	PO Statements
1	PO1	தாய்மொழியின் சிறப்புகளை அறிதல்
2	PO2	படைப்பாற்றலை வளர்த்தல்
3	PO3	அடிப்படைத் திறன்களை அறிதல்
4	PO4	சிந்தனை வளத்தை மேம்படுத்தல்
5	PO5	மொழிப்பற்றை வளர்த்தல்

Programme Specific Outcome(PSO)

S.No.	POS Number	POS Statements
1	PSO1	தாய்மொழியின் சிறப்புகளை திறனாய்வு செய்யும் ஆற்றல் பெறுதல்.
2	PSO2	தமிழ்மொழியின் இலக்கணங்களை அறிதல்
3	PSO3	சிந்தனையை வலுப்படுத்துதல்

4	PSO4	ஆற்றல்களை வெளிக்கொணருதல்	
5	PSO5	சமுகப் பண்பாட்டு மரபினை அறிதல்	
Semster	**Course**	**TitleThe Course**	**Course Outcome**
I	**Core-1**	**இக்கால இலக்கியம்**	**1.கவித்துவ மொழியின் ஆளுமைத்திறனை அறிவர். 2.சமூக அடித்தள மக்கள் வளர்ச்சி பதிவுகளின் மேன்மைகளை அறிவர். 3.படைப்புகள் வழி மனித உறவுகளின் தரவுகளை அறிவர். 4.கலை வெளிப்பாட்டுத்திறனை அறிவர். 5.இலக்கிய பதிவுகளை தற்கால மொழி வழி அறிவர்**
	Core-2	**அற இலக்கியம்**	**1. அறத்தின் தேவையை உணர்தல். 2. அற இலக்கிய வரலாற்றை அறிதல் . 3.அறநெறிகளை பின்பற்றி வாழ்க்கையை செம்மைப்படுத்த இயலுதல். 4. பழமொழிகளின் வழி அரசிந்தனைகளை அறிதல் . 5.அற இலக்கியங்களில் உள்ள பண்பாட்டுச் செய்திகளை அறிந்து கொள்ளல்.**
	Core-3	**தொல்காப்பியம் - எழுத்ததிகாரம்**	**1.தமிழ் எழுத்துக்களின் பெயரீடு முறைகள் சொற்களின் கட்டுமானம் முதலியவற்றை புரிந்து கொள்வர் .2.தமிழ் எழுத்துக்களின் பிறப்பு முயற்சிகளையும் கூட்டுச் சொற்கள் உருவாக்கத்தின் அடிப்படைகளையும் அறிந்து கொள்வர். 3.புணர்ச்சியில் எழுத்துக்களும் சொற்களும் தொகையாகவும் உருபாகவும் சொற் கட்டுமானத்தின் அடிப்படையாக அமையும் பொழுது ஏற்படும் மாற்றங்கள் குறித்து தெளிவடைவர்.4.புணர்ச்சியில் மெய்யெழுத்துக்களும் குற்றியலுகர எழுத்துக்களும் ஊடாடும் பொழுது எழுதும் திரிவுகளைத் தெளிவு கொள்வர்.5.தொல்காப்பியரின் எழுத்தில் சிந்தனைகள் மேனாட்டு அறிஞர்களின் ஒலியனியல் கோட்பாடுகளின் முன்னோடி என்பதை உணர்வர் .**

	Core-4	தமிழர் பண்பாட்டு வரலாறு	1.சிந்து சமவெளி நாகரிகம் அறிதல் . 2.களப்பிரர் காலம் குறித்து அறிதல். 3.பல்லவர் காலம் குறித்து அறிதல்.4. தமிழரின் பண்பாட்டு கருவூலங்களை அறிதல்.
	Elective -1	தொல்லியல்	1.தொல்லியல் என்பது பொருள் சார் பண்பாட்டை அகழ்ந்தெடுத்து தொன்மைகால மாந்தர் செயல்பாட்டை பகுப்பாய்வு செய்யும் அறிவியல் புலமாகும் என்ற கருத்தை மாணவர்கள் கொள்ளுதல். 2.தொல்லியல் ஆவணங்களில் கட்டிடக்கலை தொல்பொருள் தொல்லுயிர் எச்சங்கள் மனித எச்சங்கள் சூழலியல் எச்சங்கள் ஆகியவை அடங்கும் என்பது மாணவர்களுக்கு அறிய செய்தல். 3.தொல்லியலை சமூகவியல் கிளைப்புலமாகவும் மாந்த வாழ்வியல் கிளைப்புலமாகவும் கருதலாம் என்பதை அறியச் செய்தல். 4.வரலாற்றுக்கு முந்திய மற்றும் வரலாற்றுக்கால மனிதப் பண்பாட்டின் தோற்றத்தையும் வளர்ச்சியையும் ஆவணப்படுத்துதல். 5.மனித நடத்தைப் பற்றி ஆய்வு செய்தல்
II	Core-5	காப்பியங்கள்	1. சிலப்பதிகாரத்தின் சிறப்பினை அறிதல். 2. மனிதநேய வளர்ச்சியினை அறிதல் . 3.காப்பியங்களை பகுத்தறாய்தல் நிலையை அறிதல். 4. கடவுளை அடையும் முறையினை காப்பிய வழி அறிதல். 5. ஐம்பெருங்காப்பியங்களின் வகைகளை அறிதல் காப்பியங்களின் ஒருமைப்பாட்டு உணர்வை புரிந்து கொள்ளுதல் காப்பிய கால மக்களின் வாழ்வியல் முறைகளை அறிதல்.
	Core-6	பக்தி இலக்கியம்	1.சமயம் இலக்கிய அறிவை அறிதல். 2.பல்வேறு சமய கோட்பாடுகளை அறிதல். 3.இறை ஒன்றே என்னும் ஒருமைப்பாட்டு உணர்வு அறிதல். 4.இலக்கிய வகைகளை அறிதல். 5.படைப்பாற்றல் திறன் பெறுதல்.

	Core-7	தொல்காப்பியம் – சொல்லதிகாரம்	1.தொல்காப்பியரின் சொல் தொடர் இலக்கண புலமையை அறிமுகம் செய்தல். 2.தொடரமைப்பில் ஏற்படும் பொருள் மாற்றங்களுக்கான அடிப்படைக் கூறுகளை விளக்குகள். 3.சொல்லின் அடிப்படை வகைகளை விளக்கி பயன்பாட்டுக் கூறுகளை அறிமுகம் செய்தல்.4.பெயர் வினைச் சொற்களின் பொருள் நீட்சிக்கு காரணமான கூறுகளைப் பொருத்திக் காட்டுதல் .5.சொல்லிலக்கணம் மரபுகளை அடிப்படையாகக் கொண்டு தற்கால மொழியியல் வளர்ச்சியைப் பொருத்திக்காட்டி விளங்கச் செய்தல்.
	Elective -1	பெண்ணியப் படைப்புகள்	1.பெண்ணியம் குறித்த சொல்லாட்சிகளை அறிதல். 2.பெண்கள் அன்றும் இன்றும் உள்ள சூழலை அறிதல். 3.பெண்படைப்பாளர்களின் படைப்புலகை அறிதல். 4. பெண்மையின் தனி சிறப்பை அறிதல்.
III	Core-9	சிற்றிலக்கியம்	1.இலக்கிய தொடர்ச்சிகளையும் விரிவையும் அறிவர். 2.இலக்கியத்திற்கும் சமூக உறவிற்குமான தொடர்பை அறிவர் .3.வாழ்வியல் விழுமியங்களை அறிவர். 4.மொழி ஆளுகையை அறிவர். 5.படைப்பிலக்கிய பயிற்சி பெறுவர்.
	Core-10	ஆராய்ச்சி நெறிமுறைகள்	1.ஆராய்ச்சி என்னும் சிந்தனையை மாணவர்கள் உளங் கொள்ளும் வகையில் அறிதல் .2.ஆராய்ச்சி நெறிமுறைகளை பயிற்றுவித்தல். 3.ஆராய்ச்சிக்கு பயன்படும் கோட்பாடுகளை கற்றல். 4.ஆய்வேட்டின் வடிவமைப்பு பற்றி பயிலுதல். 5.ஆய்வில் மேற்கொள்ள வேண்டிய அறம் பற்றி அறிதல்.
	Core-11	தொல்காப்பியம் – பொருளதிகாரம்	1.ஆதித்தமிழரின் வாழ்வியல் முறையை தொல்காப்பியத்தின் வழி அறிந்து கொள்ளுதல்.2.திணை பாகுபாடு குறித்து அறிந்து கொள்ளுதல். 3.பொருள்வயற் பிரிதல் குறித்து மாணவர் அறிந்து கொள்ளுதல் 4. மெய்பாடுகளை குறித்து அறிதல். 5.களவு வாழ்க்கை கற்பு வாழ்க்கை குறித்து அறிதல்.

IV	Core-13	சங்க இலக்கியம்	1.சங்க கால மக்களின் வாழ்வியலை அறிந்து கொள்ளுதல்.2.பத்துப்பாட்டு நூல்களை அறிந்து கொள்ளுதல். 3.எட்டுத்தொகை நூல்களைப் பற்றி அறிந்து கொள்ளுதல். 4.முதற்பொருளைப் பற்றி அறிந்து கொள்ளுதல். 5.கருப்பொருள் உரிப்பொருள் பற்றிய மாணவர்கள் அறிந்து கொள்ளுதல்.
	Core-14	அகராதியியல்	1. தமிழில் உள்ள அகராதிகளின் வகைகளை அறிந்து கொள்ளுதல். 2. அகராதியில் சொற்பொருள் மாற்றத்தை உணர்ந்து கொள்ளுதல். 3. ஒரெழுத்து ஒரு மொழி குறித்து அறிந்து கொள்ளுதல். 4. சொற்பொருள் மாற்றத்தை புரிந்து கொள்ளல்.
	Core-15	தொல்காப்பியம் – பொருளதிகாரம்	1.தொல்காப்பியத்தின் வழி பிற இலக்கணங்களை அறிந்து கொள்ளுதல். 2.பிற இலக்கணங்களுக்கு இல்லாத சிறப்பு தொல்காப்பியத்தில் இருக்கிறது என்பதை மாணவர்கள் அறிந்து கொள்ளுதல். 3.தொல்காப்பியத்தின் வழி தலைவன் தலைவிக்கு உள்ள குடிச்சிறப்பினை அறிந்து கொள்ளுதல். 4.பத்து வகையான அவத்தைகளைப் பற்றி அறிந்து கொள்ளுங்கள்.5.தொல்காப்பியத்தில் காணப்படும் உவமை அணிகளை பற்றி அறிந்து கொள்ளுதல்.
	core-16	ஆய்வேடு	1.ஆய்வு தரவுகளை சேகரிப்பது பற்றி மாணவர்கள் அறிந்து கொள்ளுதல். 2.ஆய்வுக்குரிய பொருமைகளை மாணவர்கள் அறிந்து கொள்ளுதல். 3.முதன்மை ஆதாரம் துணைமை ஆதாரம் பற்றி மாணவர்கள் தெளிவாக அறிந்து கொள்ளுதல். 4.ஆய்வு நோக்கத்தை புரிந்து கொள்ளுதல். 5.ஆய்வேடு சமுதாயத்துக்கு நன்கு பயன்படும் வகையில் அமைதல்.

	Elective -4	தமிழர்மானிடவியல்	X-தமிழ் சமூக களங்களில் இடம்பெறும் மானிடவியல் ஆய்வுகள் தமிழர் மானிடவியல் ஆகும். தமிழர் மானிடவியலை முதலில் ஆராய்ந்தவர்கள் ஐரோப்பியர்கள் ஆவர். இவ்வாய்வுகள் பெரும்பாலும் ஆங்கிலத்திலும் ஐரோப்பிய மொழிகளிலும் காணப்பட்டன. X-பின்னர் தமிழர்களும் மானிடவியல் அணுகுமுறைகளையும் இத்துறையின் கோட்பாடுகளையும் தமிழ்ச் சூழல் கள ஆய்வுகளுக்கு பயன்படுத்தினர். முதலில் தமிழியல், நாட்டாரியல் துறைகளிலும் பின்னர் சாதி, சாதியம், சமூகக் களங்களிலும் மானிடவியலை கொண்டு சென்றனர். X-பண்பாடு பற்றிய எண்ணக் கருவும், மனித இயல்பு பண்பாடே எனும் கருத்தும், சமுதாய ரீதியில் குறியீட்டு முறையில் பயிலவும் பயிற்றுவிக்கவும், அக்குறியீடுகளின் அடிப்படையில் உலகத்தையும், எங்களையும் மாற்றிக் கொள்வதற்கும் ஏதுவாக முழுமையான தகுதியை வளர்த்துக் கொண்டுள்ளது என்னும் கருத்தே மானிடவியலின் அடிப்படையாகும். இதனை அறிந்தே அடுத்த கட்டத்திற்கு பயணிக்க வேண்டும்.

Upto VI Semester
Only Core Paper,Allied,Elective& Skill Based

Note :Prepare in MSExcel in the above Prescribed Format and Send the softcopy to drrkspillars@gmail.com

2.6 Students Performance and Learning Outcomes

2.6.1 Program Outcomes,Program Specific outcomes and Course Outcomes for all Programs Offered by the Institution

Stated and Displayed in website of the institution(to provide the weblink)

Department of Mathematics (UG)

Programme Outcome(POs)

Upon Completion of the degree requirements,students will be able

S.No.	PO Number	PO Statements
1	PO1	The learner will able to relate the concept underlying standard applications of Mathematics, Physics and Statistics
2	PO2	The learner will have an understanding on basic pure and applied Mathematics and able to formulate the Mathematical arguments in logical manner
3	PO3	They can be able to illustrate Mathematical concepts effectively by oral, written, computing and graphical means
4	PO4	The learner will make use of the theories of Mathematics and their applications in real world problems
5	PO5	The learners can able to identify the complex physical problem and apply the Mathematical techniques to solve them

Programme Specific Outcome(PSO)

S.No.	POS Number	POS Statements
1	PSO1	Mathematics is the key to success in the field of science and engineering.
2	PSO2	Today, the students need a thorough knowledge of fundamental basic principles, methods, results and a clear perception of the power of mathematical ideas and tools to use them effectively in modelling, interpreting and solving the real world problems.
3	PSO3	This course is aimed at preparing the students to cope with the latest developments and compete with students from other universities and put them on the right track
4	PSO4	Mathematics plays an important role in the context of globalization of Indian economy, modern technology and we find the applications of Computers in all walks of life from Agriculture to Atomic research.

Course Outcome(Cos)

Semster	Course	Title of the Course	Course Outcome	Level

I	Core-I	Algebra	CO1 To know about relationship between roots and coefficients.	K2
			CO2 To classify the nature of the roots of the given equation .	K2
			CO3 To evaluate sum to infinity of the given binomial, exponential and logarithmic series.	K5
			CO4 To identify the types of matrices and calculate the Eigen values of a given square matrix.	K3
			CO5 To understand about the number theory concepts.	K2
	Core-II	Trigonometry	CO1 To Explain about the expansions of cosnθ, sinnθ in powers of cosθ and sinθ	K5
			CO2 To explain expand powers of sines and cosines of θ in terms of functions of multiples of θ	K5
			CO3 To show the concept of hyperbolic functions	K2
			CO4 To built knowledge about the logarithm of complex quantities	K3
			CO5 To explain the summation of trigonometric series.	K5
	Allied	numerical methods -I	CO1 To Define First and higher order differences-forward differences and Backward differences	K1
			CO2 To Determine Central difference Operators-Central differences formulae: Gauss Forward and Backward formulae	K5
			CO3 To Learn about the Divided differences-Newton's divided differences formula and Lagrange'sEstimating the Missing terms	K2
			CO4 To Understand Lagrange's method and Reversion of series method	K2

			CO5 To Apply the knowledge of Gauss elimination method-matrix inversion method-Gauss-Jordan Method, GaussSeidal method	K3
II	Core-I	Calculus	CO1 To determine extreme values of the given function	K5
			CO2 To Learn the concept of Cartesian and polar coordinates	K2
			CO3 To Explain the knowledge of curvature, evolutes and envelope concepts	K5
			CO4 To solve integration problems	K3
			CO5 To Relate about double and triple integrals.	K2
	Core-II	Analytical geometry and three dimensions	CO1 To explain the equation of the plane and its applications	K5
			CO2 To explain the straight line and its applications	K5
			CO3 To solve sphere related problems	K3
			CO4 To know the concepts of cone, right circular cone and enveloping cone	K2
			CO5 To know the concepts related to cylinder..	K2
	Allied	numerical methods -II	CO1 To compare about the Newton's forward and backward differences to compute derivatives	K2
			CO2 To understand the General Quadrature formula-Trapezoidal rule-Simpson's one third ruleSimpson's three-eight rule	K2
			CO3 To compare the Linear differences equations-Linear homogeneous difference equation	K5
			CO4 To classify the Solution of Algebraic and Transcendental Equations	K4
			CO5 To analyse the knowledge of Euler's method, Euler's modified method-Picard's method, Taylor's methods	K4
			CO1 To Solve the firs order higher degree differential equations.	K6

III	Core-I	Differential Equations	CO2 To solve second order differential equations.	K5
			CO3 To Know the concept of total differential equations.	K2
			CO4 To know the applicaions of Laplace transform.	K2
			CO5 To solve the partial differential equations and Ordinary diferential equations	K6
	skill based	Mathematics for competetive Examinatons I		K2
			CO2 To Find the average, squae root and cubic root	K5
			CO3 solve the problems on ages and numbers	K3
			CO4 To know the percentage, profit and loss	K2
			CO5 To analyze the proportion and partnership problems	K4
	Allied	Mathematical Statistics I	CO1 To Study the concept of Sample space, events and probability	K2
			CO2 To know about the concepts of random variables and expectation and moments	K2
			CO3 To know about the concepts of Characteristic Function - Properties -	K2
			CO4 To explain Integer Linear Programming and Gomory's all integer cutting plane method.	K2
			CO5 To know about the Concept of Bivariate Distribution - Correlation and regression.	K2
	Core-I	Vector analysis and fourier series	CO1 To explain the physical and geometrical meaning of the derivative	K2
			CO2 To know the physical and geometrical meaning of the divergence and curl	K2
			CO3 To evaluating line, surface and volume integrals	K5

			CO4 To know the applications of Stoke's Theorem, Gauss Divergence Theorem and Green's theorem	K2
			CO5 analyze the Fourier series in both theory and application level	K4
IV	Core-II	Mechanics	CO1 To conclude basic knowledge of Resultant of forces and Equilibrium of a particle	K5
			CO2 To Knowledge pertaining to Parallel forces and coplanar forces	K5
			CO3 3. To know about Center of mass	K2
			CO4 4. To explain the knowledge of projectile and its applications	K2
			CO5 5 To Understand the concept of impact	K2
	Allied	Mathematical Statistics II	CO1 To know about the Statistical Population Census and Sampling Survey	K2
			CO2 To Explain about the Test of significance - Large sample test and Exact test based on 't', Chi - square and F distribution	K2
			CO3 To Explain the different types of discrete and continuous distributions and their utilization.	K2
			CO4 To evaluate study about Test of Hypothesis - Likelihood Ratio Test	K5
			CO5 To examine knowledge in theory of estimation, methods of finding estimates, confidence intervals and Theory of hypothesis.	K4
	skill based	Mathematics for competetive examinations - II	CO1 To Understands Chain rule -Time and work.	K2
			CO2 To compare the Time and the Distance	K5
			CO3 To solve the Problems on Trains.	K6
			CO4 To compare the Boats and Streams.	K5
			CO5 To explain the Alligation or Mixture.	K2

V	core I	Real analysis I	CO1 To know the concept countability	K2
			CO2 To justify the convergent, divergent sequences	K5
			CO3 To solve conditional convergence and absolute convergence problems	K6
			CO4 To evaluate limit of a function	K5
			CO5 To know the concepts of open, closed sets.	K2
	Core-II	Abstract algebra	CO1 Students able to identify groups and subgroups.	K3
			CO2 To understand homomorphism and isomorphism	K2
			CO3 To know the problems in permutation.	K2
			CO4 To analyse the basics of rings, ideals and integral domain.	K4
			CO5 To apply Euclidean rings in theorems.	K3
	Core-III	Complex Analysis	CO1 To conclude the knowledge about Complex functions and its nature, limits and Analytic functions.	K5
			CO2 To gain knowledge about elementary transformations.	K2
			CO3 To gain knowledge about line integrals and techniques for solving problems.	K2
			CO4 To gain knowledge about elementary tranmsformation	K2
			CO5 To know about Integrals, Cauchy-Goursat's Theorem	K2
	Core IV	Statics	CO1 To Describes about forces, and types of forces	K5
			CO2 To know about moment of forces, parallel forces	K2
			CO3 To know about the couples and equilbrium	K2
			CO4 To explain the coplanar forces, laws of friction	K5
			CO5 To know aboout centre of mass of all particles.	K2
	Core V	Dynamics	CO1 To know about velocity, power and energy	K2
			CO2 To know about the projectile and ranges	K2
			CO3 To know about the implusive forces and laws of impact	K2
			CO4 To know about the central forces and keplers laws	K2

		CO5 To know about the moment of interia and sphere	K2
Allied	Graph Theory	CO1 To Know about the graph and subgraph	K2
		CO2 To know about the intersection graph and operation on graphs	K2
		CO3 To explain about the walk , trial and paths	K5
		CO4 To know about the connectivity graph and eulerian and hamiltonian graph	K2
		CO5 To know about the tree and theorems and simple graph	K2
skill based	Mathematics for competetive examinations - III	CO1To Understands Chain rule -Time and work.	K2
		CO2 To differentiateTime and Distance	K4
		CO3 To explain Problems on Trains.	K5
		CO4 To solve Boats and Streams.	K6
		CO5 To explain the method of Alligation or Mixture.	K5
core I	Linear Algebra	CO1 To Understands linear dependence and independence	K2
		CO2 To understands the dual products space	K2
		CO3 TO understand the algebra of linear transformations	K2
		CO4 To Know the matrices, canonical forms	K2
		CO5 To know the trace and transpose	K2
core II	Real Analysis II	CO1 To Understands the open sets and complete metric spaces	K2
		CO2 To understands the compact metric spaces and continuity of inverse functions	K2
		CO3 To understand the riemann intergral , their properties and derivatives	K2
		CO4 To Know the role's theorem and fundamental and taylor's theorem	K2
		CO5 To know the sequence and series of function	K2
		CO1 To Understands Morera’s theorem - Maximum Moduli of functions	K2
		CO2 To understands the Taylor’s and Laurent’s theorem	K2

VI	core III	Complex Analysis II	CO3 To Know the Singularities and Cauchy's Residue theorem	K2
			CO4 To Know the Improper integrals involving Trigonometric functions	K2
			CO5 To know the Zeros of Analytic functions , Poles and zeros	K2
	core IV	Programming in C language	CO1 To Understands C Constants, variables, Data-type, Declaration of variables	K2
			CO2 To understands the Operators, expression and input output operations	K2
			CO3 To Know the Decision making: branching and looping	K2
			CO4 to Know the One - dimensional array, two - dimensional array	K2
			CO5 To know the Need for User-defined function, Multi-function program	K2
	skill based	Mathematics for competetive examinations - IV	CO1 To Understands Simple Interest.	K2
			CO2 To understands Compound Interest	K2
			CO3 To Know the Logarithms - Races and Games of Skill.	K2
			CO4 To know about the Area	K2
			CO5 To Know about the Volume and surface areas.	K2
	Elective	Fuzzy Mathematics	CO1 To Understands fuzzy subsets and boolean algebra	K2
			CO2 To understands the product and sum of fuzzy sets and cartesian product	K2
			CO3 To explain the algebra of fuzzy sets	K5
			CO4 To know about the fuzzy subgroups and homomorphic image	K2
			CO5 To Know about the fuzzy invariant subgroups and subrings	K2
	Elective	Operations Research	CO1 To Understands the networks and critical path method	K2
			CO2 To understands the Network scheduling by PERT Method-PERT Computation	K2
			CO3 To Know the inventory model and EOQ model.	K2

Elective	Operations Research	CO4 To know about the Sequencing problem and n jobs through 2 machines, n jobs through 3 machines	K2
		CO5 To compare about the Queuing Theory and Steady state analysis of M/M/1 and M/M/N	K5

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S.No.	PO Number	PO Statements
1	PO1	Nuclear Physics deals with study of the structure of matter at the atomic level. A few other applications of the subject are nuclear medicine, ion implantation in material engineering, magnetic resonance imaging, and radiocarbon dating in geology and archaeology.
2	PO2	working of various Electronic circuits. The students will u understand how to u se the basic test and measuring instruments to test the circuits. continuous and discrete time signals and systems. Understand and resolve the signals in frequency domain using Fourier series and Fourier transforms.
3	PO3	The course gives an introduction to solid state physics, and wil enable the student to employ classical and quantum mechanical theories needed to understand the physical properties of solids. Emphasis is put on building models able to explain several different phenomena in the solid state.
4	PO4	the structure and dynamics of atoms and simple molecules. the interaction between atoms, molecules and electromagnetic fields. collision processes involving atoms, charged particles and molecules. the structure of the periodic system, many-electron and relativistic effects.
5	PO5	The student will get an introduction to the discipline of optics and its role in the modern society. The student shall master the geometrical approximation, including Guass thin lens formula, Fermat's and Huygen's principles, and the paraxial matrix formalism for refractive and reflective surfaces.
Programme Specific Out come (PSOs)		
S.NO	**PO Number**	**PO Statement**

1	PO1	After completing the course, you will: know what radioactivity is and how it arises. know about radioactivity in nature and why it is there. know about fundamental concepts e.g. half-life, radioactive series and isotope generators.
2	PO2	Characteristics and applications of operational amplifiers (op-amps). Design and analysis of op-amp amplifiers, comparators, voltage and current regulators, summers, integrators, and differentiators. Frequency response of op-amp circuits. Applications of the op-amp in power supplies and control systems.
3	PO3	Explain the measurement of crystal size distribution. Discuss the impact of additives, solvents and impurities on crystal growth and purity. Explain the design of batch and industrial crystallizers. Scale up from the laboratory to the Pilot Plant and beyond/Impact of mixing.
4	PO4	describe the structure of atoms in terms of protons, neutrons and electrons. understand what is meant by a chemical element and how they are arranged in the periodic table. explain what is meant by atomic number and relative atomic mass of a chemical element.
5	PO5	Recognize and classify the structures of Optical fiber and types.1.Discuss the channel impairments like losses and dispersion.2.Analyze various coupling losses. 3.Classify the Optical sources and detectors and to discuss their principle.
course outcomes		

Semester	**Course**	**Title of the course**	**Course Outcome**	**Level**
			Study the basics of vectors algebra and the dynamics of a system	K3
			To understand the dynamics of rigid bodies	K2

I	CORE	MECHANICS	To learn the concept of work, energy and collisions	K2
			Study the basics of elasticity and bending of beams	K2
			Study the gravitational and satellites	K3
	ALLIED	CHEMISTRY - I	Students will acquire core competency in the subject Chemistry, and in allied subject areas. (i). Systematic and coherent understanding of the fundamental concepts in Physical chemistry, Organic Chemistry, Inorganic Chemistry, Analytical Chemistry and all other related allied chemistry subjects.	K4,K5
	CORE	HEAT AND THERMODYNAMICS	Understand the nature of calorimetry by specific heat of solids and law of thermodynamics and entropy	K2
			Analyses of zeroth law of thermodynamics and entropy	K4
			Understanding the low temperature physics	K2
			Analyses thermal conducitivity and black body radiation	K4
			Understanding the statistical methods	K2

II	ALLIED	CHEMISTRY - II	To acquire core competency in the subject Chemistry, and in allied subject areas. (i). Systematic and coherent understanding of the fundamental concepts in Physical chemistry, Organic Chemistry, Inorganic Chemistry, Analytical Chemistry and all other related allied chemistry subjects.	K4,K2,K3
	CORE	PRACTICAL - I	Study the elastic behaviour of materials	K2
			Analyse the relationship between various types of experiments	K4
			Perform the procedure as per standard values	K3
			Understan the applications	K2
	ALLIED	PRACTICAL - I	Study the elastic behaviour of materials	K2
			Analyse the relationship between various types of experiments	K4
			Perform the procedure as per standard values	K3
			Understand the applications	K2

III	CORE	ELECTRICITY AND MAGNETISM	Get clear idea about the specific heat capacity and kinetic theory of gases	K4
			Study the conduction, radiation and low temperature physicswill be gained	K2
			Analyse the thermodynamic system and its laws	K3,K4
			Understand the concept of entropy and Mawell'sthermodynamical relations	K2
			Analyse basic ideas of statistical mechanics	K4
	ALLIED	MATHEMATICS - I	Students will solve nonlinear equations using analytic methods.	K5
			To use mathematics concepts in real world situations.	K1
			To simplify and perform operations with nonlinear expressions.	K5
	SBS	BASIC ELECTRICAL	The basics principles of electricity.	K2
			To expose the knowledge on different kinds of cells and batteries	K2

	3B3	TECHNOLOGY	To state the different theorems for DC circuits and know the function of DC generator/motors	K2
			To acquire the basic ideas of alternating voltage and current.	K4
IV	CORE	WAVES AND OPTICS	To study of the interaction of forces between solids in mechanical systems.	K2
			The centre of mass and inertia tensor of mechanical systems.	K3
			The designing application of the vector theorems of mechanics and interpretation of their results.	K3,K6
			Newton's laws of motion and conservation principles.	K4
	ALLIED	MATHEMATICS - II	To solve nonlinear equations using analytic methods.	K1
			The mathematics concepts in real world situations.	K2
			To simplify and perform operations with nonlinear expressions.	K2
			The specific skillss in the testing of instruments	K4

	SBS	PHYSICS WORKSHOP SKILLS	To Express the function and working of different power supply system.	K2
			To know the principle and working of different electrical and electronic appliances	K2
			To State the concept of mobile communication in real time process and digital communication.	K3
	CORE	PRACTICAL - II	To Study the elastic behaviour of materials	K2
			To Analyse the relationship between various types of experiments	K4
			To Perform the procedure as per standard values	K3
			To Understand the applications	K2
		OPTICS	To understand the natural behaviour of aberration in lens	K2
			To study the theory and experiment of interference using air wedge, newtons rings and michelson interferometer	K2,K3,K5
			The theory and experimental past of diffraction by fresnels and fraunhoffer methods	K3

V	CORE		The theories for production of polarization of light	K1
		ATOMIC PHYSICS AND SPECTROSCOPY	The properties of positive rays, experimental proof by frank and hertz method	K2
			To analyse the relationship between various types of couplings	K4
			To understand the properties of x-rays verification	K2
		BASIC ELECTRONICS	The basics of diode and working of rectifier circuits and characteristics	K3
			The characteristics of transistor and transistor biasing circuits	K2
			The procedures for the working of single stage and multistage amplifier	K3
			The relationship between amplifier and oscillators	K3
			To understand the applications of op-amps i inverting and non inverting modes.	K2
			The importance of materials in materials science and engineering field.	K5

	ELECTIVE-I	MATERIAL SCIENCE	To relate between material and engineering.	K3
			To classify materials according to their types.	K2
			The basic definition and conception of materials and physical properties of materials.	K1
			The new developments in materials application field.	K3
	SBS	ASTROPHYSICS	To study about the stars of the universe	K2
			To learn about the astronomical instruments	K2
			To described solar system	K2
			To knowledge about milky way.	K2
		NUCLEAR PHYSICS AND PARTICLE PHYSICS	To knowledge about basic nuclear physics properties and nuclear models for understanding of related reaction dynamics.	K2
			The ground state properties of the nucleus for study of the nuclear structure behavior.	K3

	CORE		To explain the deuteron behavior at ground and excited states.	K2
		QUANTUM MECHANICS, RELATIVITY AND MATHEMATICAL PHYSICS	To solve the Schrödinger equation for standard systems with both analytical and numerical methodsand atoms in different systems based on quantum mechanics	K5
			To explain the physical states of elementary particles	K2
			The negative result of michelson morley experiment , galilean and lorentz transformation	K1
			The conservative and central-conservative forces mathematically understand the conservative theorems of energy, linear momentum and angular Momentum.	K3
		SOLID STATE PHYSICS	The basic concepts of force between atoms and bonding between molecules	K2
			The relationship between conductors and insulators and super conductivity	K3
			The properties of matter and classifcations - polarization	K3
			To understand the properties of semi conducotrs	K2
			The relationship between semiconducotor devices and understand the applications of semiconductor devices	K3

VI	ELECTIVE-I	APPLIED ELECTRONICS	To understand the fundamentals of codes and number system	K2
			The binary arithmetic, logics and boolean functions	K3
			The functions and working of flipflop circuits register s and counters	K3
			To perform the procedures into applications	K2
			To understand the applicattions into memory circuits	K2
	ELECTIVE-II	LASER AND FIBRE OPTICS	The basic principle of laser and characterisitcs	K2
			To undertand the theory of types of lasers	K2
			The procedures into applications oriented one	K3
			The basic concepts of optical fibres	K2
			The applicataions part of optical fibre into communiations systems	K4

SBS	INSTRUMENTATION TECHNIQUES	To know how to connect the bridge circuits	K2,K4
		To learn about the converters (ADC)	K2
		To working the CRO with measurment of frequency	K3
		To knowledge about the principle and function of ECG & EMG	K2
CORE	CORE PRACTICAL - III	To study the elastic behaviour of materials	K2
		To analyse the relationship between various types of experiments	K4
		The procedure as per standard values	K3
		To understand the applications	K2
	CORE PRACTICAL - IV	To study the elastic behaviour of materials	K2
		To analyse the relationship between various types of experiments	K4

		CORE PRACTICAL - IV	The procedure as per standard values	K4
			To understand the applications	K2

Upon completion of the degree requirements,student will be able

S.NO	PO Number	PO statements
1	PO1	Nuclear Physics deals with study of the structure of matter at the atomic level. A few other applications of the subject are nuclear medicine, ion implantation in material engineering, magnetic resonance imaging, and radiocarbon dating in geology and archaeology.
2	PO2	working of various Electronic circuits. The students will u understand how to u se the basic test and measuring instruments to test the circuits. continuous and discrete time signals and systems. Understand and resolve the signals in frequency domain using Fourier series and Fourier transforms.
3	PO3	The course gives an introduction to solid state physics, and wil enable the student to employ classical and quantum mechanical theories needed to understand the physical properties of solids. Emphasis is put on building models able to explain several different phenomena in the solid state.
4	PO4	the structure and dynamics of atoms and simple molecules. the interaction between atoms, molecules and electromagnetic fields. collision processes involving atoms, charged particles and molecules. the structure of the periodic system, many-electron and relativistic effects.
5	PO5	The student will get an introduction to the discipline of optics and its role in the modern society. The student shall master the geometrical approximation, including Guass thin lens formula, Fermat's and Huygen's principles, and the paraxial matrix formalism for refractive and reflective surfaces.

Programme Specific Out come (PSOs)

S.NO	PO Number	PO Statement
1	PO1	After completing the course, you will: know what radioactivity is and how it arises. know about radioactivity in nature and why it is there. know about fundamental concepts e.g. half-life, radioactive series and isotope generators.
2	PO2	Characteristics and applications of operational amplifiers (op-amps). Design and analysis of op-amp amplifiers, comparators, voltage and current regulators, summers, integrators, and differentiators. Frequency response of op-amp circuits. Applications of the op-amp in power supplies and control systems.
3	PO3	Explain the measurement of crystal size distribution. Discuss the impact of additives, solvents and impurities on crystal growth and purity. Explain the design of batch and industrial crystallizers. Scale up from the laboratory to the Pilot Plant and beyond/Impact of mixing.
4	PO4	describe the structure of atoms in terms of protons, neutrons and electrons. understand what is meant by a chemical element and how they are arranged in the periodic table. explain what is meant by atomic number and relative atomic mass of a chemical element.
5	PO5	Recognize and classify the structures of Optical fiber and types.1.Discuss the channel impairments like losses and dispersion.2.Analyze various coupling losses. 3.Classify the Optical sources and detectors and to discuss their principle.

course outcomes

Semester	Course	Title of the course	Course Outcome	Level
			To learn Employ appropriate instruments to measure given sets of parameters.	K2

I	CORE	MATHEMATICAL PHYSICS I	To Practice the construction of testing and measuring set up for electronic systems.	K2
			To get understanding about instrumentation concepts which can be applied to Control systems.	K2
		CLASSICAL MECHANICS AND STASTICAL MECHANICS	To learn about Lagrangian and Hamiltonian formulation of Classical Mechanics.	K2
			To State the conservation principles involving momentum, angular momentum and energy and understand that they follow from the fundamental equations of motion	K2
			Have a deep understanding of Newton's laws,	K3
		QUANTUM MECHANICS-I	To solve the Schrödinger equation for standard systems with both analytical and numerical methods	K3,K2
			Learn Interpret the results. explain the physical states of elementary particles	K2
			Analyses Atoms in different systems based on quantum mechanics	K4
			To ability to analyze PN junctions in semiconductor devices under various conditions.	K2
			To ability analyze simple rectifiers and voltage regulators using diodes.	K2

	ELECTIVE-I	ELECTRONIC DEVICE AND APPLICATIONS	To ability to describe the behavior of special purpose diodes.	K2
			To design and analyze simple BJT and MOSFET circuits.	K5,K6
	OPEN ELECTIVE I	INDUSTRIAL CHEMISTRY I	students will be able to aquire knowledge of fertilizers	K2
			Appreciate the importance of sugar industries in India	K3
			Acquire knowledge of Chemical explosives Illustrate the importance of leather industries Identify the importance of water industry	K3
	CORE	MATHEMATICAL PHYSICS II	To teach the basics of complex variables and formulate the different theorems	K4
			To provide the knowledge on partial differential equations and to get the solutions of two and three dimensional heat flow	K2
			To describe the basics of group theory and different representation of a group	K2,K3
			To explain the different probability distributions and theory of errors	K5
		QUANTUM MECHANICS II	To study primary objective is to teach the students various approximation methods in quantum mechanics.	K4

		QUANTUM MECHANICS-II	To important topic of quantum scattering is also dealt with. Relativistic quantum theory like Klein-Gordon equation and Dirac equation is also covered	K2
		ELECTROMAGNETIC THEORY	To Understand the basic mathematical concepts related to electromagnetic vector fields.	K2
			Apply the principles of electrostatics to the solutions of problems relating to electric field and electric potential,	K2
			Boundary conditions and electric energy density.	K3
II	ELECTIVE-II	NANO SCIENCE	student will develop a fundamental knowledge of nanomaterials	K2
			student will demonstrate an understanding of approaches to engineering nanomaterials and nanostructures.	K2
			The student will demonstrate an understanding of the challenges on safe nanotechnology	K2
	OPEN ELECTIVE II	DAIRY CHEMISTRY	students will be able to Identify the importance of diary chemistry	K2,K3
			To acquire knowledge of mikl-lipids, proteins, carbohydrates and vitamins	K3
			To aquire knowledge of milk powder and ice- creams Illustrate the importance of diary detergents	K3

	CORE PRACTICAL I	GENERAL EXPERIMENT	Study the elastic behaviour of materials	K2
			Analyse the relationship between various types of experiments	K4
			Perform the procedure as per standard values	K1
			Understand the applications	K2
	CORE PRACTICAL II	ELECTRONICS EXPERIMENT	To Study the elastic behaviour of materials	K3
			To analyse the relationship between various types of experiments	K2
			To Perform the procedure as per standard values	K3
			To Understan the applications	K1
			To understand the basic crystal structures,bounding of solids and the energy calculation	K2
			To study the lattice dynamics and phono momentum.	K2

III	CORE	CONDENSED MATER PHYSICS	To explaini the free electron gas in three dimensions and electronics heat capacity.	K2
			To understand basics concept of magneyism and its application.	K2
			To study the properties of superconducting material and its application	K2
		NUCLEAR PHYSICS	To learn course covers tools (accelerators, detectors), particles and nuclei and their substructure, Fermi gas model, shell model, collective model	K2,K3
			Symmetries and conservation laws, interactions (electromagnetic, weak, strong), electroweak theory of the Standard Model and QCD, nuclear models (quark model, liquid drop model,	K2
		MICRO PROCESSOR AND MICROCONTROLLER	Recall and apply a basic concept of digital fundamentals to Microprocessor based personal computer system.	K2
			Identify a detailed s/w & h/w structure of the Microprocessor.	K3
			Iillustrate how the different peripherals (8255, 8253 etc.) are interfaced with Microprocessor.	K2
			To teach the basic of rsearch philosophies and research approches.	K2

	ELECTIVE - III	RESEARCH METHODOLOGY	To know how to do the review of literature.	K2
			To expose the importance of internet in research.	K3
	OPEN ELECTIVE-III	INDUSTRIAL CHEMISTRY II	To make the students learn about electrochemical industries	K2,K4
			To understand the importance of agrochemical industries	K2
			To learn the importance of petroleum an fuel gases	K2
			To study about the paints and varnishes.	K2
	CORE	SPECTROSCOPY	To give an idea about rotatioinal spectra of different molecules using rotational spectroscopy	K2
			To study the vibrational spectroscopy of diatomic and polyatommic molecules using IR spectroscopy	K2
			To acquire knowledge on raman spectroscopy and its application	K3
			To expose the concept of UV spectroscopy and its application.	K3

IV	ELECTIVE - IV	CRYSTAL GROWTH AND THIN FLIM	To introduce theories of crystal growth.	K2
			To study the crystal symmetry and crystal structures.	K2
			To teach the various mechanisms of crystal growth.	K6
			To know the basics of thin flim deposition techniques.	K2
	OPEN ELECTIVE - IV	POLYMER CHEMISTRY	To make the students learn the concept of polymers and plastics	K2
			To understand theh classification of polymers.	K2
			To understand the methods of molecular weight determination	K2,K3
			To learn the importance of freons and rubber.	K2
	CORE PRACTICAL II	ADVANCED GENERAL	Study the elastic behaviour of materials	K2
			Analyse the relationship between various types of experiments	K3

	CORE PRACTICAL II	EXPERIMENT	Perform the procedure as per standard values	K5
			Understand the applications	K2,K3
	CORE PRACTICAL IV	MICRO PROCESSOR AND MICROCONTROLLER AND C PROGRAMMING	Study the elastic behaviour of materials	K2
			Analyse the relationship between various types of experiments	K3
			Perform the procedure as per standard values	K2
			Understand the applications	K2
	CORE	PROJECT WITH VIVA VOCE	Understand the basic ideas about the project	K2,K3
			Understand the working procedure of the project	K2
			Perform the procedure as the labarotary standards	K2,K3
			Understand the calues obtained and its applications	K2

YEAR-2021-2022

B.Sc CHEMISTRY

Programme Outcome(POs)

Upon Completion of the degree requirements,students will be able

S. No.	PO Number	PO Statements
1	PO1	An ability to knowledge domestry chemistry, solve and an understanding of major concepts in all disciplines of chemistry.
2	PO2	Employ critical thinking and the scientific knowledge to design, carry out, record and analyze the results of chemical reactions.
3	PO3	Create an awareness of the impact of chemistry on the environment, society, and development outside the scientific community.
4	PO4	Find out the green route for chemical reaction for sustainabledevelopment.
5	PO5	To Explain the organic compounds an its physical and chemical properties

Programme Specific Outcome(PSO)

S.No.	POS Number	POS Statements
1	PO1	Gain the knowledge of Chemistry through theory and practical‟s.
2	PO2	To explain nomenclature, stereochemistry, structures, reactivity,and mechanism of the chemical reactions.
3	PO3	Identify chemical formulae and solve numerical problems.
4	PO4	Know structure-activity relationship.
5	PO5	On ability to knowledge Industrial chemistry pharmaceutical chemistry

Course Outcome(Cos)

Semster	Course	Title of the Course	Course Outcome	level
	Core Theory	General Chemistry - I	Discover of atomic structure and molecular orbital theory	k4
			CO2 Define VSEPR and MO theories	k1
			CO3 Classification of organic compounds	k2

I			CO4 Choose the best oxidant catalysis	k3
			CO5 Compared aromatic and aliphatic compounds	k4
	Allied-I	Bio chemistry-i	CO1 Expalin molecular orbital theory	k5
			CO2 Define vitamines	k1
			CO3 Compared primary protein and secondary proteine	k5
			CO4 Which one of the best proteine	k2
			CO5 How to make normal solution	k6
	Core Theory	General Chemistry - II	CO1 What isAlkali metals, Alkaline Earth Metals, P-block Elements and their properties	k1
			CO2 Explaine preparation and properties of Alkanes, Alkenes and Alkynes	k2
			CO3 Conclusion of tertiory protine	k3
			CO4 Estimate the Planck's Quantum theory of radiation, Schrodinger wave equation	k6
			CO5 Emportence of Thermodynamic process, First Law of Thermodynamics and Their relationship	k5

II	Core Practical	Volumetric Analysis	CO1 Identify the oxalic acid molecular formula	k3
			CO2 Related between molarity and normality	k1
	Allied-II	allied bio chemistry	CO1 Elaborated to amino acids	k6
			CO2 Dicovered of DNA and RNA	k4
			CO3 Recall the water soluble vitamines	K1
			CO4 Efine amino acid	k1
			CO5 Test for tollence reagents	k3
	elective	pharmaceutical chemistry	CO1 Define pharmacopia	k1
			CO2 Discovered antibiotics drugs	k4
			CO3 How to predic anesthetic drugs	k4
			CO4 Define pharmaceutical chemistry	k1
			CO5 Test for tollence reagents	k3

	Allied Practical	bio chemistry	CO1 Define Young's and Rigidity modulus	k3
			CO2 Practical in Surface Tension and Sonometer	k1
			CO3 Experiments based on Spectrometer and Potentiometer	k2
	Core Theory-III	General Chemistry-III	CO1- Know the principles and application of inorganic qualitative analysis and acid base equilibria,solubility product,spot test reagent types of solvent	k3
			CO2- study about carbon,nitrogen,oxygen family for oxide, hydride,oxyacides	k6
			CO3- Study a.aliphatic and aromatic nucleophilic substitution reaction.Elimination reaction.	k5
			CO4 study the aromaticity,Huckel rule,Electrophilic substution reaction reaction,ortho and para ratio	k3
			CO5- Study second law of thermodynamics, carnot cycle entropy, reversible irreversible process	k1
	Allied-I(Theory)	Biochemistry-I	CO1- Know the complete study about carbohydrates	k6
			CO2- Study the amino acides reaction with ninhydrin and common properties	k4
			CO3- Study and learning for primary, secondary, tertiary,quaranary structure of protein	K1
			CO4- Study the concept of DNA and RNA biological function and their type difference between DNA,RNA	k1

III			CO5- Study about classification and function of lipids.simple and compound lipids and their properties	k3
	SBS-l	Water treatment and analysis	CO1- Understand chrecteristic of water, units of water purification of water by various method	k1
			CO2- Explained softening of water by various method. Determination of hardness of water	k1
			CO3-Study about the industrial treatment of water.Effluent treatment of water	k1
			CO4- Studying water analysis of colour,odur,turbidity,taste, temperature,ph.Analysis of solids	k1
			CO5- analysis of chemical substance affecting health.measurments of toxic chemical substance.	k2
	NME I	Introduction to Information Technoloy	CO1- study about introduction computer	k2
			CO2- crarify the concept of web browser	k3
			CO3- demondstrating the concept of web browser	k6
			CO4- Learning HTML programs	k5
			CO5- get knowledge about web marketting	k3
			CO1- Know the Electronic configuration of Noble gases, Compounds of Xenon	k1

Core Theory-IV	General Chemistry-IV	CO2- study about Carboxylic acid, Amines	k6
		CO3- Have a Knowledge about Alcohols, Phenols	k4
		CO4- Derive Maxwell relation, free energies	K1
		CO5- Study Third law of thermodynamics, Partial Molar properties	k1
Core Practical-II	Inorganic qualitative analysis and Preparations	CO1- Have a complete Knowledge about salt analysis	k3
		CO2- Prepare some inoranic compounds	k1
		CO3- Glarify Basic knowledge of inoranic practicals	k1
	Biochemistry-II	CO1- Know the complete study about Metobolism of Glycolysis, TCA cycle	k1
		CO2- Studying metobolic disorders such as Jaundice, Ketosis,, Dehydration	k1
		CO3- Have a knowledge of Enzymes and its classification, Mechanism.	k2
		CO4- Identify the concept of DNA and RNA	k3
		CO5- Study about types of vitamins	k6

Allied Practical-II	Biochemistry Practical	CO1- Have a complete Knowledge about volumetric estimation of amino acids	k5
		CO2- Qualitative Analysis of Carbohydrates	k3
		CO3- Qualitative analysis of Amino Acids	k1
SBS II	Food Chemistry	CO1- Impart Knowledge about Cereals and it classification	k6
		CO2- ExplainVegetabls, Fungies,algaes.	k4
		CO3- Have knowledge about beverages , appetizers	K1
		CO4- Studying beveraes, Preservatives	k1
		CO5- knowing food additives , food colors	k3
NME II	Introduction to Information Technoloy	CO1- study about introduction computer	k1
		CO2- crarify the concept of web browser	k1
		CO3- demondstrating the concept of web browser	k1
		CO4- Learning HTML programs	k1

			CO5- get knowledge about web marketting	k2
	Core Theory-V	INORGANIC CHEMISTRY-l	CO1- Study about the halogen family and related components	k3
			CO2- study about the coordination compounds,structural,geometrical,optical isomerism	k6
			CO3- Understandig sidwick theory VBT AND CFT	k5
			CO4- knowledge about copare VBT,CFT.Bonding,hybridization structure of carbonyls.application of coordination compound	k3
			CO5- Study about the nature and structure of solid, defects of solid and semiconductor	k1
	Core theory-V	organic Chemistry I	CO1- Know the complete study about carbohydrates	k6
			CO2- Understanding stereo isomerism,geometrical isomerism and optical activity of compounds	k4
			CO3- Study about the nitroalkane preparation properties,structure.Reagent and their application mechanism of naming reaction .	K1
			CO4- know the completely study of conformation analysis of compounds	k1
			CO5- Study about the hetrocyclic compounds	k3
			CO1- know about the completely study of solutions derivation of Gibbs duhem equation, nertst distribution law	k1

V	Core theory-V	Physical chemistry	CO2- Study about the phase rule.application of phase rule and thermal analysis,cooling curve	k1
			CO3- completely study of colligative properties and chemical equilibrium,vont Hoff reaction	k1
			CO4- Studying about specific and equivalent conductance,Debye Huckels theory and mobility of ions	k1
			CO5- knowing about application of conductometric measurements,concept of pH,buffer solutions, Henderson equation and hydrolysis of solid	k2
	Elective paper I	Analytical Chemistry I	CO1- Important knowledge about data analysis, purification of organic compound	k3
			CO2- Study about purification of liquid, gravimetric analysis and electro magnetic radiation	k6
			CO3- Study about the micro wave spectroscopy,UV visible spectroscopy and types of electronic transition	k5
			CO4- Study about IR spectroscopy and their application	k3
			CO5- know about the completely study of Raman spectroscopy and their application	k1
	Elective paper Il	pharmaceutical Chemistry	CO1- impart knowledge about various disease and their treatment	k6
			CO2- knowing about Indian medicinal plants and their uses,blood function, control of anemia and diabetes	k4
			CO3- study about sulpha drugs vitamins,antiseptic and disinfection	K1

			CO-4 Knowing completely study of analgesics and anesthetic,drugs affecting CNS	k1
			CO5- Study about antineoplastic drugs,Harmons and their classification	k3
	SBS-l	Applied Chemistry	CO1- know about completely study of gases fuel	k1
			CO2- knowing about manufacturing pulp and paper technology	k1
			CO3- study about sugar industry in India,recovery of glucose from molasses and preparation of Bagasse	k1
			CO-4 Study the explosive,photography and coal	k1
			CO5- know about the completely study of milk and milk product,chemical change in milk	k2
	Core Theory-VI	INORGANIC CHEMISTRYII	CO1- Know the important knowledge of nuclear chemistry	k3
			CO2- study about Radio activirty	k6
			CO3- Have a Know about metallurge	k5
			CO4- Kown the inner transition elements	k3
			CO5- Studythe organometalic and Bioinorganic compounds	k1

Core Practical-III	Gravimetric estimation	CO1- Estimation of Sulphate as Barium sulphate	k6
		CO2- Estimation of Barium as Barium sulphate	k4
		CO3- Estimation of Barium as Barium chromate	K1
Core theory-VI	organic Chemistry II	CO1- Know the complete study about Molecular rearrangement	k1
		CO2- Studying Amino acids and Polypeptides	k3
		CO3- Have a knowledge Protin and Nuclic acid	k1
		CO4- Identify the concept chemistry of natural product	k1
		CO5- Study about Organo- synthsis reagents	k1
Core Practical-III	Organic qualitative analysis and prepartion	CO1- Idendification of Fuctional group	k1
		CO2- Organic prepation Nitration, Acylation	k2
		CO3- Organic prepation Oxidation, halogenationand hydrolysis	k3
		CO1- Impart Knowledge about electrochemistry	k6

VI	Core theory-VI	Physical chemistry	CO2- Derivation og Nernst equation and polarization	k5
			CO3- Impart Knowledge about surface chemistry	k3
			CO4- Studying about chemical kinetics	k1
			CO5- knowing about photochemistry	k6
	Core Practical-III	Physical chemistry practical I	CO1- knowing kinetic reaction	k4
			CO2- Finding molecular weight	K1
			CO3- Knowing electrochemistry reaction	k1
			CO4- kown the potentiometric titration	k3
			CO5- Knowing about calorimetric reaction	k1
	Elective paper III	Analytical Chemistry II	CO1- Important knowledge about Chromatography	k1
			CO2- Study about TLC and paper , ion exchange Chromatography	k1
			CO3- Knowing ideas about HPLC	k1

			CO4- Study about NMR spectroscopy	k2
			CO5- Study about mass specroscopy	k3
	SBS IV	Agricultureand leather Chemistry	CO1- Study about soil Chemistry	k6
			CO2- knowing about Fertilizer and Manures	k5
			CO3- study about Insecticides and Fungius	k3
			CO-4 Knowing about leather Chemistry	k1
			CO5- Study about Tannery effuents	k6

YEAR-2021-2022

M.SC. CHEMISTRY

Programme Outcome(POs)

Upon Completion of the degree requirements,students will be able

S.No.	PO Number	PO Statements

1	PO1	Determine molecular structure by using UV, IR and NMR.	
2	PO2	Synthesis of Natural products and drugs by using proper mechanisms	
3	PO3	Solve the reaction mechanisms and assign the final product.	
4	PO4	. Determine the aromaticity of different compounds.	

Programme Specific Outcome(PSO)

S.No.	POS Number	POS Statements
1	PO1	Know the structure and bonding in molecules/ ions and predict theStructure of molecule/ions.
2	PO2	Study of free radical,bycyclic compound, conjugate addition ofEnolates and pericyclic reactions.
3	PO3	Study of free radical,bycyclic compound, conjugate addition ofEnolates and pericyclic reactions.
4	PO4	Understand good laboratory practices and safety.

Course Outcome(Cos)

Semster	Course	Title of the Course	Course Outcome	level
	Main	Organic Chemistry- I	CO1 Concept of stereochemistry	k3
			CO2 Conformational analysis and their application	k1
			CO3 Analyze Mechanism of aliphatic substitution reactions	k1
			CO4 To understand the Elimination reactions	k1
			CO5 Acquires knowledge on the various concept of reaction kinectics and mechanism	k1
	Main	Inorganic Chemistry- l	CO1 To explain isopolyacids and heteropolyacids of V, Cr,W etc.	k2
			CO2 Describe the structure, properties, correlations of some inorganic polymers	k3
			CO3 Illustrstes the chemistry of metal clusters	k6
			CO4 Apply the stereo chemistry of co-ordination complexes of the complexes	k3
			CO5 To know about the structure of bonding of inorganic compounds	k1

I	Main	Physical Chemistry- I	CO1 To study the partial molar property and concept of fugacity	k1
			CO2 To acquire knowledge on phase equilibria of three component system	k1
			CO3 Get the knowledge about miscells, surfactants, basics of colloids	k1
			CO4 Theories and basic concept of chemical kinetics	k2
			CO5 Mechanism of acid, base and enzyme catalysis reaction	k3
	ELECTIVE	Advanced polymer chemistry	CO1 have a knowledge on classification and Nomenclature of inorganic polymers	k6
			CO2 Kinetics and mechanism of polymerization reaction	k5
			CO3 Structure and properties of polymers	k3
			CO4 To learn about industrial and natural polymers	k1
			CO5 Understood the characterization of polymers	k6
			CO1 To learn about Fundamentals of physics, system of units CGS,MKS and SI	k3
			CO2 To study the basic concept heat and different scales of temperatures	k1

	OPEN ELECTIVE	Basic Physics	CO3 To learn basics of chareges and know about ohm's law, krichoff's law	k1
			CO4 To understant the differents types of wave motion and its properties	k1
			CO5 To teach the importants of light energy and propagation of light	k1
	Core Theory-II	Organic Chemistry-II	CO1- Elucidate the mechanism of addition and elimination reaction	k2
			CO2- Appreciate the synthetic ussages of various oxidizing and reducing reagents	k3
			CO3- To Illustrate the importance of Free radicals	k6
			CO4- Describe the concept of Aromaticity	k3
			CO5- Study heterocycles, vitamine and steroids compound	k1
	Core Theory-II	Inorganic chemistry-II	CO1- Explain about the structure and properties of solids	k1
			CO2- study the types of of nuclear reaction	k1
			CO3- Explain about the stellar energy	k1
			CO4- to study the chemistry of lanthanides and actinides, applying nonotechnology	k2

			CO5- Glarify Basic knowledge of bioinorganic chemistry	k3
	Core Theory-II	physical chemistry-II	CO1- Know the complete study about chemical kinetics and fast reaction	k6
			CO2- Describe Debye-Huckel Limitting law and	k5
			CO3- Explain the structure of double layer	k3
			CO4- Identify the group theory in elements	k1
			CO5- Study about types of group theory and its application	k6
II	Elective-II	Green chemistry	CO1- Have a complete Knowledge about the basic principle of green chemistry	k3
			CO2- Have a knowledge about 12 rules on green chemistry	k1
			CO3- Have a complete Knowledge about the green synthesis compounds	k1
			CO4- Apply use of phase transfer catalysis in reen synthesis	k1
			CO5- studied about the industrial case studies	k1
			CO 1- To give some fundamentals of spectroscop[y and lasers	k2

OPEN ELECTIVE II	Spectroscopy and Lasers	CO 2-To provide good knowledge about micrwave spectroscopy	k3
		CO 3- To teach different reggion of IR	k6
		CO 4- Students can acquire the fact of Raman spectroscopy	k3
		CO 5- To learn the basic laser and application	k1
core practical-I	organic Chemistry-I	CO1- Impart Knowledge about identification of organic compound in mixture	k1
		CO2- to get knowledge about the preparation of some organic compounds	k1
core practical-I	inorganic chemistry-I	CO1- study about the knowledge semimicro qualitative analysis of mixture	k1
		CO2- to get knowledge about the comlexometric titration	k2
		CO3- to get knowledge of the preparation inorganic complex	k3
core practical-I	physical chemistry-I	CO1- knowledge about physical methods in non electrical instruments	k6
		CO2- crarify the concept of thermodynamically colligative properties	k5
		CO3- to study the experiments of phase rule and chemical equalibrium	k3

	Main	Field study	CO 1- To learn about suar processing in cooperative sugar mill	k1
			CO 2 - The students learned about the production and operation management.	k6
			CO 3- The students learned manufacturing of the product like cutting grinding	k3
	Main	Organic Chemistry- III	CO1 Understand the factors affecting UV-absorption spectra, Interpret IR- spectra on basic values of IR-frequencies.	k6
			CO2 Discuss the problem of Proton NMR and Carbon-13 NMR	k5
			CO3 Study of mass spectrometry: Instrumentation, various methods of ionization. Different detectors rules of fragmentations of different functional groups.	k3
			CO4 Study alkaloids and Teroenoids with their structure elucidation	k1
			CO5 Learning the free radicals and understanding name reactions based on free radicals	k6
	Main	Inorganic Chemistry- III	CO1 Study the different types of Carbon Donars And different types of Reactions	k3
			CO2 Know the Various Catalysis	k1
			CO3 Learning Complementary, non-complementary electron transfer reactions	k1
			CO4 Understand the Substitution in square planar complexes and reactivity	k1

III			CO5 Know Photo-substitution, Photoredox and isomerisation process Inorganic Photochemistry	k1
	Main	Physical Chemistry- III	CO1 Learn Mechanism of electrode reactions	k2
			CO2 Know Classification of Solids and Magnetic properties	k3
			CO3 Learn the Raman, Electronic and Microwave Spectrascopy and its application.	k6
			CO4 Study the Zeeman effect, 13C, 19F, 31P NMR spectra - applications	k3
			CO5 Understand Fermi - Dirac and Bose - Einstein statistics, Partition function	k1
	ELECTIVE	Scientific Research Methodology	CO1 Know Nature and importance of research	k1
			CO2 Learn Analysis and methods of separation Techniques	k1
			CO3 Understand the accuracy and precision and classification error.	k1
			CO4 Know the students test, F test and Q test	k2
			CO5 Realise Thesis and Assignment writing format	k3
			CO1- Know the study of aromaticity	k6

	Main	Organic Chemistry-IV	CO2- study about the introduction of photochemistry	k5
			CO3- Have a Knowledge about protein and nuclic acid	k3
			CO4- Have study of the human antibiotics compounds	k1
			CO5- Study of organic dyes compounds	k6
	Main	Inorganic chemistry-IV	CO1- Have a complete Knowledge about the basic inorganic spectra	k1
			CO2- study the introduction of inorganic spectra	k1
			CO3- Have a complete Knowledge about instrumentation of inorganic spectra	k2
			CO4- To study the inorganic compound instrumental analysis	k3
			CO5- Glarify Basic knowledge of spectra in inorganic chemistry	k6
	Main	physical chemistry-IV	CO1- Know the complete study about the introduction of inorganic photochemistry	k5
			CO2- Studying in basic elemental analysis	k3
			CO3- Have a knowledge of photo reduction and oxidation	k1

IV			CO4- Identify the basic quantum chemistry	k6
			CO5- Study about the statistical thermodynamics	k5
	Elective-IV	Environmentol chemistry	CO1- Have a complete Knowledge about the air and water pollution	k3
			CO2- study the air and water pollution controled	k1
			CO3- Have a complete Knowledge about the sampling and analysis of air and water	k6
			CO4- have a knowledge of noise pollution	k1
			CO5- studied about the indian and other radio active pollution in some material	k1
	core practical-II	organic Chemistry-II	CO1- Impart Knowledge about two stage preparation of organic compounds	k2
			CO2- to get knowledge about the estimation of some organic compounds	k3
	core practical-II	inorganic chemistry-II	CO1- study about the knowledge of valumetrical and gravimetrical estimated	k6
			CO2- to get knowledge about the comlexometric titration	k5
			CO3- to get knowledge of the preparation inorganic complex	k3

	core practical-II	physical chemistry-II	CO1- knowledge about the conductometric titration method	k1
			CO2- crarify the concept of the phototiometric titration methods	k6
			CO3- to study the experiments related interpritation of the spectrum	k2

2.6 Students Performance and

2.6.1 Program Outcomes,Program Specific outcomes and Course Outcomes for all Programs Offered by the Institution

Stated and Displayed in website of the institution(to provide the weblink)

Department of Computer Science

Programme Outcome(POs)

Upon Completion of the degree

S.No.	PO Number	PO Statements
1	PO1	An ability to apply knowledge of computing and mathematics appropriate to the program's student outcomes and to the discipline.
2	PO2	An ability to analyse a problem and identify and define the computing requirements appropriate to its solution.
3	PO3	An understanding of professional, ethical, legal, security and social issues and responsibilities.
4	PO4	An ability to communicate effectively with a range of audiences.

Programme Specific Outcome(PSO

S.No.	POS Number	POS Statements
1	PSO1	To equip the students with sufficient exposure and skills to enable them in attaining a deserving position in Software Industry.
2	PSO2	To inculcate training & practical approach, internship is given to be trained among the students in the field of Computer Science.
3	PSO3	To exploit emerging technologies in Computer Science and its related discipline.
4	PSO4	To expose adequate training to the computing environment in Software Development, Software Engineering, Computer Networks etc.

Course Outcome(Cos)

Semester	Course	Title of the Course	Course Outcome	Level
	Core-I	Programming in C	CO1 Learn the problem-solving techniques and C programming basics.	K1
			CO2 Remember the concepts of C fundamentals, Types of operators and Input /Output functions.	K1, K2
			CO3 Understand the principles of decision-making statement, array and strings.	K1, K2,K3
			CO4 Apply the knowledge of function, structure and union.	K3
			CO5 Expose the concept of pointer and file management.	K3

I	Allied - I	Mathematical Foundation I	CO1 Learn the validity of logical argumentsand construct mathematical proofs.	K1
			CO2 Classify whether given graphs are isomorphic and apply different algorithms to find the shortest path	K2
			CO3 Apply the concept of two dimensional random variables to correlation, regression and Central limit theorem	K3
			CO4 Learn and apply multivariate analysis necessary for Principal Component Analysis	K1, K3
			CO5 Analyze the Mark ovian queueing model in the given system, find the performance measures and analyse the results.	K4
	Practical - I	Programming in C Lab	CO1 Choose the problem solving skills and use the same for writing programs in C	K1
			CO2 Construct diversified solutions, draw flowcharts and develop a well-documented and indented program according to coding standards	K3
			CO3 Learn to debug a given program and Solve the C program.	K1, K5
			CO4 To have enough practice the use of conditional and looping statements.	K2, K3
			CO5 To identify various File operations and Exception Handling mechanism.	K3
	Core-II	C++& Data Structures	CO1 To spell the key concepts of OOPs, Input/output and control structures.	K1
			CO2 To demonstrate C++ programs with functions, classes and objects.	K2
			CO3 .To apply Operator Overloading & Inheritance technique for various problem solving approach	K3

			CO4 To interpret and understand searching and sorting techniques.	K1, K2,K3
			CO5 To construct algorithms for Graph and its Application.	K3
II	Allied - I	Mathematical Foundation II	CO1 Relate the mathematical logic to solve problems.	K1
			CO2 Classify sets, relations, functions, and discrete structures.	K2
			CO3 Summarize logical notation to define and reason about fundamental mathematical concepts such as sets, relations, and functions	K2,K3,K4
			CO4 Able to formulate problems and solve recurrence relations.	K4
			CO5 Analyze real-world problems using graphs and trees.	K4
	Practical - II	C++ and Data Structure lab	CO1 Understand the Creating and Deleting the Objects with the Concepts of Constructors and Destructors.	K1
			CO2 Demonstrate the Polymorphism Concepts and Operator Overloading.	K1
			CO3 Understand basic Data Structures such as Arrays, Linked Lists, Stacks, Queues, Doubly Linked List and Infix to Postfix Conversion.	K1, K2
			CO4 Apply Algorithm for solving problems like Sorting and Searching.	K3
			CO5 Apply Algorithms and use Graphs and Trees as tools to visualize and simplify Problems	K3
			CO1 Define the basic fundamentals of Java Programming.	K1

III	Core-III	Java Programming	CO2 Learn about Object - oriented programming concepts.	K2
			CO3 Apply the Knowledge in Java packages, Threads and Strings.	K3
			CO4 Demonstrate the concept of JDBC and RMI.	K3
			CO5 Building programs to develop rich internet applications using JavaFX.	K3
	Allied - II	Statistical Methods and their Applications - I	CO1 Define the basic concepts of probability theory..	K1
			CO2 Describe random variables and its corresponding functional forms.	K2
			CO3 Compute mathematical expectation and variance for analysing the relation between variables.	K3
			CO4 Employ the concept of correlation and regression Analysis.	K2
			CO5 Illustrate generating functions corresponding to random variables with theorems.	K3
	Practical - III	Java Programming Lab	CO1 Understand the features of Java	K2
			CO2 Design classes with object-oriented features	K1
			CO3 Describe advanced features of Java like exception handling, multithreading etc.	K2, K3
			CO4 List the programs in JAVA featuring its core capabilities	K4

			CO5 Apply and Construct JDBC and ODBC Connectivity	K2, K3
	Skill Based - I	Digital Logic and Computer Organization	CO1. Understand significance of number systems, conversions, binary codes, etc.,.	K1, K2
			CO2. Apply different simplification methods for minimizing boolean functions.	K3
			CO3. Illustrate knowledge on design of various combinational circuits.	K3
			CO4. Illustrate the concept of sequential logic design, analyze the operation of flip-flops, registers, and counters.	K3
			CO5 Discuss the basic structure and organization of computers.	K2
	Core-IV	Relational Database Management Systems	CO1. Understand the database concepts, modelling, dependencies and normalization.	K1
			CO2. Recognize the basics and facts of Oracle9i or SQL with DDL commands.	K2
			CO3.Develop the knowledge of data management using DML and TCL Commands.	K3
			CO4. Acquire knowledge of PL/SQL to develop, organize and manage a database with huge data.	K3
			CO5. Illustrate the knowledge of database designer using named PL/SQL Blocks.	K3
			CO1 Define the theoretical distributions based on situation.	K1
			CO2 Explain the discrete and continuous probability distribution. entries accordingly	K1

IV	Allied - II	Statistical Methods and their Applications - II	CO3 Examine the validity of hypothesis using sampling tests.	K2
			CO4 Explain the relation between various distributions.	K3
			CO5 Compute the estimators and study its properties.	K3
	Practical - IV	RDBMS LAB	CO1. Creating a table and evaluate simple queries.	K1
			CO2. Applying the Set and Aggregate operations in Database.	K3
			CO3. Apply the join techniques.	k3
			CO4. Evaluate queries using SQL DML/DDL/DCL commands.	K5
			CO5. Define and Evaluate PL/SQL program for various operations.	K1, K5
	Practical - V	Statistics Lab	CO1 Formation of Uni - variate and bi - variate.	K2
			CO2 Derive the measures of location and depression	K2,K3
			CO3 Calculate the Skewness.	K2
			CO4 Execute the Fitting of Distributions..	K3, K4
			CO5 Analyze the variances.	K4

	Core- V	Mobile Application Development	CO1 Understands the basic technologies used by the Android platform. Understand Android OS, gradle, Android Studio.	K2
			CO2 Develop UI based Mobile Application using Android Studio.	K3
			CO3 Design application for Mobile using various sensors.	K3, K4
			CO4 Recognizes and uses Android Environment Emulator and Application life cycle	K4
			CO5 Adapt to learn new mobile technologies.	K6
	Core-VI	Operating System	CO1 Understand the evolution of OS functions and process.	K1
			CO2 Learn process scheduling.	K1, K2
			CO3 Understand Deadlock techniques.	K2,K3
			CO4 Acquire knowledge on Memory Management.	K3
			CO5 Ascertain facts on Storage management.	K3
	Core-VII	Design and Analysis of Algorithms	CO1. Ability to analyze the performance of algorithms.	K4
			CO2. Ability to choose appropriate algorithm design techniques for solving problems.	K3
			CO3. Understand how the choice of data structures and the algorithm design methods impact the performance of programs.	K2

			CO4. Identify problems using algorithm design methods such as the greedy method, divide and conquer, dynamic programming, backtracking and branch and bound methods.	K5
			CO5. Understand the differences between tractable and intractable problems and P & NP classes.	K2
V	Practical - V	Mobile Applications Development - Lab	CO1 Demonstrate the android features and create ,develop using android	K3
			CO2 Demonstrate and Understanding anatomy of an Android application	K3
			CO3 Apply the android geo location based services	K3
			CO4 Illustrate the android wifi features and advance android development	K2
			CO5 Demonstrate the linux security and implement ADL interface	K3
	Practical - VI	Operating System - Lab	CO1 Interpret the fundamental UNIX commands & system calls	K2
			CO2 Apply the scheduling algorithms for the given problem	K3
			CO3 Apply the process synchronous concept using message queue, shared memory, semaphore and Dekker’s algorithm for the given situation	K3
			CO4 Analyze and experiment an algorithm to detect and avoid dead lock	K4
			CO5 Demonstrate the various operations of file system	K3

	Skill Based - III	Software Engineering	CO1. Ability to identify the minimum requirements for the development of application.	K4
			CO2. Ability to develop, maintain, efficient, reliable and cost effective software solutions.	K3
			CO3. Ability to critically thinking and evaluate assumptions and arguments by using variant software architectural styles & software process models.	K2
			CO4. Understanding of software testing approaches such as unit testing and integration testing.	K5
			CO5. Understanding on quality control and how to ensure good quality software.	K2
	Elective - I	Data Mining	CO1 Understand Data Warehouse fundamentals and datamining Principles.	K1, K2
			CO2 Appreciate the strengths and limitations of various data mining and data warehousing models.	K3
			CO3 Explain the analyzing techniques of various data.	K3
			CO4 Describe different methodologies used in data mining and data ware housing.	K3, K4
			CO5 Compare different approaches of data ware housing and data mining with various technologies.	K4
	Core-VIII	Open Source Software	CO1 Understand the features of OSS over Commercial Software.	K1
			CO2 Develop simple shell programs using simple commands.	K2
			CO3 Apply the DDL and DML commands for their simple Applications with MySQL as backend.	K2, K3

			CO4 Classify the usage of different operators and functions in PHP.	K2
			CO5 Implement the web pages for manipulating files .	K5
	Core-IX	Python Programming	CO1 Enable the students to understand the basic principles of the Python Language.	K1
			CO2 Applying the design principles in the data-driven applications.	K2
			CO3 Enabling to design the web-based applications using Python.	K2
			CO4 Understanding the machine learning ability of Python based components.	K3
			CO5 Solving the real time problems using Python.	K4
	Practical - VII	Python Programming Lab	CO1 Write, Test and Debug Python Programs.	K1
			CO2 Implement Conditionals and Loops for Python Programs.	K3
			CO3 Use functions and represent Compound data using Lists, Tuples and Dictionaries.	K3
			CO4 Read and write data from & to files in Python and develop Application. services	K3
			CO1 Demonstrate the installation process of various operating systems.	K2
			CO2 Implement virtualization by installing Virtual Machine software.	K4

VI	Practical - VIII	Open Source Programming - Lab	CO3 Apply UNIX/LINUX operating system commands.	K3
			CO4 Understand different UNIX/LINUX shell scripts	K2
			CO5 Execute various shell programs.	K4
	Elective II	Big Data Analytics	CO1 Identify Big Data and its Business Implications.	K1
			CO2 List the components of Hadoop and Hadoop Eco-System.	K1
			CO3 Access and Process Data on Distributed File System.	K3
			CO4 Develop Big Data Solutions using Hadoop Eco System.	K3, K4
			CO5 Analyze Infosphere BigInsights Big Data Recommendations and Apply Machine Learning Techniques.	K4
	Elective III	Cloud Computing	CO1. Describe the principles of Parallel and Distributed Computing and evolution of cloud computing from existing technologies.	K2
			CO2. Implement different types of Virtualization technologies and Service Oriented Architecture systems.	K4
			CO3. Elucidate the concepts of NIST Cloud Computing architecture and its design challenges.	K5
			CO4. Analyse the issues in Resource provisioning and Securizty governance in clouds.	K4
			CO5. Choose among various cloud technologies for implementing applications.	K2

	Project	Project	CO1 Remember the process of various Software Project Methods.	K1
			CO2 Identify the theoretical and methodological issues involved in modern Software Project.	K1
			CO3 Prepare the activity plan andlist the existing system and tthe proposed system.	K3
			CO4 Analyze project monitoring activities.	K4
			CO5 Develop quality products by working as a team.	K3

2.6 Students Performance and

2.6.1

Program Outcomes,Program Specific

Stated and Displayed in website of

Department of Computer Science

M.Sc., Computer Science

Programme Outcome(POs)

Upon Completion of the degree

S.No.	PO Number	PO Statements

1	PO1	The ability to identify and analyse the requirements of Computer Science problems.
2	PO2	The understanding of professional and ethical responsibility in the field of computer science and to communicate effectively.
3	PO3	The ability to implement algorithms and paradigms with modern software tools.
4	PO4	The ability to function effectively on multi-disciplinary projects and problems.
5	PO5	The ability to recognize and respond towards research areas of computer science and the need for lifelong learning.

Programme Specific Outcome(PSO

S.No.	POS Number	POS Statements
1	PSO1	To embrace future developments and professional relevance in Computer Science.
2	PSO2	To attain agility in advanced programming languages and software building for wide area of applications.
3	PSO3	To explore with applications of Internet Technologies in the related profession with social and ethical responsibilities.
4	PSO4	To handle the current techniques, skills and tools necessary for computing practice.
4	PSO5	To engage in research-oriented activities and life-long learning for continuing professional development.

Course
Outcome(Cos)

Semester	Course	Title of the Course	Course Outcome	Level
	Core-I	Relational Database Management System	CO1 To learn about structure of relational databases.	K2
			CO2 To know about the structured query language.	K3
			CO3 To know about ER model.	K2
			CO4 To learn about querying and transactions.	K3
			CO5 To learn about Oracle No SQL database.	K2
	Core - II	Enterprise Java Programming	CO1. Equip the students with the advanced feature of contemporary java.	K2, K3
			CO2. Enable to handle complex programs relating to managing data.	K3
			CO3. Provide a sound foundation on the concepts, precepts and practices, in a field that is of immense concern to the industry and business.	K2,K3
			CO4. Methods to use a variety of component based frameworks.	K5
			CO5. Implementing the cocnept of Hibernet & XML.	K4,K5
			CO1 Introduces computer programming using the C# programming language with objectoriented programming principles.	K1

I	Core - III	Programming using C#.NET	CO2 Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools .	K3
			CO3 Able to design, code, test, debug, and implement objects using the appropriate environment.	K6
			CO4 Able to use the features of Dot Net Framework along with the features of C#.	K2, K3
			CO5 Provide the knowledge of Dot Net Frameworks along with C# .	K3
	Internal Elective - I	Computer Organization	CO1 To learn about parallel processing.	K2
			CO2 To learn about Solving Problems in Parallel.	K2
			CO3 To know about Principles Linear Pipelining, design, and Characteristic.	K3
			CO4 To demonstrate SIMD Array Processors.	K4
			CO5 To design Parallel Algorithms.	K5
	Open Elective - I	Introduction to Computer Applications	CO1 Introduces computer concepts, including fundamental functions and operations of the computer.	K1
			CO2 Identifying hardware components, basic computer operations, security issues, and use of software applications.	K3
			CO3 Able to demonstrate an understanding of the role and function of computers.	K2
			CO4 Illustrate the role of the computer for personal and professional uses.	K2

			CO5 Produce electronic documents using various software applications.	K4
	Practical - I	Relational Database Management System Practical	CO1. Creating a table and evaluate simple queries.	K1
			CO2. Applying the Set and Aggregate operations in Database.	K3
			CO3. Apply the join techniques.	k3
			CO4. Evaluate queries using SQL DML/DDL/DCL commands.	K5
			CO5. Define and Evaluate PL/SQL program for various operations.	K1, K5
	Practical - II	Enterprise Java Programming Practical	CO1. Identify advance concepts of java programming with database connectivity.	K3
			CO2. Design and develop platform independent applications using a variety of component based frameworks.	K6
			CO3. Able to implement the concepts of Hibernate, XML& EJB for building enterprise applications.	K5,K6
			CO4. Handle complex programs relating to managing data and processes over the network.	K4
			CO5. Able to use the Java language for writing well-organized, complex computer programs with both command- line and graphical user interfaces.	K5,K6
			CO1 Introducing to .Net IDE Component Framework.	K1
			CO2 Choosing the Programming concepts in .Net Framework.	K5

	Practical - III	Programming using C#.NET Practical	CO3 Creating website using ASP.Net Controls.	K1, K2
			CO4 Create simple data binding applications using ADO.Net connectivity.	K1,K2
			CO5 Applying the various Database operations for Windows Form and web applications.	K3
	Core - IV	Advanced Enterprise Java Programming	CO1. Equip the students with the advanced feature of contemporary java.	K2, K3
			CO2. Enable to handle complex programs relating to managing data.	K3
			CO3. Provide a sound foundation on the concepts, precepts and practices, in a field that is of immense concern to the industry and business.	K2,K3
			CO4. Methods to use a variety of component based frameworks.	K5
			CO5. Summarize various optimization techniques used for dataflow analysis and generate machine code from the source code of a novel language.	K2
	Core - V	Design and Analysis of Algorithm	CO1 To interpret the complexity of algorithms and paradigms to solve problems.	K2
			CO2 To show and understand Divide and Conquer technique for effective problem solving in computing.	K2
			CO3 To apply Greedy technique to solve problems in different approach.	K3
			CO4 To analyze the complexities of various problems indifferent domains.	K4
			CO5 To make use of Backtracking, Branch and Bound techniques to solve optimization problem.	K3

Core - VI	Web Application using C#.NET	CO1 Choose the problem solving skills and use the same for writing programs in C	K1
		CO2 Construct diversified solutions, draw flowcharts and develop a well-documented and indented program according to coding standards	K3
		CO3 Learn to debug a given program and Solve the C program.	K1, K5
		CO4 To have enough practice the use of conditional and looping statements.	K2, K3
		CO5 To identify various File operations and Exception Handling mechanism.	K3
Internal Elective - II	Social Information Network	CO1 Understanding of real world applications.	K2
		CO2 Comprehend the elements of the social network.	K4, K5
		CO3 Demonstrate and envision the social network.	K2
		CO4 Understand the role of web in the social network.	K2
		CO5 Apply the concept of social network in appropriate application.	K3
Open Elective - II	Problem Solving Technique	CO1 Develop programming techniques required to solve a given problem.	K3
		CO2 Develop problem solving skill using top – down design principles.	K3
		CO3. Develop techniques to handle array structure .	K6

			CO4 Design an algorithm for a problem.	K3
			CO5 Develop techniques such as searching and sorting.	K3
	Practical - IV	Advanced Enterprise Java Programming Practical	CO1. Identify advance concepts of java programming with database connectivity.	K3
			CO2. Design and develop platform independent applications using a variety of component based frameworks.	K6
			CO3. Able to implement the concepts of Hibernate, XML& EJB for building enterprise applications.	K5,K6
			CO4. Handle complex programs relating to managing data and processes over the network.	K4
			CO5. Able to use the Java language for writing well-organized, complex computer programs with both command- line and graphical user interfaces.	K5,K6
II	Practical - V	Design and Analysis of Algorithms Practical	CO1 Understanding the concept of Linear and Binary Searches.	K2
			CO2 Examine the various running time for different Divide and Conquer Methods.	K4
			CO3 Inferencing the output of the Prims and Kruskal Algorithm.	K4
			CO4 Simplifying the Dynamic Approach.	K5
			CO5Evaluating All Pair shortest Path.	K5
			CO1. Display proficiency in C# by building stand-alone applications in the .NET framework using C#.	K2

	Practical - VI	Web Application using C#.NET Practical	CO2. Create distributed data-driven applications using the .NET Framework, C#, SQL Server and ADO.NET	K2
			CO3. Create web-based distributed applications using C#, ASP.NET, SQL Server and ADO.NET	K2
			CO4. Utilize DirectX libraries in the .NET environment to implement 2D and 3D animations and game- related graphic displays and audio.	K4,K5
			CO5. Utilize XML in the .NET environment to create Web Service-based applications and components.	K4,K5
	Core-VII	Distributed Operating Systems	CO1 Understand the basics of Message Passing System.	K2
			CO2 Relate Interprocess Communication and Exception Handling Mechanism.	K2
			CO3 Apply the Knowledge in Java packages, Threads and Strings.	K3
			CO4 Summarize the concepts of Resource management and Process management.	K3
			CO5 Emphasis on Naming schemes and security approaches.	K4
	Core-VIII	XML and Web Services	CO1 Understanding the use of web services in B2C and B2B applications.	K1
			CO2 Designing principles and application of SOAP and REST based web services.	K6
			CO3 Collaborating web services according to a specification.	K5
			CO4 Implement an application that uses multiple web services in a realistic business scenario.	K4

			CO5 Understanding the use of JSON.	K1,K3
III	Core-IX	Programming Using Python	CO1 Explore the fundamental concepts of Python.	K2
			CO2 Understand Basics of Python programming language.	K1,k2
			CO3 Solve simple problems using Python.	K3
			CO4 Acquire fundamental knowledge and skills on Python Programming.	K4
			CO5 Know the usage of modules and packages in Python.	K3,K4
	Internal Elective - III	Network Security	CO1 Identify some of the driving factors needed for network security.	K3
			CO2 Identify and classify attacks and threats.	K3
			CO3 Compare and contrast symmetric and asymmetric encryption systems.	K2, K4
			CO4 Appropriate secure mail applications and security protocols.	K4, K5
			CO5 Identify the web systems vulnerable to attack.	K3
			CO1 Learn the problem-solving techniques and C programming basics.	K1
			CO2 Remember the concepts of C fundamentals, Types of operators and Input /Output functions.	K1, K2

Open Elective - III	Programming Using C	CO3 Understand the principles of decision-making statement, array and strings.	K1, K2,K3
		CO4 Apply the knowledge of function, structure and union.	K3
		CO5 Expose the concept of pointer and file management.	K3
Practical - VII	Distributed Operating Systems Practical	CO1 To provide hardware and software issues in modern distributed systems.	K1,K2
		CO2 To get knowledge in distributed architecture, naming, synchronization, consistency and replication, fault tolerance, security, and distributed file systems.	K1,K2
		CO3 Analyze the current popular distributed systems such as peer-to-peer (P2P).	K4
		CO4 To know about Shared Memory Techniques.	K3, K4
		CO5 Knowledge of Synchronization and Deadlock.	K5
Practical - VIII	XML and Web Services Practical	CO1 Understanding the principlesof SOA.	K2
		CO2 Efficiently use market leading environment tools to create and consume web services.	K2, K3
		CO3 Identify and select the appropriate framework components in creation of webservice solution.	K3
		CO4 Apply OOP principles to creation of webservice solutions.	K3

	Practical - IX	Programming using Python Practical	CO1 Define Data science concepts using Python.	k1
			CO2 Understand the Python Environment and Implement its operations.	K2
			CO3 Apply the Panda concepts to read and write from different file format.	K3
			CO4 Build skills to manipulate data using string functions, aggregate functions.	K3
			CO5 Develop a application using visualization and machine learning techniques.	K3
	Core - X	Mobile Application Development	CO1 Understands the basic technologies used by the Android platform. Understand Android OS, gradle, Android Studio.	K2
			CO2 Develop UI based Mobile Application using Android Studio.	K3
			CO3 Design application for Mobile using various sensors.	K3, K4
			CO4 Recognizes and uses Android Environment Emulator and Application life cycle	K4
			CO5 Adapt to learn new mobile technologies.	K6
	Core - XI	Software Project Management	CO1 Remember the process of Software Project Management.	K1
			CO2 Identify the theoretical and methodological issues involved in modern Software Project Management.	K1
			CO3 Prepare the activity planning and evaluate the risks involved in it.	K3

			CO4 Analyze project monitoring activities.	K4
			CO5 Develop quality products by working as a team.	K3
IV	Internal Elective - IV	Big Data Analytics	CO1 Identify Big Data and its Business Implications.	K1
			CO2 List the components of Hadoop and Hadoop Eco-System.	K1
			CO3 Access and Process Data on Distributed File System.	K3
			CO4 Develop Big Data Solutions using Hadoop Eco System.	K3, K4
			CO5 Analyze Infosphere BigInsights Big Data Recommendations and Apply Machine Learning Techniques.	K4
	Open Elective - IV	Research Methods & Ethics	CO1 Learn the basics of the research methods and techniques.	K1
			CO2 Remember the hypothesis, laws related to research problem.	K1
			CO3 Understand the limitations of experimentation in research.	K2
			CO4 Illustrate the concept of interdisciplinary and multidisciplinary research.	K3
			CO5 Analyse the ethics and responsibilites of research.	K3
			CO1 Demonstrate the android features and create ,develop using android	K3

	Practical - X	Mobile Applications Development - Practical	CO2 Demonstrate and Understanding anatomy of an Android application	K3
			CO3 Apply the android geo location based services	K3
			CO4 Illustrate the android wifi features and advance android development	K2
			CO5 Demonstrate the linux security and implement ADL interface	K3
	Project - I	Project	CO1 Remember the process of various Software Project Methods.	K1
			CO2 Identify the theoretical and methodological issues involved in modern Software Project.	K1
			CO3 Prepare the activity plan andlist the existing system and tthe proposed system.	K3
			CO4 Analyze project monitoring activities.	K4
			CO5 Develop quality products by working as a team.	K3

1.1 Planning and Implementation

1.1.1 (a) Program Outcomes,Program Specific outcomes and Course Outcomes for all Programs Offered by the Institution

Stated and Displayed in website of the institution(to provide the weblink)

Department of Computer Applications

Programme Outcome(POs)

Upon Completion of the degree requirements,students will be able

S.No.	PO Number	PO Statements
1	PO1	An ability to apply knowledge of computing and mathematics appropriate to the program's student outcomes and to the discipline.
2	PO2	An ability to analyse a problem and identify and define the computing requirements appropriate to its solution.
3	PO3	An understanding of professional, ethical, legal, security and social issues and responsibilities.
4	PO4	An ability to communicate effectively with a range of audiences.

Programme Specific Outcome(PSO)

S.No.	POS Number	POS Statements
1	PSO1	To equip the students with sufficient exposure and skills to enable them in attaining a deserving position in Software Industry.
2	PSO2	To inculcate training & practical approach, internship is given to be trained among the students in the field of Computer Science.
3	PSO3	To exploit emerging technologies in Computer Science and its related discipline.
4	PSO4	To expose adequate training to the computing environment in Software Development, Software Engineering, Computer Networks etc.

Course Outcome(Cos)

Semester	Course	Title of the Course	Course Outcome	Level
	Core-I	Programming in C	CO1 Learn the problem-solving techniques and C programming basics.	K1
			CO2 Remember the concepts of C fundamentals, Types of operators and Input /Output functions.	K1, K2
			CO3 Understand the principles of decision-making statement, array and strings.	K1, K2,K3
			CO4 Apply the knowledge of function, structure and union.	K3
			CO5 Expose the concept of pointer and file management.	K3

I	Allied - I	Mathematical Foundation I	CO1 Learn the validity of logical argumentsand construct mathematical proofs.	K1
			CO2 Classify whether given graphs are isomorphic and apply different algorithms to find the shortest path	K2
			CO3 Apply the concept of two dimensional random variables to correlation, regression and Central limit theorem	K3
			CO4 Learn and apply multivariate analysis necessary for Principal Component Analysis	K1, K3
			CO5 Analyze the Mark ovian queueing model in the given system, find the performance measures and analyse the results.	K4
	Practical - I	Programming in C Lab	CO1 Choose the problem solving skills and use the same for writing programs in C	K1
			CO2 Construct diversified solutions, draw flowcharts and develop a well-documented and indented program according to coding standards	K3
			CO3 Learn to debug a given program and Solve the C program.	K1, K5
			CO4 To have enough practice the use of conditional and looping statements.	K2, K3
			CO5 To identify various File operations and Exception Handling mechanism.	K3
	Core-II	C++& Data Structures	CO1 To spell the key concepts of OOPs, Input/output and control structures.	K1
			CO2 To demonstrate C++ programs with functions, classes and objects.	K2
			CO3 .To apply Operator Overloading & Inheritance technique for various problem solving approach	K3

			CO4 To interpret and understand searching and sorting techniques.	K1, K2,K3
			CO5 To construct algorithms for Graph and its Application.	K3
II	Allied - I	Mathematical Foundation II	CO1 Relate the mathematical logic to solve problems.	K1
			CO2 Classify sets, relations, functions, and discrete structures.	K2
			CO3 Summarize logical notation to define and reason about fundamental mathematical concepts such as sets, relations, and functions	K2,K3,K4
			CO4 Able to formulate problems and solve recurrence relations.	K4
			CO5 Analyze real-world problems using graphs and trees.	K4
	Practical - II	C++ and Data Structure lab	CO1 Understand the Creating and Deleting the Objects with the Concepts of Constructors and Destructors.	K1
			CO2 Demonstrate the Polymorphism Concepts and Operator Overloading.	K1
			CO3 Understand basic Data Structures such as Arrays, Linked Lists, Stacks, Queues, Doubly Linked List and Infix to Postfix Conversion.	K1, K2
			CO4 Apply Algorithm for solving problems like Sorting and Searching.	K3
			CO5 Apply Algorithms and use Graphs and Trees as tools to visualize and simplify Problems	K3
			CO1 Define the basic fundamentals of Java Programming.	K1

III	Core-III	Java Programming	CO2 Learn about Object - oriented programming concepts.	K2
			CO3 Apply the Knowledge in Java packages, Threads and Strings.	K3
			CO4 Demonstrate the concept of JDBC and RMI.	K3
			CO5 Building programs to develop rich internet applications using JavaFX.	K3
	Allied - II	Financial Accounting I	CO1 Define book keepting and accounting	K1
			CO2 Explain the general purpose and functions of accounting	K2
			CO3 Explain the difference between financial and manageent accounting	K3
			CO4 Describe the main element of financial accounting information - assets, liabilities, revenue and expenses	K2
			CO5 Identify the main financial statements and their purposes	K3
	Practical - III	Java Programming Lab	CO1 Understand the features of Java	K2
			CO2 Design classes with object-oriented features	K1
			CO3 Describe advanced features of Java like exception handling, multithreading etc.	K2, K3
			CO4 List the programs in JAVA featuring its core capabilities	K4

			CO5 Apply and Construct JDBC and ODBC Connectivity	K2, K3
	Core - IV	E-Commerce	CO1 Explain basic concepts of E-Commerce	K1, K2
			CO2 Define and demonstrate the use of firewalls in Network Security	K3
			CO3 Design and implement a World Wide Web	K3
			CO4 Design and implement EDI and its applications	K3
			CO5 Make Digital library & advertising in a Internet	K2
	Core-V	Relational Database Management Systems	CO1. Understand the database concepts, modelling, dependencies and normalization.	K1
			CO2. Recognize the basics and facts of Oracle9i or SQL with DDL commands.	K2
			CO3.Develop the knowledge of data management using DML and TCL Commands.	K3
			CO4. Acquire knowledge of PL/SQL to develop, organize and manage a database with huge data.	K3
			CO5. Illustrate the knowledge of database designer using named PL/SQL Blocks.	K3
			CO1 To Explain basic principles of ERP	K1
			CO2 To Define and demonstrate the life cycle & methodology in ERP	K1

IV	Core - VI	Enterprise Resource Planning	CO3 To Design and implement a business modules.	K2
			CO4 Design and implement Packages in ERP.	K3
			CO5 To Make present & future of ERP	K3
	Practical - IV	RDBMS LAB	CO1. Creating a table and evaluate simple queries.	K1
			CO2. Applying the Set and Aggregate operations in Database.	K3
			CO3. Apply the join techniques.	k3
			CO4. Evaluate queries using SQL DML/DDL/DCL commands.	K5
			CO5. Define and Evaluate PL/SQL program for various operations.	K1, K5
	Allied - II	Financial Accounting II	CO1 Preparing financial statements in accordance with appropriate standards.	K2
			CO2 Prepare ledger accounts using double entry bookkeeping and record journal entries accordingly	K2,K3
			CO3 Preparing accounting information for planning and control and for the evaluation of finance	K2
			CO4 Interpreting the business implications of financial statement information	K3, K4
			CO5 Prepare Bank reconciliation statement from incomplete statement	K4

	Core- VII	Mobile Application Development	CO1 Understands the basic technologies used by the Android platform. Understand Android OS, gradle, Android Studio.	K2
			CO2 Develop UI based Mobile Application using Android Studio.	K3
			CO3 Design application for Mobile using various sensors.	K3, K4
			CO4 Recognizes and uses Android Environment Emulator and Application life cycle	K4
			CO5 Adapt to learn new mobile technologies.	K6
	Core-VIII	Operating System	CO1 Understand the evolution of OS functions and process.	K1
			CO2 Learn process scheduling.	K1, K2
			CO3 Understand Deadlock techniques.	K2,K3
			CO4 Acquire knowledge on Memory Management.	K3
			CO5 Ascertain facts on Storage management.	K3
	Core-IX	Design and Analysis of Algorithms	CO1. Ability to analyze the performance of algorithms.	K4
			CO2. Ability to choose appropriate algorithm design techniques for solving problems.	K3
			CO3. Understand how the choice of data structures and the algorithm design methods impact the performance of programs.	K2

			CO4. Identify problems using algorithm design methods such as the greedy method, divide and conquer, dynamic programming, backtracking and branch and bound methods.	K5
			CO5. Understand the differences between tractable and intractable problems and P & NP classes.	K2
V	Practical - V	Mobile Applications Development - Lab	CO1 Demonstrate the android features and create ,develop using android	K3
			CO2 Demonstrate and Understanding anatomy of an Android application	K3
			CO3 Apply the android geo location based services	K3
			CO4 Illustrate the android wifi features and advance android development	K2
			CO5 Demonstrate the linux security and implement ADL interface	K3
	Practical - VI	Operating System - Lab	CO1 Interpret the fundamental UNIX commands & system calls	K2
			CO2 Apply the scheduling algorithms for the given problem	K3
			CO3 Apply the process synchronous concept using message queue, shared memory, semaphore and Dekker's algorithm for the given situation	K3
			CO4 Analyze and experiment an algorithm to detect and avoid dead lock	K4
			CO5 Demonstrate the various operations of file system	K3
			CO1. Ability to identify the minimum requirements for the development of application.	K4

	Skill Based - III	Software Engineering	CO2. Ability to develop, maintain, efficient, reliable and cost effective software solutions.	K3
			CO3. Ability to critically thinking and evaluate assumptions and arguments by using variant software architectural styles & software process models.	K2
			CO4. Understanding of software testing approaches such as unit testing and integration testing.	K5
			CO5. Understanding on quality control and how to ensure good quality software.	K2
	Elective - I	Data Mining	CO1 Understand Data Warehouse fundamentals and datamining Principles.	K1, K2
			CO2 Appreciate the strengths and limitations of various data mining and data warehousing models.	K3
			CO3 Explain the analyzing techniques of various data.	K3
			CO4 Describe different methodologies used in data mining and data ware housing.	K3, K4
			CO5 Compare different approaches of data ware housing and data mining with various technologies.	K4
	Core-X	Open Source Software	CO1 Understand the features of OSS over Commercial Software.	K1
			CO2 Develop simple shell programs using simple commands.	K2
			CO3 Apply the DDL and DML commands for their simple Applications with MySQL as backend.	K2, K3
			CO4 Classify the usage of different operators and functions in PHP.	K2

			CO5 Implement the web pages for manipulating files .	K5
	Core-XI	Python Programming	CO1 Enable the students to understand the basic principles of the Python Language.	K1
			CO2 Applying the design principles in the data-driven applications.	K2
			CO3 Enabling to design the web-based applications using Python.	K2
			CO4 Understanding the machine learning ability of Python based components.	K3
			CO5 Solving the real time problems using Python.	K4
	Practical - VII	Python Programming Lab	CO1 Write, Test and Debug Python Programs.	K1
			CO2 Implement Conditionals and Loops for Python Programs.	K3
			CO3 Use functions and represent Compound data using Lists, Tuples and Dictionaries.	K3
			CO4 Read and write data from & to files in Python and develop Application. services	K3
	Practical - VIII	Open Source Programming - Lab	CO1 Demonstrate the installation process of various operating systems.	K2
			CO2 Implement virtualization by installing Virtual Machine software.	K4
VI			CO3 Apply UNIX/LINUX operating system commands.	K3

VI			CO4 Understand different UNIX/LINUX shell scripts	K2
			CO5 Execute various shell programs.	K4
	Elective II	Cryptography	CO1 : classify the symmetric encryption techniques	K1
			CO2 : Illustrate various Public key cryptographic techniques	K1
			CO3 : Evaluate the authentication and hash algorithms.	K3
			CO4 : Discuss authentication applications	K3, K4
			CO5: Summarize the intrusion detection and its solutions to overcome the attacks.	K4
	Elective III	Cloud Computing	CO1. Describe the principles of Parallel and Distributed Computing and evolution of cloud computing from existing technologies.	K2
			CO2. Implement different types of Virtualization technologies and Service Oriented Architecture systems.	K4
			CO3. Elucidate the concepts of NIST Cloud Computing architecture and its design challenges.	K5
			CO4. Analyse the issues in Resource provisioning and Securizty governance in clouds.	K4
			CO5. Choose among various cloud technologies for implementing applications.	K2
			CO 1 Identify the problem by applying acquired knowledge.	K1

	Project - I	Group/ Individual Project Work	CO 2 Analyze and categorize executable project modules after considering risks.	K1
			CO 3 Choose efficient tools for designing project modules.G145	K3
			CO 4 Combine all the modules through effective team work after efficient testing.	K4
			CO 5 Elaborate the completed task and compile the project report.	K3

2.6.1 Program Outcomes,Program Specific outcomes and Course Outcomes for all Programs Offered by the Institution

Stated and Displayed in website of the institution(to provide the weblink)

Department of Commerce B.Com 2021-2022

Programme Outcome(POs)

Upon Completion of the degree requirements,students will be able

S.No.	PO Number	PO Statements
1	PO1	Motivating the students go to higher studies develop the competitive world.
2	PO2	Curriculum offers a number of specializations and practical disclosures which overcome the student to face the contemporary challenge business activities
3	PO3	Further the students are encouraged with add on value based and job oriented courses which ensure them to the sustained in the organization level.
4	PO4	Develop the ability to use a basic accounting system to create (record, classify, and summarize) the data needed to solve a variety of business problems.
5	PO5	Promotion of top level management for accounting, manager etc.

Programme Specific Outcome(PSO)

S.No.	POS Number	POS Statements
1	PO1	To face the slove the economic and social problemsof organization
2	PO2	To develop the accounting skill preparartion of profit and loss account
3	PO3	Change the individual and society
4	PO4	Describe the concept of buyer persona and its importance for constructing effective marketing campaigns.
5	PO5	Manage the responsiblities of all functions of activities

Course Outcome(Cos)

Semster	Course	Title of the Course	Course Outcome	Level
	CORE - I	FINANCIAL ACCOUNTING - I	CO1 To preparation of final account	K2
			CO3To adopt the accounting methods. CO4To operate the accounting transactions into systems without any mistakes. CO5The students can gain knowledge about the basic principles and functions of Accountancy.	k6
			CO3To identify the accounting methods	k3

			CO4To anlysis the accounting transactions into systems without any mistakes.	k4
			CO5The students can gain knowledge about the basic principles and functions of Accountancy.	k5
I	CORE -II	BUSINESS ORGANISATION	CO1 To develop the financial and non fiancial activities	k5
			CO2To know the accounting systems followed in partnership form of business	k2
			CO3 To discuss critically the uses and limitations of all the types of organisations	k5
			CO4 To solve a range of problems faced by a business man in the market	K4
			CO5To conduct the important meetings along with the co operation of all the employees	K5
	ALLIED	CONSUMER PROTECTION	CO1To understand the expectations of consumer and the ways to satisfy them	K2
			CO2To know the primary types of managers and the roles they play.	K2
			CO2To change the all function of role and responsiblities	K2
			CO4 To know the key points of the consumer protection act 2019	K3
			CO5 To outline machinery for settlement of consumer grievances	K4
			CO1To know the types of services of Merchant Bankers	K3

	ALLIED	MERCHANT BANKING	CO2To know the procedures for providing all necessary documrentation and information	K4
			CO3To identify the Merchant bankers to kknow who can be a consultant, advisor, and underwriter.	K3
			CO4 To classify the services provided by the merchant bankers	K2
			CO5 To know the High exposure to risk since they deal with businesses	K4
II	CORE - III	FINANCIAL ACCOUNTG -II	CO1To learn the Accounting methods	K2
			CO2 To identify the accounting methods followed in branches of head offices of MNCs	K3
			CO3To Describe the ethical and social responsibilities of accountants in ensuring the integrity of financial formation	K5
			CO4To Apply knowledge of federal tax laws and procedures to individuals and businesses	K3
			CO5To know the accounting systems followed in partnership form of business	K5
	CORE -IV	ELEMENTS OF INSURANCE	CO1To know the types of insurance schemes•Evaluating the firm's operating results.	K3
			CO2To Evaluating the varieties of insurance schemes	K2
			CO3 To know the benefits to the business people when they avail the insurance policies	K2

			CO4To know the procedures for claiming the policy amount after the incidence happens	K2
			CO5To learn the procedures for compensation for the maturity of the policy	K3
	CORE -V	CORPORATE ACCOUNTG -I	CO1To know the Accounts maintained by the corporates	K5
			CO2To learn the methods to Prepare the final accounts of Joint Stock companies	K2
			CO3To know the ways and Explain the concepts of Amalgamation and External Reconstruction	K4
			CO4To learn the ways to Prepare Liquidators Final Statement of Accounts	K5
			CO5To Explain the concepts of Liquidation of companies.	K6
	CORE- VI	**BUSINESS LAW**	CO1To demonstrate an understanding of the Legal Environment of Business.	K1
			CO2To Apply basic legal knowledge to business transactions.	K4
			CO3To Communicate effectively using standard business and legal terminology	K3
			CO4To Demonstrate knowledge of basic court procedures	K3
			CO5To Identify contract remedies	K2
			CO1To know the origination of banks in the world and in India	K2

		CO2To Identify the contract laws and agreements	K3
		CO3To know the various types of banking services and also The Banking and financial system in India	K4
		CO4To learn About commercial banks and its products.	K5
CORE -VII	**BANKING**	CO5To know How to build customer relationship in banking sector.	K2
		CO1To learn How to apply mathematical tools in business decision	K2
		CO2To know How to do comparative study of two or moreobservations	K3
		CO3To know The basic concepts of statistics and its use in business	K4
		CO4To know the various statistical methods followed in business organisations	K2,K3,K5
CORE -VIII	**BUSINESS STATISCTICS**	CO5To develop group and creating high performance in the areas wher	K2
		CO1To know the economical condition of a countryand The fundamental conceptual foundations of microeconomics	K2
		CO2To know How to analyze the behavior of consumers in terms of the demand for products	K1
		CO3To know How to evaluate the factors affecting firm behavior	K3
		CO4To analyze the performance of firms under different market structures.	K4

	ALLIED- III	BUSINESS ECONIMICS	CO5To identify the fundamental conceptual foundations of microeconomics	K2
	SBS	E-COMMERCE	CO1To Analyze the impact of E-commerce on business models and strategy.	K2
			CO2To Describe the major types of E-commerce.	K1
			CO3To Explain the process that should be followed in building an E- commerce presence.	K3
			CO4To Identify the key security threats in the E-commerce environment.	K4
			CO5To l;earn how procurement and supply chains relate to B2B E- commerce.	K3
III	NMEC	MANAGEMENT CONCEPT	CO1To Describe what a management is and what are the needs to have it	K1
			CO2To know the primary functions of management.	K4
			CO3To know the primary types of managers and the roles they play.	K2
			CO4To know the advantages that arise from managing people well.	K5
			CO5To Explain the key aspects of the environment that can affect strategy.	K3
			CO1To learn the Account for the various adjustments related to share capital	K1
			CO2To learn and Prepare the final accounts of Joint Stock companies	K4

		CO3To Prepare Liquidators Final Statement of Accounts	K2
		CO4To Explain the concepts of Liquidation of companies.	K3
CORE- IX	**CORPORATE ACCOUNTING - II**	CO5To know the concepts of Amalgamation and External Reconstruction	K1,K3
		CO1To Explain the concepts in business laws with respect to foreign trade	K3
		CO2To know the ways to Apply the global business laws to current business environment	K5
		CO3To Analyse the principle of international busines	K3
		CO4To Integrate concept of business law	K2
CORE -X	**COMPANY LAW**	CO5To Analyse the principle of business laws and its applications	K1
		CO1To know the importance of effective communication in business	K5
		CO2To Differentiate between different methods of communication Methods of Communication	K3
		CO3To know the importance of Ethics in Business Communication	K4
		CO4To Identify the three parts of the writing process in communication	K2
CORE -X1	**BUSINESS COMMUNICATIO N**	CO5To know the common word processing software to write business messages	K5

CORE -XII	BUSINESS STATISTICS	CO1To Describe and discuss the key terminology	K2
		CO2To know the Discrete data are the values assumed by a discrete variable	K5
		CO3To know the defective items in a consignment received for sale,are all examples of discrete data	K1
		CO4To know the Qualitative data refer to qualitative characteristics	K3
		CO5To learn the Nominal data are the outcome of classification into two or more categories of items	K4
ALLIED -IV	BUSINESS ECONOMICS -II	CO1To know How to evaluate the factors affecting firm behavior	K3
		CO2To analyze the performance of firms under different market structures	K1
		CO3To know the fundamental conceptual foundations of microeconomics	K3
		CO4To know the economical policies of a country in mananasging its own resources	K4
		CO5To learn and evaluate the factors affecting firm behavior	K1
		CO1To learn the Development of new skills	K3
		CO2To identify and Helps to adjust with changing Technology	K1
		CO3To create the various types of Trust in the organisations	K5

			CO4To identify the vacancies for Filling human resource requirements	K4
	NMEC	TRANING AND DEVELOPMENT	CO5To Analyse the human reosurce planning process and its	K2
			CO1To know the various tpes of industries operating in the countries	K3
			CO2To identyify the workplace and active environmental conditions	K1
			CO3To learn the types of industries producing the necessary goods	K4
			CO4To learn the industrial objectives of business people in satisfying the various expectations of customers in the market	K1
IV	SBS	INDUSTRIAL ORGANISATION	CO5To Realize that the overall structure is important and has an impact to people	K5
			CO1To know the difference between Cost Accounting , Cost Accountancy and Costing	K3
			CO2To identify the role of cost accountant	K2
			CO3To identify the objectives of cost accounting	K5
			CO4To understand the Management information needs	K3
	CORE -XIII	COST ACCOUNTING-I	CO5To learn cost accounting as a tool of management, provides management with detailed records of costs relating to product	K5
			CO1To learn the auditiong nature followed in companiers	K2

		CO2To know the various types of audits	K1
		CO3To know the needs for auditing a companys accounts	K3
		CO4To know the necessity to audit a company accounts and its benefits	K2
CORE - XIV	PRACTICAL AUDITING	CO5To know the functions of auditors in auditing practices	K1
		CO1To learn the role of a Business manager in managing a business org	K3
		CO2To know the Requirements to start a business Finance /Money Labor / People Customers Suppliers	K2
		CO3To know the Organizational Structure dealing in Product or Service	K1
		CO4To learn the principles of management for the successful of a business undertaking	K3
CORE-XV	BUSINESS MANAGEMENT	CO5To know the functions performed a manager of a business organisation	K2
		CO1To familiar with the computation of capital gain	K4
		CO2To know the types of taxes levied in the country	K5
		CO3To know the exemptions available to an assessee	K2
		CO4To learn the ways to determine who are responsible to pay the tax	K1

	CORE-XVI	INCOME TAX	CO5To identiofy the various sources if incomes can be earned by an assessee	K4
	ELECTIVE	ENTTREPRENEURIAL DEVELOPMENT	CO1To identify the sources available to a person to do a businerss and the ways availble to do it	K3
			CO2To identify the various types of incentives provided to an entrepreneur	K4
			CO3To know the types of entrepreneur and the benefits to become a business	K5
			CO4To inform the procedures to be followed by a business man to avail loans form financial institutions	K5
			CO5To know the concessions provided to an entreprenur in innovating his business firm	K2
V	SBS	PRINCIPLES OF MARKETING	CO1To identify the opportunities availbale to a businessman to shine in the markets for a long time	K1
			CO2To know the marketing technologies available to a businessman to develop new advertisemnt copies	K3
			CO3To know the channels of distribution and to choose the best one	K2
			CO4To learn the general idea about framing advertisements.	K4
			CO5To know the methods followed to expand thwe market size	K5
			CO1To enable the students to understand about job costing, batch costing and contract costing.	K3
			CO2To understand the students the different operating methods to control and reduce cost of rendering services	K2

CORE-XVIII	COST ACCOUNTING - II	CO3To inform the students about the methods of costing and also used to ascertain the cost	K1
		CO4To know to formulate their own strategies in deciding a best method to control the costs	K3
		CO5To learn the different ways to control the costs of a product or service	K2
CORE - XIX	INCOMETAX, LAW AND PRACTICE	CO1To familiar with the computation of capital gain	K4
		CO2To know the various processes to be followed in seizure of the properties of those who evade from tax payment	K5
		CO3To know about the tax payments in advance and the interest for the advance amount	K1
		CO4To know how the income tax is calculated as per income tax rules	K4
		CO5To learn about the income tax authorities and their powers and duties.	K3
ELECTIVE-II	BUSINESS ENVIRONMENT	CO1To learn the understanding of natural resources and ecosystems	K1
		CO2To know the awareness about the importance of presrving natural resources in improving a vbusiness organisation	K5
		CO3To identify the consequences of pollution and possible solutions to avoid pollution in improving a business undertaking	K3
		CO1To have an understanding of natural resources and ecosystems	K1
		CO5To know the factors affecting a business undertaking in its performance	K3

		HUMAN RESOURCE MANAGEMENT	CO1To know how to Effectively manage and plan key human resource functions within organizations	K2
			CO2To Examine current issues, trends, practices, and processes in HRM	K1
			CO3To Contribute to employee performance management and organizational effectiveness	K4
			CO4To know the various Problem-solve human resource challenges	K5
			CO5To Develop employability skills for the smooth workplace condition of an organisation	K3
			CO1To Gain familiarity with the concepts and terminology used in the development of systems used in an organisation	K1
			CO2To Explore various methods that Information Technology processes used in an organisation	K2
			CO3To know the applications of computers in managing a business undertakings	K3
			CO4To Accomplish projects utilizing computers in solving the business issues	K1
VI	SBS	R APPLICATION IN	CO5To understand the purpopses of computers in dealing with the accounts related informations	K4
				K2

Programme Specific Outcome(PSO)

S.No.	POS No.	
1	POS01	To develop the decision making skill through costing methods and practical application of management

2	POS02	knowledge in various field of commerce through advertising and
3	POS03	auditing and entrepreneurial development.
4	POS04	To Develop the skills of analysis a

Course Outcome(COs)

Semster	Course	Title of the Course		
	Main I	Advanced Financial Management	CO 1 Understand concepts of Financial Management	K3
			CO2 Enumerate the Capital Structure	K2
			CO 3 Analyse Cost of Capital measurement	K4
			CO 4 Evaluate Investment decisions process	K5
			CO 5 Analyse Working capital management	K1,K3,K4
			CO 1 Analyse Financial Statement analysis	K3
			CO 2 Apply Cost Volume Profit analysis	K2
			CO 3 Knowing the capital budgeting appraisal methods	K5

	Main II	**Accounting for Managerial Decisions**	CO 4 Evaluation of capital structure factors	K2,K3
			CO 5 Analysing the dividend calculation methods	K5
	Main III	**Global Marketing**	CO 1 Understand Classification of services and implications	K2
			CO 2 Identify Marketing strategies for service firms	K3
			CO 3 Understand Pricing of services	K3,K4
			CO 4 Understand Marketing of financial services	K1,K2
			CO 5 Identify Customer Relationship Marketing	K4
			CO 1 Develop the skills of analysis and capability of making business decisions	K3,K5
			CO 2 Apply mathematical tools in business decision	K1
			CO 3 Basic concepts of statistics and its use in business	K5
			CO 4 Key terminology, concepts tools and techniques used in business statistical analysis	K2,K4

			CO 5 Qualitative data refer to qualitative characteristics of a subject or	K3
	Main IV	**Advanced Business statistics**	an object	K1
			CO 1 Analyse Scope and methods of Managerial Economics	K5
			CO 2 Apply Concept and tools of demand analysis	K2,K3,K4
			CO 3 Enumerate Concepts in resource allocation	K1
			CO 4 Evaluate Market Structure and Advertisement budgeting	K4
I	**Elective**	**Managerial Economics**	CO 5 Apply Pricing methods and approaches	K1,K2
			CO 1 Enumerate Problems of Industrial Relations and Growth of	K3
			Trade Union	K4
			CO 1 Enumerate Problems of Industrial Relations and Growth of	K1,K3,K4
			Trade Union	K2,K3
			CO 3 Evaluate Labour Welfare Measures	K4
			CO 4 Analyse Industrial Accidents and Safety measures	K5

	Main V	**Corporate Laws**	CO 5 Analyse Types of Labour	K3
			CO 1 Understand the Dimensions of managerial jobs	K2
			O 2 Plan and Identifying managerial talent and career management	K1,K2
			CO 3 Use measuring managerial effectiveness	K3
			CO 4 Generate Organisational processes	K2,K3
	Main VI	**HRM**	CO 5 Understand the Self- development skills and creativity	K1
			CO 1 Solve the Problems in Share capital, Debentures, Valuation of Goodwill	K3
			CO 2 Apply the procedures Acquisition, amalgamation, Absorption process.	K4
			CO 3 Compare the Holding and Subsidiary companies procedures &	K2,K3
			CO 4 Compute Liquidation	K5
	Main VII	**Advanced Accounts**	CO 5 Recollect Accounting Principles and practices to apply inProblem solving	K1,K2
			CO 1 Understand Probability Theory	K3
			CO 2 Analyse Sampling Techniques	K4

			CO 3 Apply Testing Hypothesis, Chi-square, f-test	K1
			CO 4 Comprehend Correlation and Regression	K5
	Main VIII	**QT for Business Decisions**	CO 5 Apply linear programming	K1,K2
			CO 1 Understand Classification of services and implications	K3,K4
			CO 2 Identify Marketing strategies for service firms	K1
			CO 3 Understand Pricing of services	K3
			CO 4 Understand Marketing of financial services	K5
II	**Elective**	**Retail Management**	CO 5 Identify Customer Relationship Marketing	K2
			CO 1 Enumerate Problems of Industrial Relations and Growth of Trade Union	K1
				K3
			CO 2 Understand and solve Disputes in GST	K2
			CO 3 Evaluate GST related Measures	K1
			CO 4 Analyse Industrial Accidents and Safety measures	K3

	Main IX	**GST**	CO 5 Analyse issues related to GST calculation	K4
	Main X	**Organisational Behaviour**	CO 1 Identify the Approaches and models of Organizational behavior	K2
			CO 2 Compare the Individual and group behavior in work place	K3
			CO 3 Evaluate Organizational Communication effectiveness	K1
			CO 4 Enumerate Organizational Dynamics and Climate	K3
			CO 5 Analyse Organizational Change	K2
III	**Elective III**	**Services Marketing**	CO 1 Understand Classification of services and implications	K2,K3
			CO 2 Identify Marketing strategies for service firms	K1
			CO 3 Understand Pricing of services	K3
			CO 4 Understand Marketing of financial services	K2
			CO 5 Identify Customer Relationship Marketing	K3
			CO 1 Identify Tax calculation considerations	K2
			CO 2 Computation of tax payment	K5

		CO 3 Understand the rules of IT Dept.	K1
		CO 4 Identify the methods of calculating the tax from various sources.	K3
Main XIII	**Direct Taxes**	CO 5 Understand the procedures for the relief	K4
		CO 1 Understand Knowledge economy and Knowledge management	K5
		CO 2 Identify Knowledge Attributes	K2
		CO 3 Understand Infrastructure of Knowledge Management	K1
		CO 4 Develop Knowledge Culture	K4
Main XIV	**Investment Management**	CO 5 Comprehend Knowledge Management tools, techniques and	K2
		CO 1 Learning the process of prject preparation	K3
		CO 2 Analysing the data collected	K1
		CO 3 Preparation of Questionnaire	K3
		CO 4 Collecting the respondent opinions	K4
Main XV	**Project work**	CO 5 Suggesting the remedies	K2

		CO 1 Learning the basic in marketing	K3
		CO 2 Knowing the types of advertising media	K4
		CO 3 Channels of Distribution	K5
		CO 3 Services marketing of product to customers	K1
Elective IV	**Sales and Advertising Management**	CO 5 Consumer Protection Activities	

2.6 Students Performance and Learning Outcomes

2.6.1 Program Outcomes,Program Specific outcomes and Course Outcomes for all Programs Offered by the Institution

Stated and Displayed in website of the institution(to provide the weblink)

Department of BBA

Programme Outcome(POs)

Upon Completion of the degree requirements,students will be able

S.No.	PO Number	PO Statements
1	PO1	The ability to understanding of Business Functions
2	PO2	To understand how to Providing Global Perspectives
3	PO3	to understand the Developing Critical and Analytical Thinking
4	PO4	The ability to develop Interpersonal Skill Development

Programme Specific Outcome(PSO)

S.No.	POS Number	POS Statements
1	PO1	Acquiring conceptual clarity various functional areas
2	PO2	Ability to analyze variuos functional issues affecting Organization
3	PO3	Demonstrate effectively oral and written communication
4	PO4	Demonstrate ability to work in groups

Course Outcome(Cos)

Semster		Course	Title of the Course	Course Outcome	Level
		Core-I	Principals of Management	CO1: To learn about Demonstrate comprehensive accurate knowledge and understanding of various areas of management	k2
				CO2: Able to Exibit knowledge and skill required to administer the affairs of management	k2
				CO3: To understand levels of mnagement	k2
				CO4: To analyse management ethics	k4
				CO5 : To know Familiarizes students with concept and Principles of management	k2

I	Core-I	Business Mathematics and Statistics -I	CO1 : To know the basic mathemetical calculations.	k2
			CO2 : To identify knowledge of quantitative methods and its applications in commercial situation for decision making.	k3
			CO3: To understand statistics tools	k2
			CO4: To analyse and design quantitative aspects	k2,k6
			CO5 : To analyze different tools of progression theories of equation and number system	k3
I	Allied	Business Organization	CO1:To understand basics of business organisation	k5
			CO2:Attain knowledge of various forms of organisation	k3
			CO3:Acquire depth understanding of stock excange and functions	K2
			CO4:To understand organisation structur	K2
			CO5:To gain knowledge about trade association	k2
			CO1 : Ability to Understand and evaluate the globalscale of environmental problems	k2,k5
			CO2 : To know Communicate complex environmental information to both technical and non - technical audiences	k2,

	Core-I	Environmental Studies	CO3: To analyse the environmental factors	k3
			CO4:To design structure effectively	k5
			CO5 : Discuss Articulate interconnected and evaluate strategy interdisciplinary nature of environment studies	k3
Semster	**Course**	**Title of the Course**	**Course Outcome**	
II	Core	Business Environment	CO1 : Familiarize with the nature of business environment and its components	k4
			CO2 : The students will be able to demonstrate and develop conceptual framework of business environment and generate interest in international business	k6
			CO3: To understand factors of environment	k2
			CO4: Analyse the nature and scope of business	k3
			CO5: Understand the definition of ethics and the importance and role of ethical behavior in the business world today.	k5
			CO1 : Describe and discuss the key terminology, concepts tools and techniques used in business statistical analysis	k3
			CO2 :Critically evaluate the underlying assumptions of analysis tools	k2,k5

		Business Mathematics and Statistics II	co3:Develop time series, irregular variations	k1
			co4:To use index number in practical applications	k2
			CO5:: Toknow how to Solve a range of problems using the techniques covered	k2
II	Core	Value Education	CO1 :Describe Students will understand the importance of ethics value based living.	k2
			CO2 : To verify Students will gain deeper understanding about the purpose of their life.	k3
			CO3: To find ethics of life	k1
			CO4: to understand skiils of human life	k2
			CO5: Evaluate Students will understand and start applying norms and ethics the essential steps to become good leaders	k5
		Soft Skill	CO1 : Discuss how to Effectively communicate through verbal/oral communication and improve the listening skills	k6
			CO2:Design the skill of human life and structure	k5
			CO3: To understand presentation level of humans	k2

			CO4 : Write precise briefs or reports and technical documents	k2
			CO5 : Actively participate in group discussion / meetings .	k2
II	Allied	Customer Relationship Management	CO1 : Understand the basic concepts of Customer relationship management.	k2
			CO2 : To find marketing aspects of Customer relationship management.	k1
			co3: Design customer relatinship structure	k5
			CO4: to understand skiils of human life	k2
			CO5 : Learn basics of analytical Customer relationship management.	k5
Semster	**Course**	**Title of the Course**	**Course Outcome**	
		Production Management	CO1 : Identify the elements of operations management and various transformation processes to enhance productivity and competitiveness.	k1
			CO2:Implement suitable materials planning principles	K1
			CO3:Plan and imlement store keeping,material handling	K3

III	Core		CO4 : Analyze and evaluate various facility alternatives and their capacity decisions, develop a balanced line of production & scheduling and sequencing techniques in operation environments	k4
			CO5: Develop aggregate capacity plans and MPS in operation environments.	k4
		Financial Accounting	CO1 : Acquire conceptual knowledge of basics of accounting	k3
			CO2:To know the need for making single and double entry	K2
			CO3:To know the meaning of shares and forfeitures	K2
			CO4 : Identify events that need to be recorded in the accounting records	k3
			CO5 : Describe the role of accounting information and its limitations	k2
		Human Resource Management	CO1 : To develop the understanding of the concept of human resource management and to understand its relevance in organizations.	k2
			CO2:understand need and methods o performance appraisal	K2
			CO3:Abe to analyse key issues of mentoring,promotion	K3
			CO4 : To develop necessary skill set for application of various HR issues	k6

III	Core		CO5 : To analyse the strategic issues and strategies required to select and develop manpower resources.	k4
		Managerial Economics	CO1 : Understand the roles of managers in firms	k2
			CO2:To know application of price discrimination	K2
			CO3:To analyse the output decision	K2
			CO4 : Understand the internal and external decisions to be made by managers	k2
			CO5 : Design competition strategies, including costing, pricing, product differentiation, and market environment according to the natures of products and the structures of the markets.	k3
	Allied	Office Management	CO1 : Identify and describe challenges that affect administrative managers.	k3
			CO2:Identify levels of management	k2
			CO3: Understand ethics of rules andregulations	k2

III			CO4 :Discuss the major areas of management, human resources, leadership and communications, administrative services, and workplace systems and technology	k5
			CO5 : Discuss emerging elements impacting administrative management practices.	k5
	Skill Based	Business Communication	CO1 : To demonstrate his/her ability to write error free while making an optimum use of correct Business Vocabulary & Grammar.	k3
			co2:Effective correspondance with clarity	k5
			co3:Understand traditional nad modern communication	k2
			CO4: To choose participate in an online learning environment successfully by developing the implication-based understanding of Paraphrasing, deciphering instructions, interpreting guidelines, discussion boards & Referencing Styles.	k3
			CO5 : To distinguish among various levels of organizational communication and communication barriers while developing an understanding of Communication as a process in an organization.	k5
			CO1 : Upon completion of the course, students will be able to have clearunderstanding of managerial functions like planning, and have same basic knowledge on international aspect of managemen	k2

	Non Major Elective	Management Concepts	CO2: To find planning and staffing	k1
			co3: Understand the level os management	k2
			CO4 : To understand the planning process in the organization	k2
			CO5: To understand the concept of organization	k2
Semster	**Course**	**Title of the Course**	**Course Outcome**	
IV	Core-I	Organizational Behavior	CO1 : Demonstrate the applicability of the concept of organizational behavior to understand the behavior of people in the organization.	k2.k5
			co2:To know the significants of organizational culture	k2
			co3:Able to learn the concept of change in organization	k3
			CO4 : Demonstrate the applicability of analyzing the complexities associated with management of individual behavior in the organization.	k2
			CO5 : Analyze the complexities associated with management of the group behavior in the organization.	k4,
			CO1 : Acquire conceptual knowledge of basics of accounting	k2,k4

		Management Accounting	To know short and long yerm solvency ratios	k1
			To know fund flow analysis and objectives	k1
			CO4 : Identify events that need to be recorded in the accounting records	k1
			CO5: Develop the skill of recording financial transactions and preparation of reports in accordance with GAAP	k2
IV	Core-I	Taxation	CO1 : To know about basics of accounting tax	k2,k4
			co2: Understand acounting tools and strategy	k2
			co3: Evaluate and design taxation methods	k6
			CO4 : To calculation of accounting records	k2
			CO5 : Develop the skill of recording financial transactions and preparation of reports in accordance with GAAP	k3
		Operations Research	CO1 : Be able to understand the application of OR and frame a LP Problem with solution – graphical and through solver add in excel	k2
			co2:Use tools to solve problems	k3
			co3:To develop report that describe techniques	k2
			CO4 : Be able to build and solve Transportation and Assignment problems using appropriate method.	k2,k4

			CO5 : Be able to design and solve simple models of CPM and queuing to improve decision making and develop critical thinking and objective analysis of decision problems.	k2,k4
IV	Allied	Organizational Behavior	CO1 : Demonstrate the applicability of the concept of organizational behavior to understand the behavior of people in the organization.	k2
			co2:Understand the concept of leadership	k2
			co3:To know the significants of organizational culture	k2
			CO4 : Demonstrate the applicability of analyzing the complexities associated with management of individual behavior in the organization.	k2
			CO5 : Analyze the complexities associated with management of the group behavior in the organization.	k4
IV	Non Major Elective	Training and Development	CO1 : To develop an understanding of the evolution of training & development from a tactical to a strategic function .	k1,k2
			co2:To know management development programme	k2
			co3:To understand different training institutes	k2
			CO4 : To provide an insight into what motivates adults to learn and the most appropriate methodologies to impart training	k2

		CO5: To understand the concept of training audit & training evaluation	k2
Semster	**Course**	**Title of the Course**	**Course Outcome**	
V	Core	Marketing Management	CO1 : Analyse Students will demonstrate strong conceptual knowledge in the functional area of marketing management	k4
			co2:Implement work and methods study procedures	k1
			co3:Implement suitable materials planning principles	k1
			CO2 : Students will demonstrate effective understanding of relevant functional areas of marketing management and its application.	k2
			CO3 : Students will demonstrate analytical skills in identification and resolution of problems pertaining to marketing management.	k2
		Business Law	CO1 : Explain the concepts in business laws with respect to foreign trade	k5
			co2:To identify common forms of business association	k1
			co3:To know legality and statute faud	k3

				CO2 : Apply the global business laws to current business environment	k4
				CO3 : Analyse the principle of international business and strategies adopted by firms to expand globally	k4
V		Elective	Human Resource Management	CO1 : To develop the understanding of the concept of human resource management and to understand its relevance in organizations.	k2
				co2:Acquire knowledge in identify training needs	k2
				co3:understand need and methods o performance appraisal	k2
				CO2 : To develop necessary skill set for application of various HR issues	k2
				CO3 : To analyse the strategic issues and strategies required to select and develop manpower resources.	k4
Semster		**Course**	**Title of the Course**	**Course Outcome**	
				CO1 : The students should able to illustrate the role of trade union in the industrial setup.	k3,k5
				co2:Understand the meaning og industrial unrest	k2

VI	Core	Industrial Relations and Labour Laws	co3:Understand the indian factories act	k2
			CO4 : Students should able to outline the important causes & impact of industrial disputes.	k2,k5
			CO5 : Students should able to elaborate Industrial Dispute settlement procedures.	k2
		Entrepreneurial Development	CO1 : Interpret how to start an enterprise and design business plans those are suitable for funding by considering all dimensions of business.	k5
			Able to understand enterprise,entrepreneur	k2
			Abl to get complete picture of govt programmes	k3
			CO4 :Understand entrepreneurial process by way of studying different case studies and find exceptions to the process model of entrepreneurship.	k2
			CO5 : Run a small enterprise with small capital for a short period and experience the science and art of doing business.	k3
VI	Elective	Marketing Research	CO1 : To know about marketing research	k1
			co2:Identify tools for collecting data	k3
			co3:Able to choose correct sampling methods	k2

			CO4 : Analyze the research tools	k4
			CO5 : To marketing decision making	k3
VI	Skill Based Subject	Creativity and Innovation Management	CO1 : Consider cognitive aspects of creativity and how personality and individual differences might contribute	k1
			co2Able to learn creative hats methods	k2
			co3Able to practice creativity exercises	k5
			CO4 :Explore ways in which individuals can enhance their own creative potential	k6
			CO5: Appreciate how organisational factors such as culture, leadership, diversity and structure can both help and hinder creativity and innovation	k5