LANGUAGES

COURSE NAME	COURSE CODE	COURSE OUTCOME	COGNITIVE LEVEL
Cognitive Level Remember- R, Understand- U, Apply- P, Analyze- A, Evaluate- E, Create- C			
I YEAR I SEMESTER			
Tamil I	LA11A	**CO 1:** இக்கால இலக்கிய வகைகளையும் இலக்கிய வரலாற்றையும் தெரிந்து கொள்வர்.	U
		CO 2: இக்கால இலக்கியங்களை துய்க்கும் முறைகளையும் உணர்த்தும் கருத்துகளையும் அறிந்து கொள்வர்.	U
		CO 3: மொழியை திறம்பட பயன் படுத்தும் ஆற்றலை பெறுவர்.	R
French I	100L1K	**CO 1**: Introduce oneself and talk about one's likes and dislikes	U
		CO 2: Invite someone, to accept or deny an invitation	U
		CO 3: Making purchases at the market	A
Hindi I	100L1E	**CO 1:** Identify the theme and aims of prose lessons and functional Hindi	R
		CO 2: Understand and summarise the theme	U
		CO 3: Apply ideology of literary works and writers	P
Arabic	100L1H	**CO 1:** Understand the correct pronunciation of Arabic letters	U
		CO 2: Understand the structure-based composition.	U
		CO 3: Acquire new vocabulary in Arabic	R
Telugu I	100L1B	**CO 1:** To understand ancient, medieval & modern literary text in Telugu	U
		CO 2: To describe text and context of ancient, medieval & modern Telugu Classical literature.	R
		CO 3: To evaluate the difference between the ancient, medieval & Modern style of writing.	A
Basic Tamil - 1	100L1L	**CO 1:** தமிழ் உயிரெழுத்து வடிவங்களையும் மெய்யெழுத்து வடிவங்களையும் அறிந்து கொள்வர்.	U
		CO 2: உயிர், மெய், உயிர்மெய்த் துணைக் குறியீடுகளை அறிந்து அவற்றை எழுதும் திறன் பெறுவர்.	U
		CO 3: ஒரு எழுதுக்கு ஒரு ஒலி, ஒரு ஒலிக்கு ஒரு எழுத்து என்ற தமிழின் உச்சரிப்பு - வரி வடிவத் தொடர்பை உணர்வர்.	R
Advanced Tamil - I	100S1B	**CO 1:** சமகால இலக்கியங்களின் நோக்கங்கள் - போக்குகள் குறித்து மாணவர்கள் அறிந்து கொள்வர்.	U
		CO 2: நாட்டுபுற மக்களின் வாழ்வியல், அறிவாற்றல் இன்றையநிலை ஆகியவை குறித்து சிந்திப்பர்.	R

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		CO 3: தங்கள் கற்பனை வளத்தை மாணவர்கள் பெருக்கி கொள்வர்.	A
English – I	100L1Z	**CO 1:** Acquire self awareness and positive thinking required in various life situations	U
		CO 2: Acquire the attribute of empathy.	U
		CO 3: Acquire creative and critical thinking abilities	U
		I YEAR II SEMESTER	
Tamil II	100L2A	**CO 1:** சிற்றிலக்கியங்களின்வழி இலக்கிய சுவையினையும் பண்பாட்டு அறிவினையும் பெறுவர்.	U
		CO 2: புதுக்கவிதை வரலாற்றினை அறிந்து கொள்வர்.	U
		CO 3: திராவிட இயக்க இலக்கியங்களைக் கற்பதன் மூலம் மொழி உணர்வு, இன உணர்வு, சமத்துவம் சார்ந்த சிந்தனைகளை பெறுவர்.	A
French II	100L2K	**CO 1:** To ask for and give directions.	P
		CO 2: To give orders or commands using Impératif	P
		CO 3: To narrate events from the past using Passé Composé	P
Hindi II	100L2E	**CO 1:** Identify the features, elements of literary forms i.e. Drama, one act play, Novel and Short Stories, techniques of Translation	U
		CO 2: Understand the theme, aim of lessons and obtain skills of Evaluation	R
		CO 3: Evaluate the thought, ideology, expressional and artistic skills of writers and contextual meanings	R
Arabic II	100L2H	**CO 1:** Understand the correct pronunciation of Arabic letters	U
		CO 2: Able to write the simple sentences in Arabic without errors	R
		CO 3: Read the Arabic sentences without diacritical marks	A
Telugu II	100L2B	**CO1**: To understand the Contemporary literary text in Telugu	U
		CO2: To Explain the nature of Modern Poetry	P
		CO3: To Explain the Contemporary author style of writings	P
Basic Tamil II	100S2A	**CO 1:** தமிழ்மொழியைப் பேசவும் பிறர் பேசுவதை புரிந்து கொள்ளவும் திறன் பெறுதல் தமிழைப் படிக்கவும் எழுதவும் கற்றுக்கொள்வர்.	A
		CO 2: கடிதம், விண்ணப்பம், நிகழ்சிக் குறிப்புகள் எழுதுதல், தகவல் தொடர்புச் சாதனங்களில் தகவல் எழுதுதல் என அன்றாட வாழ்வியல் தமிழ் பண்பாட்டை கற்றுக்கொள்வர்.	A
		CO 3: தமிழின் இலக்கிய வளத்தோடு தமிழரின் அறக்கோட்பாடுகளையும் தமிழரின் வரலாற்று - பண்பாட்டு செழுமையும் புரிந்து கொள்வர்.	U

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Advanced Tamil II	100S2B	**CO 1:** உரைநடை இலக்கியத்தின் பெருமைகளை உணர்ந்து, அதனை அன்றாட வாழ்வியல் பயன்படுத்தும் திறன் பெறுவர்.	P
		CO 2: பாண்டியதமிழ் இலக்கியங்கள் காட்டும் சமூக, பண்பாட்டு வாழ்வியல் முறைகளை அறிந்து கொள்வர்.	U
		CO 3: காப்பிய கட்டமைப்புகளை இன்றைய புதினம், திரைப்படங்கள் ஆகியவற்றுடன் ஒப்பிட்டுக் காணும் அறிவை பெறுவர்.	A
English - II	100L2Z	**CO 1**: Realize the importance of resilience	A
		CO 2 : Become good decision-makers	P
		CO 3 : Imbibe problem-solving skills	P
II YEAR III SEMESTER			
Tamil III	LA13A	**CO 1:** சைவ இலக்கியம்	P
		CO 2: வைணவ இலக்கியம்	P
		CO 3: சித்தர் இலக்கியம்	P
Language Through Literature - I	LZ13B	**CO 1:** Extent of enhancement of their vocabulary and use them appropriately to communicate in contexts	U
		CO 2: Aware of commonly occurring errors and avoid committing them in language use	U
		CO 3: Rewrite words and sentences by changing their forms and use them appropriately	U
French III	CLK3V	**CO1:** Outline the overview of the short literary texts	U
		CO 2: Explain the literary text	U
		CO 3: Make use of the grammar in the text	U
Hindi III	CLE3H	**CO 1:** Explain the moral of the poetry in Tamil and contrast with the Hindi literature	U
		CO 2: Outline the experience of the poets and their society	U
		CO 3: Explain the thoughts, ideology and skills of writer	U
Arabic III	CLH3H	**CO 1:** Develop vocabulary in Arabic	C
		CO 2: Read the Arabic sentences without diacritical marks	R
		CO 3: Able to write the simple sentences in Arabic without errors	C
Telugu III	CLB3C	**CO 1:** Understand the modern style of writing	U
		CO 2: To describe about the style of the author	R
		CO 3: To narrate the poetry and improve the grammatical skill of writing	P

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II YEAR IV SEMESTER			
Tamil IV	LA14A	**CO 1:** காப்பியங்கள்	E,C
		CO 2: புராண காப்பியங்கள்	E.C
		CO 3: கிறித்தவ இசுலாமியக் காப்பியங்கள்	E,C
French IV	CLK4W	**CO 1:** Explain culture through the art form	U
		CO 2 : Summarize the short paragraphs of various authors	P
		CO 3 : Make use of the rules of grammar in the phrases and text	U
Hindi IV	CLE4J	**CO 1:** Summarize the poetic skills of poets and their poem	U
		CO 2: Explain the modern hindi literature and its current advances	U
		CO 3: Outline the human, social, ethical and literary value	U
Arabic IV	CLH4J	**CO 1:** Understand and speaks Arabic sentences	U
		CO 2: Write Arabic sentences without errors	P
		CO 3: Reading and understanding the authors point	R
Telugu IV	CLB4D	**CO 1:** To Explain the Contemporary author style of writings	U
		CO 2: To evaluate the difference between the ancient and Contemporary Literature.	A
		CO3: To use grammatical styles in writing.	P
Language Through Literature -II	LZ14B	**CO 1:** Develop skills in gathering and organizing information	C
		CO 2: self-help essays focuses on introspection and personal discovery through various writing tasks	R
		CO 3: critical analysis and writing skills through a focus on future-oriented and cultural perspectives	A

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BA ENGLISH

PROGRAMME CODE: REGULATION 2023-2024			
Cognitive level Remember- R, Understand -U, Apply – P, Analyse -A, Evaluate- E, Create- C			
I Year: I Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Introduction to Literature	105C1A	**CO 1:** Understand and describe the basic elements of poetry, including meter, rhyme, and theme.	**U**
		CO 2: Gain knowledge of the elements of fiction including narrative structure, character analysis and comparison between different but related texts. Work skillfully within a team, respect coworkers, delegate work and contribute to a group project.	**R**
		CO 3: Have an idea about dramatic storytelling including play structure, monologues, dialogue, and scene setting. Use library resources to research and develop arguments about literary works	**A**
Indian Writing in English	105C1B	**CO 1:** Appreciate the historical trajectory of various genres of Indian Writing in English from colonial times to till the present	**U**
		CO 2: Analyze Indian literary texts written in English in terms of colonialism, post colonialism, regionalism, and nationalism. Evaluate critically the contributions of major Indian English poets and dramatists	**R**
		CO 3: Understand the role of English as a medium for political awakening and the use of English in India for creative writing. Analyze how the sociological, historical, cultural and political context impacted the texts selected for study.	**A**
Social History of England I	105E1A	**CO 1:** Gain extensive insight into the history of English literature, while laying special emphasis on various literary movements, genres and writers that are held to be the representatives of their times.	**U**
		CO 2: Evaluate the way socio-cultural and historical phenomena influence the literary production of a particular period. Gain in-depth understanding on the growth of the English language under the influence of various other languages including Latin and French, besides being mentored in the structural nitty-gritties of the language.	**R**
		CO 3: Evaluate the way socio-cultural and historical phenomena influence the literary production of a particular period. Develop a nuanced appreciation of the literary times stalwarts of those.	**A**
SEC1-English for Communication	105S1A	**CO 1:** Identify the basic principles of communication	**U**
		CO 2: Analyze the various types of communication , Make use of the essential principles of communication	**R**
		CO 3: Identify the prominent methods and models of Communication. Learn about the four skills of language and get familiarized with them.	**A**
FC-Fundamental Framework for Reading English Literature.	105B1A	**CO 1:** Attain communicative competences that they can use language accurately and appropriately	**U**
		CO 2: Understand the basic features of communication and aim at improving language skills	**A**
		CO 3: Gain useful letter/report writing tools, tips and techniques to effectively apply the skills to their everyday workplace correspondence.	**R**

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Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: II Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
British Literature-I	105C2A	**CO 1:** Demonstrate knowledge of the major social, political, philosophical, and scientific events forming the back drop for the development of early British Literature. Distinguish between the characteristics of British literary movements in discussing and writing about British literature. Critically appreciate literature using standard literary terminology and other literary conventions.	**U**
		CO 2: Synthesize, integrate, and connection formation by Writing essays using techniques of critic is made by evaluation. Read and discuss the themes, approaches, styles, and contributions to the development of British literature from the Medieval Period to the end of the eighteenth-century	**R**
		CO3: Distinguish between the characteristics of British literary movements in discussing and writing about British literature. Critically appreciate literature using standard literary terminology and other literary conventions.	**A**
American Literature	105C2B	**CO 1:** Analyze and discuss works of American literature from arrange of genres (e.g. poetry, nonfiction, slave narrative, captivity narrative, literary fiction, genre fiction, sermon, public proclamations, letters, etc.). Produce a mix of critical, creative, and/ or reflective works about American literature to 1865. Analyze and describe about American literature using standard literary terminology and other literary conventions.	**U**
		CO 2: Identify relationships between moments in American history, colonialism, and culture and their representation in works of American literature. Articulate ways that American literature reflects complex historical and cultural experiences.	**R**
		CO 3: Produce a mix of critical, creative, and/ or reflective works about American literature to 1865. Analyze and describe about American literature using standard literary terminology and other literary conventions	**A**
Social History Of England-II	105E2A	**CO 1:** Recognize the milestones of British History from 18th century till the modern age and can relate how these movements influence the English society and Literatures of that period.	**U**
		CO 2: Identify the various revolutions and movements of English society leading to form a crucial opinion for the benefit of humanity. Examine the causes and consequences of the war of Americans and French	**R**
		CO 3: Evaluate the effects of the revolutions and their impacts in literature in a better perspective. Analyze the reforms and the development of education, transport and communication in the modern era	**A**
Sec-II Public Speaking Skills	105S2A	**CO 1:** Demonstrate an understanding of the principles of public speaking	**U**
		CO 2: Recognize barriers to public speaking and identify how to avoid them. Understand how to give effective verbal and Non- verbal feedback	**R**
		CO 3: Learn about planning speech organization for the intended audience. Practice effective group delivery and speech informal context.	**A**
SEC-III Digital Literacy And	105S2B	**CO 1:** Gain knowledge of digital literacy	**U**
		CO 2: Acquire skills in text literacies and language. Acquire skills in information digital literacy	**R**

Concepts		**CO 3:** Build confidence in using digital literacy. Aware of the various types socio-economic factors in digital literacy	**A**
II Year: III Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
British Literature-Paper III	AG23A	**CO 1:** Identify and define basic terms and concepts which are needed for advanced courses in British literature.	**U**
		CO 2: Write brief essays describing the distinct features of the important works of mainstream writers from Victorian Age and Twentieth Century.	**A**
		CO 3: Analyze and interpret seminal poetry of the period with close reading.	**R**
Aspects of English Language-I	AG23B	**CO 1:** show their understanding of language and its features	**U**
		CO 2: demonstrate their understanding of English Grammar	**R**
		CO 3: use English language correctly, distinguish between correct and incorrect use of the language.	**A**
Background To English Literature-II	AG33A	**CO 1:** Identify and define basic terms and concepts which are needed for advanced courses in British literature	**U**
		CO 2: Describe the distinct periods of British literature.	**R**
		CO 3: Write brief notes on literary forms. Write brief essays on seminal writers from Britain in the Twentieth century. Write brief essays on the historical background of the same period	**R**
Computing Skill- I	TSSE1	**CO 1:** The major objective in introducing the course is to impart hands on training to students in Microsoft Office essentials like MS Word, MS Excel and MS Access.	**U**
		CO 2: The course is basic course offered at two levels exclusively meant for students who have no computer knowledge.	**A**
		CO 3: Course is designed as a practical oriented course and not for chalk and board.	**R**
II Year: IV Semester			
English IV –Academic Writing	LZ14C	**CO 1:** adopt a more organised approach to academic writing by acquiring the required writer's resources.	**U**
		CO 2: Gain a scholarly understanding in writing about Literature.	**A**
		CO 3: Identify the broad categories in academic writing styles and use their format appropriately.	**R**
American Literature I	AG24A	**CO 1:** Trace the Origin and History of America.	**U**
		CO 2: Understand and Explain the cultural, political, and stylistic protocols that governed early American literature, the impact of Puritanism and significance of Transcendentalism using prescribed texts.	**A**
		CO 3: Assess thematic aspects of literary texts as a part of cultural and historical movements in America	**R**
Aspects Of English Language-II	AG24B	**CO 1:** Different Languages across the world.	**U**
		CO 2: Sounds of Language.	**A**
		CO 3: Words-Sound- Meaning. Distinct sounds and meanings.	**R**

Background To European And American Literature-IV	AG34A	**CO 1:** Identify and define basic terms and concepts which are needed for advanced courses in European and American literature	**U**
		CO 2: Write brief essays on the historical background of European and American literatures	**A**
		CO 3: Write brief essays on the historical background of the same period	**R**
Computing Skills-II	TSSE2	**CO 1:** Microsoft Office essentials like MS Word, MS Excel and MS Access.	**U**
		CO 2: Presentations – Power point- starting, browsing and saving, creating, editing, formatting of text and paragraphs, inserting tables and charts; Presentation through slides, hand-outs and printing.	**A**
		CO 3: Graphics and Multimedia - Clip art – create and insert; shapes- draw, insert and copy; create a flow	**R**
III Year: V Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
American Literature	AG25A	**CO 1:** Evaluate new forms of space, identity and writing that transformed canonical English literary structures.	**U**
		CO 2: Assess thematic aspects of literary text as a part of cultural	**R**
		CO3: Historical movements in America.	**R**
World Classics in Translation	AG25B	**CO 1:** Possess an understanding of a few world classics.	**U**
		CO 2: Acquire historical and cultural knowledge of the past.	**R**
		CO 3: Develop critical thinking by being exposed to original ideas and philosophies.	**R**
		CO 4: Write about early literature, writers and their literary styles.	**A**
Aspects of English Language III	AG25C	**CO 1:** Use English with a thorough understanding of the different ways in which English is used in India.	**U**
		CO 2: Comprehend and respond to American and British.	**A**
		CO 3: Use their writing skills to produced good write ups.	**R**
Theory Introduction to Literary	AG25D	**CO 1:** Remember the critical thinkers or philosophers and their seminal works.	**U**
		CO 2: Understand the significance of major critical theories analyse the theme and the structure of literary works	**R**
		CO 3: Analyse the theme and structural of literary works	**A**
		CO 4: Examine the dominant ideologies in literary work	**A**
		CO 5: Evaluate a literary work using a theoretical framework	**A**
Introduction to Journalism	AG45A	**CO 1:**Trace the history of journalism in India and discuss the aspects of Press and its governing principles	**U**
		CO 2: Assess the various components of a newspaper	**R**
		CO 3: Analyse the importance of news agencies, advertisement, photographic Journalism and News Media. Evaluate the elements of reporting in the print, radio, television and online platform.	**R**
		CO 1: Understand the basic concepts of value in life.	**A**

Value Education	VAE5Q	**CO 2:** Acquire the value oriented to education in life.	**R**
III Year: VI Semester			
Post-Colonial Literature in English	AG26A	**CO 1:** Define the problems and consequences of colonization.	**U**
		CO 2: Identify key authors and literary forms in Post-Colonial Literature.	**A**
		CO3: Understand how ancestry, race, class, gender, history and identity are presented in the literary text.	**R**
		Co 4: Examine the use of English language by the colonized to express their experiences and the emergence of English.	**A**
		CO 5: Think critically about the contexts of exploration and colonialism in relation to post- colonial societie**s.**	**A**
Contemporary literature	AG26B	**CO 1:** Examine the representation of contemporary trends, thematic concern and innovation in genres	**U**
		CO 2: Identify key concepts like multiculturalism, globalisation acculturation, displacement, alienation and identity crisis in contemporary texts post-World War II	**A**
		CO 3: Categorize major streams of thought, literary styles and issues that dominate the world	**R**
		CO 4: Analyze the interconnectedness of human experiences with a develop understanding of their social cultural and aesthetic contexts.	**R**
Indian Literature in English	AG26C	**CO 1:** Remember the background of Indian literary tradition and the significance of Indian aesthetics.	**U**
		CO 2: Understand the characteristic features of Regional Indian literature in Translation.	**R**
		CO 3: Develop a basic perception about the difficulties, possibilities and challenges in translating a text.	**A**
		CO 4: Analyze the regional elements in the prescribed text.	**A**
		CO 5: Evaluate the skills involved in translation of regional Indian Literature into English.	**R**
Women's Writing	AG46B	**CO 1:** Understand the impact of patriarchy on women and become sensitized to the need for gender equality**.**	**U**
		CO 2: Distinguish women's writings as one shaped by their gender experiences**.**	**R**
		CO 3: Identify genres and narrative strategies employed by different women writing and the language used.	**R**
		CO 4: Gain an understanding from the themes of suppressing, oppressing and marginalization express by women writers across the world and gauge its effect in changing the social construct.	**R**
		CO 5: Analyze literary text through the perspective of gender.	**R**
		CO 1: Define what is cinema and its genres.	**U**
		CO 2: Identify the aspects of translation from text to screen visual representation.	**A**

Film and Literature	AG46F	**CO 3:** Demonstrate a knowledge of film narrative and techniques.	**R**
		CO 4: Explain the terminologies for analyzing images, sound and costume in narrative film.	**U**
		CO 5: Synthesize the themes and issues portrayed in both forms.	**R**
		CO 6: Critically review a film.	**A**

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BBA

Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: I Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Principles of Management	150C1A	**CO 1:** Interpret the process and levels of management in the organization.	U
		CO 2: Relate planning and decision making activities in the organization.	U
		CO 3: Summarize the types and structure of organization.	U
		CO 4 : Explain about staffing of employees.	P
Financial Accounting	150C1B	**CO 1:** Explain the basic concepts in accounting and preparation of cash book.	U
		CO 2: Interpret the accounting concepts of sole trade and non-profit organization	U
		CO 3: Explain a new balance sheet of a partnership firm after reconstitution.	U
Managerial Economics	150E1A	**CO 1:** Explain the nature and scope of Managerial Economics	R
		CO 2: Interpret the practical knowledge of consumer behavior and classify different market structure	R
I Year: II Semester			
Course Name and Course Code		**Course Outcome**	Cognitive Level
Marketing Management	150C2A	CO 1: Summaries the concepts and importance of Marketing management	U
		CO 2: Explain consumer behaviour model	U
		CO 3: Interpret PLC cycle and the NEW product development process	U
Accounting For Managers II	150C2B	**CO 1:** Interpret the accounting concepts of sole trade and non-profit organization	U
		CO 2: Explain a new balance sheet of a partnership firm after reconstitution.	R
		CO 3: Explain the accounting procedure of single entry system in an origination	R
International Business	150E2A	**CO 1:** Infer B.O.P and the theories of international trade	U
		CO 2: Students will summarize international financial institutions and WTO	U
II Year: III Semester			
Course Name and Course Code		**Course Outcome**	Cognitive Level
Organizational Behaviour	BB23B	CO 1: Relate the need, scope and theories of organization	U
		CO 2: Summarize various motivational techniques of employees	U
		CO 3: Compare work environment and leadership styles	A

Computer Applications in Business	BB23C	CO 1: Interpret about creating and editing word Document and excel sheet for Business	U
		CO 2: Summarize the concepts of Database management system.	U
		CO 3: Infer about the Basic concepts of Internet	U
Marketing Management	BB23D	CO 1: Understand fundamental marketing concepts	U
		CO 2 : Knowing the implications of marketing in business	E
		CO 3: Familiarize various promotional tools in marketing	U
Business Statistics	BB33A	CO 1: Explain the basic concept of statistics	U
		CO 2: Explain the variations in Data and relate the variables using correlation techniques.	U
		CO 3: Explain the concept of time serious and trend analysis	U
Essentials of Language and Communication Skills	TSSEG	CO 1 : Interpret the process and concepts of speaking and reading	U
		CO 2 : Demonstrate the writing skills for the employability	U
		CO 3 : Demonstrate their ability to utilize business correspondence	U
Financial Management	BB23A	CO 1 : Understand various sources of finance	U
		CO 2 : Summarize the concept of the cost of capital	U
		CO 3 : Understanding the working capital requirements and operating cycles	U
II Year: IV Semester			
Course Name and Course Code		**Course Outcome**	Cognitive Level
Human Resource management	BB24A	CO 1 : Understand fundamental concepts and practices in Human resource management	U
		CO 2 : Know the role of Human resource management in Organization	P
		CO 3: Familiarize on Labor relation and Human Resource audit.	U
Business Regulatory Framework	BB24B	CO 1 : Understand the provision of Law related to Business	U
		CO 2 : Know the legal remedies for Business	U
		CO 3: Understand the concepts of Law related to IPR	U
Financial Services	BB24C	CO 1 : Understand the role and significance of financial services	U
		CO 2 : Various players in Financial services market	P
		CO 3 : Understand the concept of lease and Hire purchase	U
Management Information System	BB24D	CO 1 : Know the Basic system concepts types and its functions in Business	U
		CO 2: Familiarize Computer, its components and functions.	U
		CO 3 :Understand the concept of various functional information system	U
		CO 1: Familiarize about operations research and its significance in Business.	U

Operations Research	BB34A	CO 2 ; Know and use the various decision making tools used in business	P
		CO 3 : Understand the concepts of Decision theory	U
Environmental Studies	ENV4B	CO 1 : Understand the concepts of ecosystem	U
		CO 2 : Explain the environmental problems and policies	U
Computing Skills	TSSE1	CO 1 : Understand the fundamentals of OS and Networking	U
		CO 2 : Understand the basic functions of MS WORD,MS EXCEL,MS POWER POINT	U
III Year: V Semester			
Course Name and Course Code		**Course Outcome**	Cognitive Level
Advertising Management and Sales Promotion	BB25A	CO 1 : Impart Knowledge about advertising and Sales promotion	U
		CO 2: Understand the various media and developing integrated program.	U
		CO 3 : Measure effectiveness of advertisement and known its implications on society	U
Research Methodology	BB25B	CO 1: Acquire basic knowledge about the research and types.	R
		CO 2 :Enable the students know research process and report writing	U
		CO 3: Acquire knowledge about research report writing.	R
Operations Management	BB25C	CO 1 : Familiarize on the production concepts and its significance	U
		CO 2 : Know the various inventory control methods	P
		CO 3 : Provide comprehensive outlook on service operations management	U
Materials Management	BB25D	CO 1 : Impart knowledge on materials management importance	R
		CO 2 : Understand the various functions of materials management	U
		CO 3 : Gain knowledge about materials handling	U
Entrepreneurial Development	BB45A	CO 1 : Enable the students to understand the concept of Entrepreneurship and to learn the professional behavior expected of an entrepreneur	U
		CO 2 :Identify significance changes and trends which create business opportunities and to analyses the environment for potential business opportunities	U
		CO 3 : Provide conceptual exposure on converting idea to a successful entrepreneurial firm	R
Value Education	VAE5Q	CO 1 : Know the purpose and significance of value education in the present World	R
		CO 2 : Familiarize the concepts of human rights and its violations	**U**
		CO 3: Understand environment and ecological balance.	**U**

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III Year: VI Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Business Environment	BB26A	CO 1 :Impart knowledge on the concept of business environment and significance	P
		CO 2 :know the various environment factor and its impact on business	U
		CO 3 :Understand the financial environment and institutions	U
Service Marketing	BB26B	CO 1 :Know the Service concepts, Its evolution and growth	U
		CO 2 : Understand marketing mix in service marketing and its effective management	U
		CO 3 :Know the service marketing techniques applied in various sectors	U
Business Taxations	BB26C	CO 1 : Understand the concepts of Tax system in India	U
		CO 2 : Familiarize about customs duty , levy and collections	U
		CO 3: Know about GST, CGST, and SGST.	U
Customer Relationship Management	BB46D	CO 1 : Understand the need of Communications and its types	U
		CO 2 : Familiarize CRM concepts approaches and applications	P
		CO 3 :Know the types of customers and complaint redressal methods	U
Group Project Work	BB46Q	CO 1 : enable the students apply the conceptual knowledge in the study area	R
		CO 2 : Conduct study and provide suggestion for problem area and / or area of improvement	R

BCA

Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: I Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Python Programming	120C1A	CO1: Develop and execute simple Python programs	C
		CO2: Write simple Python programs using conditionals and looping for solving problems	A
		CO3: Decompose a Python program into functions	A
		CO4: Represent compound data using Python lists, tuples, dictionaries etc.	U
		CO5: Read and write data from/to files in Python programs	U
Python Programming Practical	120C11	CO1: To understand the problem solving approaches	U
		CO2: To learn the basic programming constructs in Python	U
		CO3: To practice various computing strategies for Python-based solutions to real world problems	A
		CO4: To use Python data structures - lists, tuples, dictionaries.	A
STATISTICS-I	120E1B	CO1 : Know the uses of statistics in society	U
		CO2 : Organize, manage and present data	R
		CO3: Analyze the statistical data graphically using frequency distribution and cumulative frequency distribution.	A
		CO4: Analyze statistical data using measures of central tendency, dispersion and location.	A
		CO5: To understand correlation between continuous variables and association between categorical variables.	U
Skill Enhancement Course – I Office Automation	120S1A	CO1: Understand the basics of computer systems and its components.	U
		CO2: Understand and apply the basic concepts of a word processing package.	U
		CO3: Understand and apply the basic concepts of electronic spreadsheet software.	U
		CO4: Understand and apply the basic concepts of database management system.	U
		CO5: Understand and create a presentation using PowerPoint tool.	U
Foundation Course – Fundamentals Of Computer	120B1A	CO1:Fundamental concepts of computer	U
		CO2: Fundamental mathematical techniques and how they relate to computer	U
		CO3: The architecture of processing and file storage in a computer system	R

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		CO4: Basic operations of operating systems	R
		CO5: A variety of software packages applicable to an academic, software development and business environment	A
Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: II Semester			
Course Name and Course Code		Course Outcome	Cognitive Level
Object Oriented Programming using C++	120C2A	CO1: Explain the various basic concepts of Object-orientation.	U
		CO2: Write programs to implement static binding	C
		CO3: Write programs to implement inheritance and dynamic binding	C
		CO4: Write programs to implement templates and exception handling and learn how to use STL class library	C
		CO5: Write programs implementing File and Stream I/O.	C
Object Oriented Programming using C++ Practical	120C2B	CO1: Design and create classes. Implement Stream I/O as appropriate.	C
		CO2: Design appropriate data members and member functions.	C
		CO3: Implement functions, friend functions, static members, constructors and compile-time polymorphism	U
		CO4: Implement inheritance, run-time polymorphism and destructors.	C
		CO5: Implement templates and exceptions. Use STL class library. Implement File I/O.	A
Statistics-II	120E2B	CO1: Understand Probability and its properties.	U
		CO2: Learn characteristics of different discrete and continuous distributions.	U
		CO3: Know situation to which different distributions can be applied.	U
		CO4: Comprehend the Sampling distributions.	U
		CO5: Learn how to apply statistical tests to get information from data.	U
Skill Enhancement Course - II: Office Automatio Practical	120S2A	CO1: Understand the basics of computer systems and its components	U
		CO2: Understand and apply the basic concepts of a word processing package.	U
		CO3: Understand and apply the basic concepts of electronic spreadsheet software.	U
		CO4: Understand and apply the basic concepts of database management system.	U
		CO5: Understand and create a presentation using PowerPoint tool.	U
Skill Enhancement Course - III Quantitative aptitude	120S2B	CO1: To gain knowledge on LCM and HCF and its related problems	R
		CO2: To get an idea of age, profit and loss related problem solving.	R
		CO3: Able to understand time series simple and compound interests	U

		CO4: Understanding the problem related to probability, and series	U
		CO5: Able to understand graphs, charts	U
II Year: III Semester			
Course Name and Course Code		Course Outcome	Cognitive Level
Core Course - V: Data Structures	220C3A	CO1: To introduce the concepts of Data structures and to understand simple linear data structures.	U
		CO2: Learn the basics of stack data structure, its implementation and application	U
		CO3: Use the appropriate data structure in context of solution of given problem and demonstrate a familiarity with major data structures	A
		CO4: To introduce the basic concepts of algorithms	U
		CO5: To give clear idea on algorithmic design paradigms like Divide and conquer and Backtracking,	U
Data Structures Practical	220C31	CO1: Implement data structures using C++	P
		CO2: Implement various types of linked lists and their applications	P
		CO3: Implement Tree Traversals	P
		CO4: Implement various algorithms in C++	P
Cost and Management Accounting-I	220E3C	CO1: Remember the various concepts of cost accounting and preparation of Cost sheet	R
		CO2: Analyse the various valuation methods of issue of materials.	A
		CO3: Examine the different methods of calculating labour cost.	P
		CO4: Remember and recall basics in Management Accounting and Financial Statements	R
		CO5: Apply the knowledge of preparation of various Accounting Ratios	P
Skill Enhancement Course - IV: (Entrepreneurial Based): Web Page Design Practical	220S31	CO1: Define the principle of Web page design	R
		CO2: Define the basics in web design.	R
		CO3: Visualize the basic concept of HTML	R
		CO4: Recognize the elements of HTML.	R
		CO5: Introduce basics concept of CSS.	U
Skill Enhancement Course - V: Desktop publishing Practical	220S32	CO1: Understand basics of computer and its related terminology.	U
		CO2: Write, Edit & Print documents using MS-WORD & EXCEL	U
		CO3:Understand various software used for Desktop Publishing and would be able to create and design documents with text and graphics like newspaper ad, wedding cards, visiting cards, greeting cards etc.	U
		CO4: Using PageMaker, CorelDraw & Photoshop. Understand Colour concept in Printing	P

II Year: IV Semester			
Core Course - VII: Java Programming	220C4A	CO1: Understand the basic Object-oriented concepts. Implement the basic constructs of Core Java	R
		CO2: Implement inheritance, packages, interfaces and exception handling of Core Java.	P
		CO3: Implement multi-threading and I/O Streams of Core Java	P
		CO4: Implement AWT and Event handling.	P
		CO5: Use Swing to create GUI	U
Core Course -VIII: Java Programming Practical	220C41	CO1: Code, debug and execute Java programs to solve the given problems	P
		CO2: Implement multi-threading and exception-handling	P
		CO3: Implement functionality using String and String Buffer classes	P
		CO4: Demonstrate Event Handling.	P
		CO5: Create applications using Swing and AWT	C
Cost and Management Accounting-II	220E4C	CO1: Remember the various aspects of reconciliation of Cost and Financial Accounts	R
		CO2: Apply the Knowledge in Machine hour rate and Contract Costing	P
		CO3: Analyse and assimilate concepts in Process Costing	A
		CO4: Evaluate techniques of Budgetary Control	A
		CO5: Formulate criterial for decision-making using technique of Marginal Costing	C
Skill Enhancement Course - VII: Emotional Intelligence	220S4A	CO: After completion of subjects students understand and application of Emotional Intelligence.	U
Skill Enhancement Course - VII: Technical Writing	220S4B	CO1: Students will learn to analyse communication-related problems and develop solutions through the composition of technical documents from a number of genres and within several settings (i.e., print, web, interactive software) and contexts (e.g., academic, corporate, non-profit, governmental).	A
		CO2: Students will explore rhetorical and professional strategies in order to discover how to clearly identify and address audiences and stakeholders, organizational contexts, and ethical concerns in the act of communication.	C
II Year: III Semester			
Course Name and Course Code		Course Outcome	Cognitive Level
Data Structures	SZ23A	CO1: Implement abstract data types for linear data structures.	P
		CO2: Apply the different linear and non linear data structures to problem solutions.	P
		CO3: Critically analyze the various sorting algorithms.	A

Java Programming	SZ23B	CO1: Knowledge of the structure and model of the Java programming language.	U
		CO2: Understand the basic principles of creating Java applications with GUI.	U
		CO3:Demonstrate use of string and String Buffers, Develop multithreaded programs in Java	R
Computer Organization	SZ23C	CO1: Describe the major components of a computer system and state their function and purpose	U
		CO2: Describe the microstructure of a processor	U
		CO3: Demonstrate the ability to program a microprocessor in assembly language.	U
		CO4: Classify and describe the operation DMA and peripheral Interfaces.	U
Data Structures Using Java Lab	SZ231	CO1: Write functions to implement linear and non-linear data structure operations.	R
		CO2: Suggest appropriate linear and non-linear data structure operations for solving a given problem.	E
		CO3: Analyze various sorting methods	A
Financial Accounting	SZ23A	After finishing this course students are well acquainted with Principles of accounting and well equipped in the system of keeping Financial Accounting Records	U
II Year: IV Semester			
Course Name and Course Code		Course Outcome	Cognitive Level
Open Source Technologies	SZ24B	CO: To recognize the benefits and features of Open Source Technology and to interpret, contrast and compare open source products among themselves	U
Computer Network	SZ24A	CO1: Analyse different network models	R
		CO 2:Analyse and compare a number of data link, network and transport layer	A
		CO3: Analysing key networking protocols and their hierarchical relationship in the conceptual model like TCP/IP and OSI	A
E-Commerce Technologies	SZ24C	CO1: Obtain a general understanding of basic business management concepts.	U
		CO2: Have complete knowledge about basic technical concepts relating to E-Commerce.	U
		CO3: Obtain thorough understanding about the security issues, threats and challenges of E-Commerce.	U
Open Source Technologies Lab	SZ241	CO1: Students must be able to use appropriate open source tools based on the nature of the problem	U

		CO2:Students should be able to code and compile different open source software	C
Cost And Management Accounting	SZ34A	CO1: To learn the theory and practices of cost accounting.	U
		CO2: To understands the concepts of management accounting.	U
Environmental Studies	ENV4B	CO1: Introduction to Environmental Studies	U
		CO2: Understanding of Ecosystem	U
		CO3: Study of Natural Resources Renewable and Non renewable Resources	U
		CO4: Understanding of Biodiversity and Conservation	U
		CO5: Understanding of Environmental Pollution	U
III Year: V Semester			
Course Name and Course Code		Course Outcome	Cognitive Level
Operating System	SE25B	CO1:Understand the structure and functions of Operating System	U
		CO2: Compare the performance of Scheduling Algorithms	R
		CO3: Analyze resource management techniques	A
		CO4: Identify the features of I/O and File handling methods	R
Relational Database Management System	SE25C	CO1: Describe basic concepts of database system	R
		CO2Design a Data model and Schemas in RDBMS	C
		CO3:Competent in use of SQL	A
		CO4:Analyze functional dependencies for designing robust Database	A
Operating System Lab	SE251	CO1: Understand the process management policies and scheduling process by CPU.	U
		CO2: Analyze the memory management and its allocation policies.	A
		CO3: To evaluate the requirement for process synchronization.	E
PL/SQL LAB	SE252	CO1: Implement the DDL , DML Commands and Constraints	P
		CO2: Create, Update and query on the database.	C
		CO3: Design and Implement simple project with Front End and Back End.	C
Software Engineering	SU25A	CO1: The students should be able to specify software requirements, design the software using tools	R
		CO2:To write test cases using different testing techniques	C
Multimedia And Its Applications	SU45B	CO: To understand the technologies behind multimedia applications	U
Value Education	VAE5Q	CO1: Understanding of culture and civilization	U

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		CO2: Understanding of Salient value for life	U
		CO3: Apply the knowledge of human rights	A
		CO4: Remember and recall basic of environmental and ecological balance	R
		CO5: Evaluate the social evils and corruptions	E
III Year: VI Semester			
Web Design And Development	SZ26A	CO1: Ability to Develop and publish Web pages using Hypertext Markup Language (HTML).	C
		CO2: Ability to optimize page styles and layout with Cascading Style Sheets (CSS).	A
		CO3: Ability to Understand, analyze and apply the role of languages to create a capstone	U
		CO4: Website using client-side web programming languages like HTML, DHTML, CSS, XML, JavaScript, and AJAX	U
Data Mining	SZ26B	CO1: To have knowledge in Data mining concepts	U
		CO2:To apply Data mining concepts in different fields	A
Mobile Application Development	SZ26C	CO1: To explain the basics of mobile application development.	U
		CO2: Develop Android application with User interface, networking and animation.	C
		CO3: Use simulator tools to test and publish the application.	R
Mobile Application Development Lab	SZ261	CO1: At the end of the course, the student should be able to: Use Emulator tools to design and develop applications	U
Software Project Management	SZ46A	CO1: Knowledge gained to train software project managers and other individuals involved in software project planning and tracking and oversight in the implementation of the software project management process	C
Mini Project	SZ26Q	CO1: The mini project is that the student has to understand the real time software development environment.	U
		CO2:Developing solution for real life problem	C

B.COM (ACCOUNTING & FINANCE)

Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: I Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Financial Accounting	144C1A	**CO 1:** Remember the concept of rectification of errors and Bank reconciliation statements	**U**
		CO 2: Apply the knowledge in preparing detailed accounts of sole trading concerns	**A**
		CO 3: Determine the royalty accounting treatment and claims from insurance companies in case of loss of stock.	**A**
Principles of Management	144C1B	**CO 1:** Demonstrate the importance of principles of management.	**A**
		CO 2: Paraphrase the importance of planning and decision making in an organization	**U**
		CO 3: Comprehend the concept of various authorizes and responsibilities of an organization.	**U**
Business Communication	144E1A	**CO 1:** Acquire the basic concept of business communication	**U**
		CO 2: Exposed to effective business letter	**U**
		CO 3: Prepare Secretarial Correspondence like agenda, minutes and various business reports.	**C**
Professional Ethics	144B1A	**CO 1:** Identify and analyze an ethical issue in the subject matter under investigation or in a relevant field	**U**
		CO 2: Identify the multiple ethical interests at stake in a real-world situation or practice	**U**
		CO 3: Articulate what makes a particular course of action ethically defensible	**A**
Ms Office for Commerce	144S1A	**CO 1:** Performing basic editing functions, formatting text, copy and moving objects and text	**U**
		CO 2: Leaning the formatting skills on paragraphs, tables, lists, and pages.	**U**
		CO 3: Integrating information from other Microsoft programs into a PowerPoint presentation.	**U**
Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: II Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Advanced Financial Accounting	144C2A	**CO 1:** To evaluate the Hire purchase accounts and Instalment systems	**E**
		CO 2: To prepare Branch accounts and Departmental Accounts	**A**
		CO 3: To know Settlement of accounts at the time of dissolution of a firm.	**U**

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Business Law	144C2B	**CO 1:** Explain the Objectives and significance of Mercantile law	**C**
		CO 2: Explain concepts on performance, breach and discharge of contract.	**C**
		CO 3: Explain the various provisions of Sale of Goods Act 1930	**C**
Working Capital Management	144E2B	**CO 1:** Construct the factors influencing working capital requirements and estimate it	**A**
		CO 2: Determine the importance of cash management and cash budgeting	**A**
		CO 3: Discuss about the Techniques of inventory management, EOQ, ABC, VED, and FSN Analysis	**U**
Retail Management	144S2B	**CO 1:** Clarify the concept and related terms in retailing.	**A**
		CO 2: Comprehend the ways retailers use marketing tools and techniques to interact with their customers.	**U**
		CO 3: Understand various formats of retail in the industry.	**U**
Acoounting Using Excel	144S2A	**CO 1:** Develop And Apply Fundamental Spread Sheet Skills.	**U**
		CO 2: Knowledge On Various Statistical Tests in Ms-Excel	**U**
		CO 3: Demonstrate Proficiency in Using Complex Spread Sheet Tools Such as Formulas and Functions.	**U**
Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
II Year: III Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Corporate Accounting	CZ23A	**CO 1:** The students will learn the accounting procedures of corporate undertaking and their financial statement preparations	**A**
		CO 2: Asses the accounting treatment of issue and redemption of preference shares and debentures	**E**
		CO 3: Compute the value of goodwill and shares under different methods and assess its applicability	**E**
Financial Reporting	CA23A	**CO 1:** Identify the basic reporting structure of accounting information, statements framework and Indian Accounting Standards	**C**
		CO 2: Prepare various financial statement, Ratio Analysis and cash Flow Analysis	**A**
		CO 3: Explain the recent trends on reporting and integrated reports	**E**
Banking Theory Law and Practice	CZ23C	**CO 1:** After completion of this subject students understand the growth of Indian Banking Systems and their Modern Day Development.	**U**
		CO 2: Analyse the evolution of Central Banking concept and prevalent Central Banking system in India and their roles and function	**A**

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		CO 3: Define the practical banking systems relationship of bankers and customers, crossing of cheques, endorsement etc.	**K**
Marketing	CZ23D	The Students will understand the basic concepts of Marketing, Market Segmentation, Marketing Mix and Recent trends in Marketing.	**U**
		Positive marketing experiences can enhance customer satisfaction	**A**
		Successful marketing strategies can help a company capture a larger share of the market.	**U**
Business Statistics	CZ33A	**CO 1:** Determine the various measures of central tendency	**A**
		CO 2: Calculate the correlation co-efficients.	**U**
		CO 3: Assess problems on time series analysis	**A**
Personality Enrichment	TSSEG	**CO 1:** Effective communication is a key outcome, covering verbal and non-verbal communication	**U**
		CO 2: Courses may focus on developing emotional intelligence, including skills in empathy, self-regulation, and managing interpersonal relationships.	**A**
		CO 3: Developing healthy relationships, conflict resolution skills, and networking.	**C**
Environmental Studies	ENV4B	**CO 1**: Explain the concepts of ecosystem and biodiversity.	**A**
		CO 2: Explain the environmental problems, policies and practices.	**A**
		CO 3: Explain environmental challenges such as climate change, biodiversity loss, pollution, deforestation, and resource depletion.	**A**
II Year: IV Semester			
Advanced Corporate Accounting	CZ24A	**CO 1:** The students will be able to understand the procedures of corporate restructuring and to prepare the various accounting statements	**A**
		CO 2: Understand the accounting treatment of amalgamation, Internal and external reconstruction	**U**
		CO 3: Preparation of liquidator's final statement of account	**A**
Corporate & Business Law	CA24A	CO 1: Explain the provisions of law governing the General contracts.	**A**
		CO 2: Outline the significant provisions of the companies Act, 2013.	**U**
		CO 3: Explore principles of corporate governance, including the roles and responsibilities of directors,	**U**
Working Capital Management	CA24B	**CO 1:** Construct the factors influencing working capital requirements and estimate it	**C**
		CO 2: Determine the importance of cash management and cash budgeting	**A**
		CO 3: Formulate the receivables management and credit policy evaluation	**E**

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Indirect Taxation	CZ24B	**CO 1:** Exposed to the overview of GST	**U**
		CO 2: Apply provisions of CGST and IGS	**A**
		CO 3: Discuss aspects of Customs Duty in India	**U**
Elements of Operations Research	CZ34A	**CO 1:** Understanding of the Concept of Operations Research and to Help the Students to Understand the Various Techniques of Solving Problems	**U**
		CO 2: Demonstrate the methods of graphical and algebraic procedure to obtain optimal solution for a linear programming problems.	**U**
		CO 3: Explain how to solve the assignment and transportation problmes using various techniques.	**A**
Computing Skills	TSSE1	**CO 1:** Understand the fundamenttals of operating systems & Networking.	**U**
		CO 2: Understand the basic features in Ms Word, Ms Excek & Ms Powerpoint.	**U**
		CO 3: Skills in creating and maintaining websites using HTML, CSS, and possibly JavaScript.	**C**
Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
III Year: V Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Elements of Cost Accountin	CZ25A	**CO 1:** At the end of the course students will understand the basic elements of costin	**U**
		CO 2: Analyse the various valuation methods of issue of materials.	**U**
		CO 3: Examine the different methods of calculating labour cost.	**A**
Practical Auditing	CZ25B	**CO 1:** On the completion of syllabus students will gain in sight of the Auditing practices prevailing in the present scenario	**U**
		CO 2: Students will understand the general approach of audit in EDP environment.	**U**
		CO 3: Auditors evaluate the effectiveness of internal controls, including policies, procedures, and processes, to ensure they are operating effectively.	**E**
Income tax law & Practice-I	CA25A	**CO 1:** The students will understand the concepts of Income tax, Types of filing and computation of tax from various head.	**U**
		CO 2: Compute income of an individual under the head salaries.	**U**
		CO 3: Evaluate income from a business carried on or from the practice of a Profession	**A**
Financial Management	CZ25D	**CO 1:** At the end of syllabus students will understand the basics of financial management, investing, financing and dividend decisions.	**U**
		CO 2: Apply the various capital structure theories.	**A**

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		CO 3: Apply capital budgeting techniques to evaluate investment proposals.	**E**
Portfolio Management	CA45A	**CO 1:** On completion of syllabus student will understand the basic concepts of Portfolio Management and the techniques of Portfolio Management	**U**
		CO 2: Awareness of recent developments in financial markets, investment strategies	**U**
		CO 3: Ability to determine the optimal mix of asset classes that align with an investor's goals and risk tolerance.	**A**
Value Education	VAE5Q	**CO 1:** Understand the basic concept of values in life.	**U**
		CO 2: Acquire the values oriented to education in life.	**A**
		CO 3: Development of critical thinking and decision-making skills based on ethical considerations	**C**
III Year: VI Semester			
Advanced Cost Accounting	CZ26A	**CO 1:** The students will understand the concepts of cost accounting, methods and its usage in decision making.	**U**
		CO 2: Explain costing principles to preparecostsheet and prepare reconciliation statement to find out the reasons for the difference in the net profit / net loss as per cost and financial records.	**A**
		CO 3: Classify and assess material cost, Labour cost and overhead to ensure effective utilization of materials and labour.	**U**
Management Accounting	CZ26B	**CO 1:** Understand the primary purpose of management accounting namely financial statement analysis and budgetary control	**U**
		CO 2: Develop and apply budget for planning and controlling purpose.	**C**
		CO 3: Interpret Fund flow and cash flow statement	**U**
Income Tax law & Practice-II	CA26A	**CO 1:** The students will understand the procedure for computing taxable income from different heads, clubbing of income, Setoff and carry forward of losses and Deductions applicable to an individual.	**U**
		CO 2: Explain the various methods of costing such as process costing and job costing to estimate the actal output costs for the future periods for similar jobs.	**U**
		CO 3: Interpret the accounting procedure of service sector costing.	**A**
Entrepreneurial	CA46A	**CO 1**: Understand on basic concept of entrepreneurship and business opportunities to familiars with knowledge about business and project reports for starting a new ventures on team based.	**U**
		CO 2: Understanding financial concepts such as budgeting, cash flow management, financial forecasting.	**U**

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Development		**CO 3:** On completion of syllabus student will understand on the basic concepts of entrepreneurship and business opportunities to familiars with knowledge about business and project reports for starting a new ventures on team based.	**U**
Capital Markets	CA46B	**CO 1:** Knowledge of various types of securities traded in capital markets,	**U**
		CO 2: The relationship between risk and return in different types of securities and investment strategies.	**A**
		CO 3: financial instruments and products available in capital markets	**C**

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B.Com Computer Application

Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: I Semester			
Course Name and Course Code		Course Outcome	Cognitive Level
Financial Accounting I	147C1A	CO 1: Remember the concept of rectification of errors and Bank reconciliation statements	R/U
		CO 2: Apply the knowledge in preparing detailed accounts of sole trading concerns	R/ U/A
		CO 3: Analyze the various methods of providing depreciation	R/ U/A
Principles of Management	147C1B	CO 1: Demonstrate the importance of principles of management.	R/U
		CO 2: Paraphrase the importance of planning and decision making in an organization.	R/U
		CO 3: Comprehend the concept of various authorizes and responsibilities of an organization.	R/U
Python Programming Theory	147E1B	CO 1: Implement Object Oriented Programming concepts in Python.	R/ U/A
		CO 2: Build Web Services and introduction to Network and Database Programming in Python	R/ U/A
		CO 3: Understand Lists, Dictionaries and Regular expressions in Python.	R/ U/A
Python Programming PRACTICAL	147E12	CO 1: Apply the concept of Control Structures to solve any given problem	U/A/C
		CO 2: Apply the concept of single and multi-dimensional arrays to solve problems related to searching, sorting and matrix operations	U/A/C
		CO 3: Apply the concept of Strings for writing programs related to character array.	U/A/C
SEC–I MS Office for Commerce	147S1A	CO 1: Format a Word Document.	R/U
		CO 2: Apply illustrations, tables, header and footer etc.	U/A/C
		CO 3: Type texts with columns, use page breaks and accomplish efficient paragraph alignment.	U/A/C
FC-Professional Ethics	147B1A	CO 1: Understand significance of finance planning	R/U
		CO 2: Aware on ethical issues in Human Resource Management	R/U
		CO 3: Know the ethical practices to be followed on marketing of goods	R/U
Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: II Semester			
Course Name and Course Code		Course Outcome	Cognitive Level
Financial Accounting II	147C2A	CO 1: To evaluate the Hire purchase accounts and Instalment systems	R/ U/A
		CO 2: To prepare Branch accounts and Departmental Accounts	R/ U/A
		CO 3: To understand the accounting treatment for admission and retirement in partnership	R/ U/A
Business Law	147C2B	CO 1: Explain the Objectives and significance of Mercantile law	R/U
		CO 2: Understand the clauses and exceptions of Indian	R/U

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		Contract Act.	
		CO 3: Explain concepts on performance, breach and discharge of contract	R/U
Programming in C++ Theory	147E2B	CO 1: Explain the various basic concepts of Object-orientation	R/U
		CO 2: Write programs to implement static binding	R/U
		CO 3: Write programs to implement inheritance and dynamic binding	R/U
Programming in C++ PRACTICAL	147E22	CO 1: Design and create classes. Implement Stream I/O as appropriate	U/A/C
		CO 2: Design appropriate data members and member functions	U/A/C
		CO 3: Implement functions, friend functions, static members, constructors and compile-time polymorphism	U/A/C
SEC–II Accounting Using Excel	147S2A	CO 1: - Calculates the interest paid during a specific period of an investment	U/A/C
		CO 2: Converts a dollar price, expressed as a decimal number, into a dollar price, expressed as a fraction.	U/A/C
		CO 3: Internal rate of return where positive and negative cash flows are financed at different rates	U/A/C
SEC–I Retail Marketing	147S2B	CO 1: Know the fundamental concepts of retail businesses.	R/U
		CO 2: Understand the retail business strategy.	R/U
		CO 3: Plan merchandising and pricing.	R/U
II Year: III Semester			
Course Name and Course Code		Course Outcome	Cognitive Level
Corporate Accounting I	CZ23A	CO 1: Prepare and account for various entries to be passed in case of issue, forfeitureand reissue of shares and compute the liability of underwrites	R/U
		CO 2: Asses the accounting treatment of issue and redemption of preference shares anddebentures	U/A/C
		CO 3: Construct Financial Statements applying relevant accounting treatments	U/A/C
Business Law	CZ23B	CO 1: Explain the Objectives and significance of Mercantile law	R/U
		CO 2: Understand the clauses and exceptions of Indian Contract Act.	R/U
		CO 3: Outline the contract of indemnity and guarantee	R/U
Computerized Accounting(Practical)	CP232	CO 1: Understand the various features of Tally	U/A/C
		CO 2: Introduce the system of Tally accounting in a business concern.	U/A/C
		CO 3: Apply the various vouchers in Tally.	U/A/C
Object Oriented Programming using C++ Theory	CP23A	CO 1: Understand the concept of OOPS with C++ and apply the learning for lifelong	R/U
		CO 2: Familiarize on the classes, objects, pointers	R/U
		CO 3: Critically analyze the need and develop the program in OOPS with C++ required for the situation	R/U
Object Oriented Programming using C++ Practical	CP233	CO 1: Be familiar with the application of the Unified Modeling Language (UML) towards analysis and design	U/A/C
		CO 2: Write the simple C++ programs using the variables, operators, control structures, functions and I/O objects cin and cout	U/A/C

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		CO 3: Developing the program based on the need	U/A/C
Business Statistics	CZ33A	CO 1: Learn the basics of ratio, proportion, indices and logarithm	R/U
		CO 2: Familiarize with calculations of simple and compound interest and arithmetic, geometric and harmonic progressions.	R/ U/A
		CO 3: Determine the various measures of central tendency	R/ U/A
Personality Enrichment Level -1	TSSEG	CO 1: Lead an honorable life with a great deal of self-awareness, self-esteem and self-respect.	R/U
		CO 2: Shine as an exemplary model with impeccable character traits.	A
		CO 3: Set a reasonably challenging goal exerting enough labour and effectively managing time.	A
		II Year: IV Semester	
Advanced Corporate Accounting	CZ24A	CO 1: Understand the accounting treatment of amalgamation, Internal and externalreconstruction	R/U
		CO 2: Construct Profit and Loss account and Balance Sheet of Banking Companies in accordance in the prescribed format.	R/ U/A
		CO 3: Synthesize and prepare final accounts of Insurance companies in theprescribed format	R/ U/A
Principles of management	CP24A	CO 1: On the completion of syllabus students will understand the basic concepts and significance of management in business	R/U
		CO 2: Paraphrase the importance of planning and decision making in an organization.	R/U
		CO 3: Comprehend the concept of various authorizes and responsibilities of an organization.	R/U
E-Commerce	CP24B	CO 1: Understand the basic concepts and technologies used in the field of management information systems	R/U
		CO 2:Enable the student to understand basics of E-Commerce	R/U
		CO 3: Gain a practical orientation to E-Commerce and E- Business management	R/U
Programming in Java Theory	CP24A	CO 1: Knowledge of the structure and model of the Java Programming language	R/U
		CO 2: : Understand the basic principles of creating Java Applications with GUI	R/U
		CO 3: Demonstrate use of String and String Buffers, Develop multithreaded Programmingin Java	R/U
Programming in Java Practical	CP242	CO 1: Implement the OOPS paradigm.	R/ U/A
		CO 2: Construct the packages in Java	R/ U/A
		CO 3: Develop reusability and execute the different tasks through interface	R/ U/A
Elements of operation Research	CZ34A	CO 1: Remember and recall the various concepts of cost accounting	R/U
		CO 2: Demonstrate the preparation and reconciliation of cost sheet	R/ U/A
		CO 3: Analyze the various valuation methods of issue of materials	R/ U/A
		CO 1: To illustrate the use of MS-Word and different operations on a document.	R/ U/A

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Computing Skill	TSSE1	CO 2: To demonstrate the need and use of Power point Presentations designing with various effects and controls.	R/ U/A
		CO 3: To analyze data in Spreadsheets using different tools provided for data handling.	R/ U/A
Environmental Studies	ENV4B	CO 1: Master core concepts and methods from ecological and physical sciences and their application in environmental problem solving.	R/U
		CO 2: Master core concepts and methods from economic, political, and social analysis as they pertain to the design and evaluation of environmental policies and institutions	R/U
		CO 3: Appreciate the ethical, cross-cultural, and historical context of environmental issues and the links between human and natural systems.	R/U
III Year: V Semester			
Course Name and Course Code		Course Outcome	Cognitive Level
Elements of Cost Accounting	CZ25A	CO 1: At the end of the course students will understand the basic elements of costing	R/U
		CO 2: Compute the Material cost in the production	R/ U/A
		CO 3: Compute the cost of the production process and the losses that arise in normal and abnormal conditions.	R/ U/A
Practical Auditing	CZ25B	CO 1: On the completion of syllabus students will gain in sight of the Auditing practices prevailing in the present scenario	R/U
		CO 2: Students will understand the general approach of audit in EDP environment	R/U
		CO 3: Learn vouching, valuation of assets and liabilities and their verification.	R/U
Financial Management	CZ25D	CO 1: At the end of syllabus students will understand the basics of financial management, investing, financing and dividend decisions	R/ U/A
		CO 2: Understanding significance of finance planning	R/ U/A
		CO 3: Solve dividend and working capital problems	R/ U/A
Statistical Package for Social Science	CP251	CO 1: Understand the basics of data analytics using SPSS	R/ U/A
		CO 2: Apply the concepts of statistics in SPSS, data analysis software for business modeling.	R/ U/A
		CO 3: Understand the process of using statistical tools for validating findings interpreting statistical results.	R/ U/A
Research Methodology	CP45B	CO 1: Introduce the concept at the heart of every research project – the research problem- and to discuss what a researchable problem is.	R/U
		CO 2: Identify the research problem and design the blue print to capture data and analyse the same.	R/U
		CO 3: Select and define appropriate research problem and its parameters.	R/U
Value Education	VAE5Q	CO 1: A value system is a set of consistent values and measures. Knowledge of the values are inculcated through education	R/U
		CO 2: values reflect a person's sense of right and wrong or what "ought" to be. There are representative values like, "Equal rights for all", "Excellence deserves admiration"	R/U

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		CO 3: Values tend to influence attitudes and behavior and help to solve common human problems.	R/U
III Year: VI Semester			
Financial Services	CP26A	CO 1: On the completion of modules, the students will understand the various financialservices.	R/U
		CO 2: Enable the students to understand the world of financial services.	R/U
		CO 3: Facilitate the understanding of the various Financial Services	R/U
Human Resource management	CP26B	CO 1: Understanding of basic concepts, functions and functioning of Human resource department of the organizations	R/U
		CO 2: Familiarize the concept of HR planning, Selection, Recruitment, job analysis and its interrelations.	R/U
		CO 3: Recognize the concepts and practical implications of performance management, Training methods and career planning.	R/U
Management Accounting	CZ26B	CO 1: Understand the primary purpose of management accounting namely financial statement analysis and budgetary control	R/ U/A
		CO 2: Develop and apply budget for planning and controlling purpose.	R/ U/A
		CO 3: Learn Human Resources Planning related to recruitment and selection procedures.	R/ U/A
Web Technology Theory	CP26C	CO 1: Ability to Develop and publish Web pages using Hypertext Markup Language(HTML).	R/U
		CO 2: Website using client-side web programming languages like HTML and JavaScript	R/U
		CO 3: Ability to understand the concepts of web technology in ASP.NET.	R/U
Web Technology Practical	CP262	CO 1: Design static web page using HTML	R/ U/A
		CO 2: Develop dynamic web page using Java Script	R/ U/A
		CO 3: Develop dynamic websites using HTML and Cascading Style Sheets	R/ U/A
Project	CP46Q	CO 1: Develop the right sense of research outlook pertaining to the topic of the project chosen and be knowledgeable about the methodology to be applied.	A
		CO 2: Acquire the caliber to collect sufficient data, critically analyze the subject matter, organize coherently and be completely original in accomplishing the project	A
		CO 3: Show improvement in communication competency and excel in the art of delivery	A

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B.COM(BM)

Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: I Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Financial Accounting I	145CIA	CO 1:Remember the concept of rectification of errors and Bank reconciliation statements	**R**
		CO 2: Apply the knowledge in preparing detailed accounts of sole trading concerns	**P**
		CO 3: Analyse the various methods of providing depreciation	**A**
		CO 4: Evaluate the methods of calculation of profit	**E**
		CO 5: Determine the royalty accounting treatment and claims from insurance companies in case of loss of stock.	R
Principles of Management	145C1B	CO 1: Demonstrate the importance of principles of management.	**R**
		CO 2: Paraphrase the importance of planning and decision making in an organization.	**P**
		CO 3: Comprehend the concept of various authorizes and responsibilities of an organization	**U**
		CO4 : Enumerate the various methods of Performance appraisal	**U**
		CO5: Demonstrate the notion of directing, co-coordination and control in the management.	**U**
Business Communication	145E1A	CO1: Acquire the basic concept of business communication.	**U**
		CO2 :Exposed to effective business letter	**U**
		CO3: Paraphrase the concept of various correspondences.	**U**
		CO4 : Prepare Secretarial Correspondence like agenda, minutes and various business reports.	**C**
		CO5 : Acquire the skill of preparing an effective resume	**U**
Foundation Course: Professional Ethics	145B1A	CO 1: Concept and Theories of Business Ethics	**U**
		CO2: Understanding of Principles of Professional Ethics	**U**
		CO3: learn Ethical Dilemmas, Sources and their Resolutions:	**U**
		CO4: Understanding of Ethical Decision-making in Business	**U**

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		CO5:Understanding of Human Values for Indian Managers	**U**
Skill Enhancement: MS-Office for Commerce	145S1A	CO1:Understood the MS Word & Commonly used features	**U**
		CO 2:learned How to use Insert Tab & Mail Merger	**U**
		CO 3: Understanding the MS Powerpoint	**U**
		CO4: Learn MS Excel &Using Formulas	**U**
		CO5: Understanding Working on multiple Worksheets & Working with huge Datasets	**U**
Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: II Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Financial Accounting II	145C2A	CO1:To evaluate the Hire purchase accounts and Installment systems	**E**
		CO2:To prepare Branch accounts and Departmental Accounts	**C**
		CO3:To understand the accounting treatment for admission and retirement in partnership	**U**
		CO4: To know Settlement of accounts at the time of dissolution of a firm.	**U**
		CO5 : To elaborate the role of IFRS	**R**
Business Law	145C2B	CO1:Explain the Objectives and significance of Mercantile law	**U**
		CO2: Understand the clauses and exceptions of Indian Contract Act.	**U**
		CO3: Explain concepts on performance, breach and discharge of contract.	**U**
		CO4 :Outline the contract of indemnity and guarantee	**U**
		CO5 :Explain the various provisions of Sale of Goods Act 1930	**U**
Banking Management	145E2A	CO1 Describe the key functions of banking and identify the role of banking in economic development	**U**
		CO2 Identify the legal formalities relating to the lending of loans	**U**

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		CO3 Classify the Non-performing asset and its management	**U**
		CO4 Analyse the investment avenues of bank fund	**A**
		CO5 Outline the recent trends in technology based banking system	**U**
Accounting Using Excel	145S2A	CO1:Undertanding the ACCRINT, ACCRINTM, AMORDEGRC, COUPDAYBS	**U**
		CO 2: Using Financial Functions, DB function, DDB function, DOLLARDE	**U**
		CO 3: Using Financial Functions, INTRATE function, PMT function, MDURATION function	**U**
		CO4: understanding of PDURATION function, PRICEDISC function, PRICEMAT function	**U**
		CO5: Using SLN function, SYD function, TBILLEQ function, TBILLPRICE function	**P**
Retail Management	145S2B	CO 1: Retail & Entrepreneurship - Retail Formats	**U**
		CO 2: Basic Retail Marketing Concepts and fundamentals	**U**
		CO 3: Retail Store Operations	**U**
		CO4: Customer Value Management	**U**
		CO5:Latest Trend in Retail Business	**U**
II Year: III Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Corporate Accounting	CZ23A	CO1: Prepare and account for various entries to be passed in case of issue, forfeiture and reissue of shares and compute the liability of underwrites	**P**
		CO2: Asses the accounting treatment of issue and redemption of preference shares and Debentures	**A**
		CO3: Construct Financial Statements applying relevant accounting treatments	**C**
		CO4: Compute the value of goodwill and shares under different methods and assess its applicability	**R**

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		CO5: Integrate theoretical knowledge on all accounting in par with IFRS and IND AS	**U**
Business Law	CZ23B	CO1:Explain the Objectives and significance of Mercantile law	**U**
		CO2: Understand the clauses and exceptions of Indian Contract Act.	**U**
		CO3: Explain concepts on performance, breach and discharge of contract.	**U**
		CO4 :Outline the contract of indemnity and guarantee	**U**
		CO5 :Explain the various provisions of Sale of Goods Act 1930	**U**
Banking Theory law and Practice	CZ23C	CO1:Explain the Objectives and significance of Mercantile law	**U**
		CO2: Understand the clauses and exceptions of Indian Contract Act.	**U**
		CO3: Explain concepts on performance, breach and discharge of contract.	**U**
		CO4 :Outline the contract of indemnity and guarantee	**U**
		CO5 :Explain the various provisions of Sale of Goods Act 1930	**U**
Marketing of Banking Services	CB23D	CO1: Examine and illustrate various concepts and principles in marketing	**U**
		CO2: Describe effective understanding of relevant areas of marketing management	**U**
		CO3: Outline the importance of understanding consumer behaviour	**U**
		CO4: Explain the importance of market segmentation	**U**
		CO5: Describe the importance of data in conducting marketing research and the need for	**U**
Business Statistics	CZ33A	CO1: Learn the basics of ratio, proportion, indices and logarithm	**U**
		CO2: Familiarise with calculations of simple and compound interest and arithmetic, geometric and harmonic progressions.	**R**
		CO3: Determine the various measures of central tendency	**U**

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		CO4: Calculate the correlation and regression co-efficient.	**U**
		CO5: Assess problems on time series analysis	**A**
Personality Enrichment Level - I	TSSEG	CO1: Study of Self Disclosure	**U**
		CO2:Understanding of Anger, Stress and Managing Feelings	**U**
		CO3: Understanding of Interpersonal Effectiveness	**U**
		CO4: Memory powervisualizing, concentrating, relating, repeating, reviewing memory hindrances	**R**
		CO5:Understanding of Goal Setting and Managing Time	**U**
Environment Studies	ENV4A	CO1: Introduction to Environmental Studies	**U**
		CO2: Understanding of Ecosystem	**U**
		CO3: Study of Natural Resources Renewable and Non renewable Resources	**U**
		CO4: Understanding of Biodiversity and Conservation	**U**
		CO5: Understanding of Environmental Pollution	**U**
II Year: IV Semester			
Advanced Corporate Accounting	CZ24A	CO1: Understand the accounting treatment of amalgamation, Internal and external reconstruction	**U**
		CO2: Construct Profit and Loss account and Balance Sheet of Banking Companies in accordance in the prescribed format.	**C**
		CO3: Synthesize and prepare final accounts of Insurance companies in the prescribed	**C**
		CO4: Give the consolidated accounts of holding companies	**U**
		CO5: Preparation of liquidator's final statement of account	**C**
Financial Services	CZ24C	CO1: Summarise the role and function of the financial system	**R**
		CO2: Gain practical knowledge on key areas relating to management of financial products and services	**P**

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		CO3: Familiarize students about Venture Capital, Leasing	**R**
		CO4: Infer the importance of the Credit Rating system.	**U**
		CO5 Understand various types of Mutual funds schemes and the roles of NSDL and CSDL.	**U**
Indirect Taxation	CZ24D	CO1: Acquaintance with Indirect tax laws	**R**
		CO2: Exposed to the overview of GST.	**U**
		CO3: Apply provisions of CGST and IGST	**U**
		CO4: Summarise procedures of GST	**U**
		CO5: Discuss aspects of Customs Duty in India	**U**
Customer Relationship Management in Banks	CB24B	CO1: Outline the importance of customer database information for profitable segment	**U**
		CO2: Explain the different models in CRM process	**U**
		CO3: Summarise CRM planning and its implementation	**R**
		CO4: List the various types of service quality and quality measurement scales	**U**
		CO5: Explain the latest technological revolution in CRM	**U**
International Economics	CZ34B	CO1: Define the concept of international trade and its theories.	**U**
		CO2: Evaluate the system of balance of trade and payments and its economic effects.	**U**
		CO3: Analyse the foreign exchange rates and its theories.	**A**
		CO4: Familiar with the international monetary systems and the structure of IMF.	**U**
		CO5: Practical knowledge on the workings of international financial institutions.	**P**
Computing Skill	TSSE1	CO1: Overview of introduction of computer	**U**
		CO2: Understanding of Word processing	**U**

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		CO3:Study of importance of file management	**U**
		CO4: Understanding of Spreadsheets	**U**
		CO5: Study of Networking process	**U**
Environmental Studies	ENV4B	CO1: Introduction to Environmental Studies	**U**
		CO2: Understanding of Ecosystem	**U**
		CO3: Study of Natural Resources Renewable and Non renewable Resources	**U**
		CO4: Understanding of Biodiversity and Conservation	**U**
		CO5: Understanding of Environmental Pollution	**U**
III Year: V Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Practical Auditing	CB25B	CO1: Define auditing and its process.	**U**
		CO2: Compare and contrast essence of internal check and internal control.	**R**
		CO3: Identify the role of auditors in companies.	**R**
		CO4: understand the various Types of Audit and Role of National Financial Reporting Authority (NFRA)	**U**
		CO5: understand the general approach of audit in EDP environment	**U**
Cost Accounting	CB25E	CO1: Remember and recall the various concepts of cost accounting	**R**
		CO2: Demonstrate the preparation and reconciliation of cost sheet.	**P**
		CO3: Analyse the various valuation methods of issue of materials.	**A**
		CO4: Examine the different methods of calculating labour cost.	**E**
		CO5: Critically evaluate the apportionment of Overheads	**E**
Income Tax Law and	CZ45A	CO1: Demonstrate the understanding of the basic concepts and definitions under the Income Tax Act.	**P**
		CO2: Assess the residential status of an assessed & the incidence of	**A**

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Practice- I		tax.	
		CO3: Compute income of an individual under the head salaries.	**P**
		CO4: Ability to compute income from house property.	**U**
		CO5: Evaluate income from a business carried on or from the practice of a Profession.	**E**
International Banking	CB25A	CO1: Compare and contrast International banking and domestic.	**U**
		CO2: Explain techniques that can be used to hedge risk in the foreign exchange market	**U**
		CO3: Discuss the role that international financial institutions play in the global arena.	**U**
		CO4: Examine the International Sources of Finance for the Firm	**U**
		CO5: Describe the various currency arrangements a country may adopt	**U**
Financial Management	CZ25D	CO1: Recall the concepts in financial management.	**U**
		CO2: Apply the various capital structure theories.	**P**
		CO3: Apply capital budgeting techniques to evaluate investment proposals.	**P**
		CO4: Determine dividend pay-outs.	**U**
		CO5: Estimate the working capital of an organization	**U**
Value Education	VAE5Q	CO1: Understanding of culture and civilization	**U**
		CO2: Understanding of Salient value for life	**U**
		CO3: Apply the knowledge of human rights	**P**
		CO4: Remember and recall basic of environmental and ecological balance	**U**
		CO5: Evaluate the social evils and corruptions	**E**
III Year: VI Semester			
		CO1: Explain the banking sector reforms based on the recommendations of various committee.	**U**

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Technology in Banking	CB26A	CO2 Demonstrate online banking techniques and examine the pros and cons of digital banking	**U**
		CO3 Examine Banking Operations in real life scenario	**E**
		CO4 Develop insights into the impact of technology on different stakeholders of the bank	**C**
		CO5 Evaluate the challenges in the digital era in the context of security and privacy issues in e-commerce	**E**
Management Accounting	CZ26B	CO1: Remember and recall basics in management accounting	**R**
		CO2: Apply the knowledge of preparation of Financial Statements	**P**
		CO3: Analyse the concepts relating to fund flow and cash flow	**A**
		CO4: Evaluate techniques of budgetary control	**E**
		CO5: Formulate criteria for decision making using principles of marginal costing.	**C**
Income tax Law and Practice – II	CZ46A	CO1: Remember and recall provisions on capital gains	**U**
		CO2: Apply the knowledge about income from other sources	**P**
		CO3: Analyse the set off and carry forward of losses provisions	**A**
		CO4: Learn about assessment of individuals	**U**
		CO5: Apply procedures learnt about assessment procedures.	**P**
Entrepreneurial Development	CZ26C	CO1: Identify the various traits of an entrepreneur	**U**
		CO2: Turn ideas into business opportunities	**U**
		CO3: Do feasibility study before starting a project	**U**
		CO4: Identify the sources of funds for funding a project	**U**
		CO5: Develop an understanding about the Government schemes available for women	**C**
		CO1: Analyse and evaluate the investment purposes, the efficiency of key stages of the investment process	**A**

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Portfolio Management	CZ46C	CO2: Calculate the risk and expected return of various financial instruments and investment portfolios	**P**
		CO3: Implement in practice the quantitative methods of investment decision making; apply the principles of portfolio theory in the process of investment portfolio management	**P**
		CO4: Explain the various mutual fund scheme and systematic investment plans under SEBI guidelines	**U**
		CO5: Elaborate the concepts of portfolio management, selection, and construction	**U**

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B Com Corporate Secretaryship

Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Financial Accounting I	118C1A	**CO 1:** To enable the students to know the principles of Accounting in General.	**U**
		CO 2: To understand the System of Keeping Financial Accounting Records	**P**
		CO 3: To provide students with information for predicting, comparing and evaluating the earning power of the enterprise.	**E**
Principles of Management	118C1B	**CO 1:** To prepare the students to know about the significance of the management principles in business.	**U**
		CO 2: To make the students understand the basic concepts of management	**R**
		CO 3: To obtain knowledge about, authority, delegation and decentralization process. They also learned about responsibility of management towards recruitment process, selection and training methods.	**E**
Business Communication	118E1A	**CO 1:** To facilitate the students to understand the concept of communication	**U**
		CO 2: To know the basic techniques of the modern forms of communication	**R**
		CO 3: Have the ability to overcome the barriers of business communication	**E**
Logistics Management	118S1B	**CO 1:** Understand the basic concepts of Logistics	**U**
		CO 2: Identify the opportunities in the field of logistics	**R**
		CO 3: Exploring the value chain functions and supply chain relationships	**E**
FC- Fundamental Concepts of Accounting & Commerce	118B1A	**CO 1:** Instill confidence among students	**U**
		CO 2: Create interest for the subject	**R**
		CO 3: Overview of Accounting concepts and overcome the barriers of subjects.	**E**
Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: II Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Financial Accounting II	118C2A	**CO 1:** To make the students know the various methods of recording various accounting transactions in different forms of business	**U**
		CO 2: To get a comprehensive idea about the working of partnership firms	**P**
		CO 3: To help the students in making sound business decisions, preparation of Budgets and logical business forecasting and future expansion of business.	**E**

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Business Law	118C2B	**CO 1:** To highlight the Provisions of Law governing the General Contract and Special Contract.	**U**
		CO 2: To enable the students to understand the Legal Remedies available in the Law to the business and other People.	**R**
		CO 3: To empower the students to anticipate the legal needs of companies and comprehend how laws and regulations can impact businesses in both positive and negative ways	**E**
International Trade	118E2C	**CO 1**: Distinguish between the concept of internal and international trade.	**U**
		CO 2: Define the various theories of international trade	**R**
		CO 3: Examine the balance of trade and exchange rates	**E**
Every day banking	118S2A	**CO 1:** To facilitate the understanding of the origin and the growth of the Indian Banking System	**U**
		CO 2: To understand the Modern Day Developments in Indian Banking Sector.	**R**
		CO 3: To provide the student an overview of banking activities, the central role of banks in the monetary policy transmission mechanism, and the nature of economic frictions that make banks special.	**E**
Essential skills for personal Development	118S2D	**CO 1:** Define interpersonal Skills and list the qualities for interpersonal effectiveness.	**U**
		CO 2: Learning about personality can help students manage stress. They discover coping mechanisms based on their individual traits.	**R**
		CO 3: Understanding leadership styles and traits prepares students for leadership roles. They learn how to motivate and influence others effectively.	**E**

II Year: III Semester

Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Core Paper V - Corporate Accounting - I	AY23A	**CO 1:** To enable the students to develop awareness about Corporate Accounting in conformity with the provisions of Companies Act and Accounting as per Indian Accounting Standards.	**U**
		CO 2: To make aware the students about the conceptual aspect of corporate accounting	**P**
		CO 3: : To enable the students to develop skills for Computerized Accounting	**E**
Company Law and Secretarial practice	AY23B	**CO 1:** To impart students with the knowledge of fundamentals of Company Law.	**U**
		CO 2: To update the knowledge of provisions of the Companies Act of 2013 and to apprise the students of new concepts involving in company law regime.	**R**
		CO 3: To acquaint the students with the duties and responsibilities of Key Managerial Personnel and to impart students the provisions and procedures under company law	**E**

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Business Statistics	AY33A	**CO 1:** To facilitate the understanding of the relevance and need of the statistics in the current scenario	**U**
		CO 2: To customize the importance of business statistics for the commerce students	**P**
		CO 3: To demonstrate different measures of central tendency, variations and identifies the significance of coefficient of variation and to identify the various types of correlation and its significance and to estimate the value of unknown variable using regression.	**E**
Personality Enrichment	TSSEG	**CO 1:** To Understanding your shyness analyze the social situation of shyness and the causes of shyness.	**U**
		CO 2: To Learning how to breathe deeply help one to relax systematically when one is anxious by controlling one's breathing.	**P**
		CO 3: To apply Systematic Muscle Relaxation train one in the procedure for systematic muscle relaxation.	**E**
Environmental Studies	ENV4A	**CO 1:** To recognize the physical, chemical, and biological components of the earth's systems and show how they function.	**U**
		CO 2: To apply lessons from various courses through field experiences.	**R**
		CO 3: To interact with the environment on both a personal and a social level.	**E**
II Year: IV Semester			
Advanced Corporate Accounting	AY24A	**CO 1:** To help the students in accounting for larger organizations rather than smaller-scale sole traders or partnerships where the requirements and demands for filing accounts tend to be less rigorous	**U**
		CO 2: To empower the students to do accounting for specific events like amalgamation, absorption, preparation of consolidated balance sheets	**P**
		CO 3: To enable the students to prepare final accounts of Insurance and bank accounts and to understand the liquidation procedures and final statements of accounts	**E**
Indirect Taxation@	AY24B	**CO 1:** To make the students to gain knowledge of the principles of the indirect tax	**U**
		CO 2: To highlight the students about the customs duty, excise duty, GST etc	**R**
		CO 3: Compute the assessable value of transactions related to goods and services for levy and determination of duty liability	**E**
Securities Laws & Market Operation	AY34A	**CO 1:** To provide the students about the concept of Securities laws and market operations which includes primary and secondary market	**U**
		CO 2: Ability to analyze share prices, settlement procedure, Demat trading and role of depositories	**R**
		CO 3: To understand the various components of primary and secondary market for equity in India	**E**

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Computing Skill	TSSE1	**CO 1:** To Understand the basics of computer systems and its components.	**U**
		CO 2: To Understand and apply the basic concepts of a word processing package.	**P**
		CO 3: To Understand and create a presentation using PowerPoint tool.	**E**
Environmental Studies	ENV4A	**CO 1:** To recognize the physical, chemical, and biological components of the earth's systems and show how they function.	**U**
		CO 2: To apply lessons from various courses through field experiences.	**R**
		CO 3: To interact with the environment on both a personal and a social level.	**E**
III Year: V Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Cost Accounting	AY25A	**CO 1:** To acquaint the students with the significance of Cost Accounting in Global Competitive environment.	**U**
		CO 2: To enable students to learn application of different methods of costing in Manufacturing and Service Industry.	**P**
		CO 3: To enlighten the students about how to produce better quality products at minimum possible cost.	**E**
Corporate Governance and Ethics	AY25B	**CO 1:** Student learner should be able to contrast the underlying theory of Ethics that is governing the organization under study	**U**
		CO 2: Student learner should be able to design a Code of Ethics for professional behavior within an organization.	**R**
		CO 3: Student learner should be able to identify the possible ethical concerns which may be faced by an organization in given situation.	**E**
Business Laws	AY25C	**CO 1:** To highlight the Provisions of Law governing the General Contract and Special Contract.	**U**
		CO 2: To enable the students to understand the Legal Remedies available in the Law to the business and other People	**R**
		CO 3: To empower the students to anticipate the legal needs of companies and comprehend how laws and regulations can impact businesses in both positive and negative ways	**E**
Income Tax Law & Practice – I	AY25D	**CO 1:** To understand the basic concepts and to acquire knowledge about Computation of Income, Submission of Income Tax Return, Advance Tax, and Tax deducted at Source, Tax Collection Authorities under the Income Tax Act,	**U**
		CO 2: Upon the successful completion of the course students will be able to calculate tax for individual for different sources of income.	**P**
		CO 3: To compute taxable incomes for residents and non-residents	**E**
		CO 1: To create awareness about market and marketing.	**U**
		CO 2: To establish link between commerce/Business and marketing.	**R**

Marketing	AY45A	**CO 3:** To understand the basic concept of marketing. and understand marketing philosophy and generating ideas for marketing research	**E**
Value Education		**CO 1:** To encourage a sense of responsibility, positivity and eventually, more mindful behavior that springs from a sense of self-awareness.	**U**
		CO 2: To Instill humane values: Kindness, empathy, collaboration, compassion are some of the key values that are instilled among young learners when exposed to value education.	**R**
		CO 3: To exercise judgment based on moral and social ethics.	**E**
III Year: VI Semester			
Industrial Laws	AY26A	**CO 1:** To analyze various acts related to industrial law such as factories Act 1948, Wages Act 1936	**U**
		CO 2: To Understanding the Growth and functions of Trade Unions	**R**
		CO 3: Identify the industrial Disputes based on the Act and find solutions and plan strategically	**E**
Management Accounting	AY26B	**CO 1:** The objective of the course is to enable students to acquire sound Knowledge of concepts, methods and techniques of management accounting.	**U**
		CO 2: To make the students develop competence with their usage in managerial decision making and control	**P**
		CO 3: To formulate criteria for decision making using principles of marginal costing.	**E**
Entrepreneurial Development	AY26C	**CO 1:** To make the students to understand the concept of entrepreneurship and their work in life	**U**
		CO 2: To enable students to know the effectiveness of the Manpower in Entrepreneurship.	**R**
		CO 3: To help the students to acquire skills and necessary capabilities to play the role of an entrepreneur effectively.	**E**
Income Tax Law & Practice – II	AY26D	**CO 1:** To help the students to understand the relevance and significance of tax.	**U**
		CO 2: To facilitate the students in understanding the various provisions of I.T Act	**P**
		CO 3: Students will be able to set off and carry forward the losses of various sources and the distinguish between deductible and non-deductible expense	**E**
Institutional Training	AY461	**CO 1: To** acquire institutional experience the nature of school as workplace and their associated values, routines and cultures.	**U**
		CO 2: To demonstrate professional skills that pertain directly to the institutional experience and to Analyses the various department activities and their responsibilities	**A**
		CO 3: To understand the organization structure, layout and to describe the organization's financial statement analysis and Prepare the report based on the training experience	**E**
		CO 1: Environment Development Students are educated to aware of environment for creating eco-friendly society.	**U**

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Extension Activities	CES6Q	**CO 2:** Water Conservation Social Development Students are motivated for the community service and they are made aware of their responsibility towards social issues	**A**
		CO 3: Imparting practical life and cultivating humanity and helping tendency among young minds for developing good human being in the society	**E**

B.COM(ISM)

Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: I Semester			
Course Name and Course Code		Course Outcome	Cognitive Level
Financial Accounting	151CIA	CO1: Remember the concept of rectification of errors and Bank reconciliation statements	R
		CO2: Apply the knowledge in preparing detailed accounts of sole trading concerns	P
		CO3: Analyse the various methods of providing depreciation	A
		CO4: Evaluate the methods of calculation of profit	E
		CO5: Determine the royalty accounting treatment and claims from insurance companies in case of loss of stock.	C
Principles of Management	151C1B	CO1: Develop an understanding on the role and importance of marketing	U
		CO2: Apply the 4p's of marketing in their venture	P
		CO3: Identify the factors determining pricing	A
		CO4: Use the different Channels of distribution of industrial goods	P
		CO5: Understand the concept of E-marketing and E-Tailing	U
Python Programming	151E1B	**CO 1:** Develop and execute simple Python programs	U
		CO 2: Write simple Python programs using conditionals and looping for solving problems	E
		CO 3: Decompose a Python program into functions	P
Python Programming Lab	151E12	**CO 1:** To understand the problem solving approaches	U
		CO 2: To learn the basic programming constructs in Python	E
		CO 3: To practice various computing strategies for Python-based solutions to real world problems	C
Professional Ethics	151B1A	**CO1:** Understanding basic purpose of profession, professional ethics and various moral and social issues.	U
		CO2: Awareness of professional rights and responsibilities.	A
		CO3: Professional Ethical values and contemporary issues	R

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MS-Office for Commerce	151S1A	**CO1:** Understand the basic concepts computer applications using MS-Office applications for the business transactions.	**U**
		CO2: Aware and apply various statistical tools available in MS-Excel for the business enterprise transactions.	**A**
		CO3: To gain knowledge making effective presentation for the business meeting using power point presentation.	**C**
Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: II Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Advanced Financial Accounting	151C2A	**CO1:**To evaluate the Hire purchase accounts and Installment systems	**E**
		CO2: To prepare Branch accounts and Departmental Accounts	**C**
		CO3: To understand the accounting treatment for admission and retirement in partnership	**U**
Business Law	151C2B	**CO1:**Explain the Objectives and significance of Mercantile law	**U**
		CO2: Understand the clauses and exceptions of Indian Contract Act.	**U**
		CO3: Explain concepts on performance, breach and discharge of contract.	**A**
Java Programming-Theory	151E2A	**CO1:** Understand the basic Object-oriented concepts. Implement the basic constructsof Core Java	**U**
		CO2: Implement inheritance, packages, interfaces and exception handling of CoreJava.	**P**
		CO3:Implement multi-threading and I/O Streams of Core Java	**P**
Java Programming-Lab	151E21	**CO 1:** Code, debug and execute Java programs to solve the given problems	**A**
		CO 2: Implement multi-threading and exception-handling	**P**
		CO 3: Implement functionality using String and String Buffer classes	**P**
Accounting Using Excel	151S2A	CO1: Understanding the need and use of using Excel templates.	**U**
		CO2: Securing information in an Excel workbook.	**A**
		CO3: Learning formulas, creating charts and graphs that can easily explain or simplify complex information or data.	**E**
Retail Management	151S2B	CO1: The student can understand the fundamentals of communication and identify their communication abilities.	**U**
		CO2: The can apply the managerial writing skills in terms of good	**P**

		communication student.	
		CO3: The students can give better presentation because of presentation skills.	**E**
II Year: III Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Computerized Accounting	BS23A	**CO 1:** To introduce the students to Basic of Accounts and the usage of Tally for accounting purpose.	**U**
		CO 2: To help students to work with well- known accounting software i.e. Tally ERP.9.Tally is an accounting package which is used for learning to maintain accounts.	**P**
		CO 3: Students will learn to create company, enter accounting voucher entries including advance voucher entries, do reconcile bank statement, do accrual adjustments, and also print financial statements, etc. inTally ERP.9 software.	**C**
Data Structure	BS23B	**CO1:** Understand basic data structures such as arrays, strings, and linked lists.	**U**
		CO 2: Study linear data structures such as stacks and queues and understand their difference.	**U**
		CO 3: Describe the hash function and concepts of collision and its resolution methods.	**A**
Banking Law And Practice	BS23C	**CO 1:** Explain the functions and services of commercial banks	**U**
		CO 2: Knowledgeable of the root causes of bank panics and wholesale runs	**U**
		CO 3: Able to critically compare the bank regulatory system	**P**
Java Programming	BS23E	**CO 1:** Able to solve real world problems using OOP techniques.	**P**
		CO 2: Able to understand the use of abstract classes.	**U**
		CO 3: Able to solve problems using java collection framework and I/o classes.	**E**
JavaProgramming Practical	BS231	**CO 1:** Able to solve real world problems using OOP techniques.	**E**
		CO 2: Able to understand the use of abstract classes.	**U**
		CO 3: Able to solve problems using java collection framework and I/O classes.	**E**
Business Statistics	BS33A	**CO1:**Summarized at a sets using Descriptive statistics ·	**U**
		CO 2: Analyze the relationship between two variables of various managerial situations	**A**
		CO 3: Geometrically Interpret Correlation and Regression	**E**
II Year: IV Semester			
		CO 1: Relate the basic concepts and technologies used in the	

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Management Information System	BS24A	field of management information systems.	**R**
		CO 2: Compare the processes of developing and implementing information systems.	**E**
		CO 3: Outline the role of the ethical, social, and security issues of information systems.	**C**
Principles of Management	BS24B	**CO 1:** Demonstrate understanding of the role of managers in an organization.	**U**
		CO 2: Summarize the elementary concepts, principles and theories of management	**E**
		CO 3: Examine the managerial functions having an impact on the organizational effectiveness	**A**
Financial Services	BS24C	**CO 1:** Understand the nature and scope of various types of financial services.	**U**
		CO 2: Knowledge of regulatory environment surrounding the financial services	**U**
		CO 3: Solving problems related to leasing and hire purchase.	**E**
Python Programming Theory & Lab	BS24E	**CO 1:** Develop algorithmic solutions to simple computational problems.	**P**
		CO 2: Develop and execute simple Python programs.	**P**
		CO 3: Develop simple Python programs for solving problems.	**E**
Elements of Operations Research	BS34A	CO1: Frame a linear programming problem for quantitative decisions in business planning.	**A**
		CO2: Optimize economic factors by applying transportation and assignment problems.	**A**
		CO3: Apply the concept of game theory and simulation for optimal decision making.	**P**
Environmental Studies	ENV4B	CO1: Gain knowledge about environment and ecosystem.	**U**
		CO2: Students will learn about natural resource, its importance and environmental impacts of human activities on natural resource.	**U**
		CO3: Gain knowledge about the conservation of biodiversity and its importance.	**U**
III Year: V Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Finanacial	BS25A	CO1: Recall the concepts in financial management.	**R**
		CO2: Apply the various capital structure theories.	**P**

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Management		CO3: Apply capital budgeting techniques to evaluate investment proposals.	**P**
		CO4: Determine dividend pay-outs.	**A**
		CO5: Estimate the working capital of an organization	**E**
Logistics and supply chain management	BS25B	CO1: Learn to use and apply computer-based supply chain optimization tools including the use of selected state of the art supply chain software suites currently used in business	**P**
		CO2: Develop and utilize critical management skills such as negotiating, working effectively within a diverse business environment, ethical decision making and use of information technology	**E**
		CO3: Demonstrate the use of effective written and oral communications, critical thinking, team building and presentation skills as applied to business problems	**C**
SpreadSheet Accounting	BS25C	CO1: Demonstrating the basic mechanics and navigation of an Excel spreadsheet.	**C**
		CO2: Formatting techniques and presentation styles.	**E**
		CO3: Learning the use and utility of functions and formulas on excel spreadsheet	**U**
Business Analytics	BS25D	CO1: Analyze and interpret data visualization, recognizing its importance in conveying complex information effectively and efficiently.	**A**
		CO2: Acquire the skill to Compare and contrast structured, semi-structured, and unstructured data, appreciating the challenges and opportunities each type presents in analytics.	**P**
		CO3: Understand the importance of data quality, and learn strategies for dealing with missing or incomplete data to ensure accurate and reliable analysis	**U**
Portfolio Management	BS45D	CO1: Identify the investment opportunities and the nature of investment decisions.	**R**
		CO2: Interpret the investment environment and assess the procedural issues of the security markets.	**P**

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		CO3: Organize the various instruments and their regulatory systems on the portfolio analysis.	**A**
III Year: VI Semester			
Software Project Management	BS26A	CO1: Develop the model from the conventional software product to the modern.	**E**
		CO2: Analyze and design the software architecture.	**A**
		CO3: Have an exposure for organizing and managing a software project.	**C**
		CO4: Apply, analyze, design and develop the software project	**P**
Management Accounting	BS26B	CO1: Recall the objectives and scope of management and know the relationship between other managerial accounting.	**R**
		CO2: Analyze the performance of the company using different ratios	**A**
		CO3: Understand the working capital requirements of the company using the format.	**U**
		CO4: To gain knowledge about marginal costing and BEP analysis.	**U**
		CO5: Understand about budgeting and budgetary control	**U**
Entrepreneurial Development	BS26C	CO1: Identify the various traits of an entrepreneur	**R**
		CO2: Turn ideas into business opportunities	**C**
		CO3 : Identify the sources of funds for funding a project	**R**
WebTechnology – Theory & Practicals	BS26E	CO1. Design and develop web applications.	**A**
		CO2. Explain client and server-side scripting and their applicability.	**P**
		CO3. Create scripts using JavaScript in a web page.	**C**

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B.COM (G)

Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: I Semester			
Course Name and Course Code		Course Outcome	Cognitive Level
Financial Accounting	146C1A	CO1: Remember the concept of rectification of errors and Bank reconciliation statements	R
		CO2: Apply the knowledge in preparing detailed accounts of sole trading concerns	P
		CO3: Analyse the various methods of providing depreciation	A
		CO4: Evaluate the methods of calculation of profit	E
		CO5: Determine the royalty accounting treatment and claims from insurance companies in case of loss of stock.	U
Principles of Management	146C1B	CO1: Demonstrate the importance of principles of management.	U
		CO2: Paraphrase the importance of planning and decision making in an organization.	U
		CO3: Comprehend the concept of various authorizes and responsibilities of an organization.	U
		CO4: Enumerate the various methods of Performance appraisal	U
		CO5: Demonstrate the notion of directing, co-coordination and control in the management.	U
Business Economics	146E1C	CO1: Explain the positive and negative approaches in economic analysis	U
		CO2: Understood the factors of demand forecasting	U
		CO3: Know the assumptions and significance of indifference curve	U
		CO4: Outline the internal and external economies of scale	U
		CO5: Relate and apply the various methods of pricing	P
Skill Enhancement Course SEC - I - MS Office for Commerce	146S1A	CO1: Understood the MS Word & Commonly used features	U
		CO 2: learned How to use Insert Tab & Mail Merger	A
		CO 3: Understanding the MS PowerPoint	U
		CO4: Learn MS Excel &Using Formulas	U
		CO5: Understanding Working on multiple Worksheets & Working with huge Datasets	A
Foundation Course - Professional Ethics	146B1A	CO 1: Concept and Theories of Business Ethics	U
		CO2: Understanding of Principles of Professional Ethics	U
		CO3: learn Ethical Dilemmas, Sources and their Resolutions:	U
		CO4: Understanding of Ethical Decision-making in Business	U
		CO5: Understanding of Human Values for Indian Managers	U

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Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: II Semester			
Course Name and Course Code		Course Outcome	Cognitive Level
Advanced Financial Accounting	146C2A	CO1: To evaluate the Hire purchase accounts and Instalment systems	E
		CO2: To prepare Branch accounts and Departmental Accounts	U
		CO3: To understand the accounting treatment for admission and retirement in partnership	E
		CO4: To know Settlement of accounts at the time of dissolution of a firm	U
		CO5: To elaborate the role of IFRS	A
Business Law	146C2B	CO1: Explain the Objectives and significance of Mercantile law	U
		CO2: Understand the clauses and exceptions of Indian Contract Act.	U
		CO3: Explain concepts on performance, breach and discharge of contract.	U
		CO4: Outline the contract of indemnity and guarantee	U
		CO5: Explain the various provisions of Sale of Goods Act 1930	U
Indian Economic Development	146E2C	CO1: Elaborate the role of State and Market in Economic Development	U
		CO2: Explain the Sectorial contribution to National Income	U
		CO3: Illustrate and Compare National Income at constant and current prices.	U
		CO4: Describe the canons of public expenditure	U
		CO5: Understand the theories of money and supply	U
Skill Enhancement Course SEC - II - Accounting Using Excel	146S2A	CO1: UndertandingtheACCRINT, ACCRINTM, AMORDEGRC, COUPDAYBS	P
		CO2: Using Financial Functions, DB function, DDB function, DOLLARDE	A
		CO3: Using Financial Functions, INTRATE function, PMT function, MDURATION function	U
		CO4: understanding of PDURATION function, PRICEDISC function, PRICEMAT function	U
		CO5: Using SLN function, SYD function, TBILLEQ function, TBILLPRICE function	A
Skill Enhancement Course SEC - III - Retail Management	146S2B	CO1: Retail & Entrepreneurship - Retail Formats	U
		CO2: Basic Retail Marketing Concepts and fundamentals	U
		CO3: Retail Store Operations	U

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		CO4: Customer Value Management	U
		CO5: Latest Trend in Retail Business	U
II Year: III Semester			
Course Name and Course Code		Course Outcome	Cognitive Level
Corporate Accounting	CZ23A	CO1: Prepare and account for various entries to be passed in case of issue, forfeiture and reissue of shares	U
		CO2: Compute the liability of underwrites and redemption of debentures	U
		CO3: Construct Financial Statements applying relevant accounting treatments	A
		CO4: Compute the value of goodwill and shares under different methods and assess its applicability	U
		CO5: Computation of accounting for insurance and companies	U
Business Law	CZ23B	CO1: Explain the Objectives and significance of Contract and agreement	U
		CO2: Understand the clauses and exceptions of Indian Contract Act.	U
		CO3: Explain concepts on performance, breach and discharge of contract.	U
		CO4: Outline the contract of indemnity and guarantee	U
		CO5: Explain the various provisions contemporary issues in business law	U
Banking Theory Law And Practice	CZ23C	CO1: Aware of various provision of Banking Regulation Act 1949 applicable to banking companies including cooperative banks	U
		CO2: Analyze the evolution of Central Banking concept and prevalent Central Banking system in India and their roles and function	A
		CO3: Understanding of E-banking and fund transfer of online banking	U
		CO4: Evaluate the role of capital fund of commercial banks, objectives and process of Asset securitization etc	E
		CO5: Define the practical banking systems relationship of bankers and customers, crossing of cheques, endorsement etc	U
Marketing	CZ23D	CO1: Learn the role and important of marketing	U
		CO2: Understanding of market segmentation consumer buying decision process	U
		CO3: Understanding of marketing mix	U
		CO4: Understanding of chennal of distribution	U
		CO5: Learn the recent trend of marketing	U
		CO1: Learn the basics of ratio, proportion, indices and logarithm	U

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Business Statistics	CZ33A	CO2: Familiarise with calculations of simple and compound interest and arithmetic, geometric and harmonic progressions.	P
		CO3: Determine the various measures of central tendency	U
		CO4: Calculate the correlation and regression co-efficient.	E
		CO5: Assess problems on time series analysis	A
Soft Skill-III-Personality Enrichment		CO1: Study of Self Disclosure	U
		CO2:Understanding of Anger, Stress and Managing Feelings	U
		CO3: Understanding of Interpersonal Effectiveness	U
		CO4: Memory power visualizing, concentrating, relating, repeating, reviewing memory hindrances	U
		CO5: Understanding of Goal Setting and Managing Time	U
II Year: IV Semester			
Advanced Corporate Accounting	CZ24A	CO1: Understanding of internal reconstruction	U
		CO2: Understand the accounting treatment of amalgamation, Internal and external reconstruction	E
		CO3: Preparation of liquidator's final statement of account	A
		CO4: Give the consolidated accounts of holding companies	P
		CO5: Construct Profit and Loss account and Balance Sheet of Banking Companies in accordance in the prescribed format.	U
Company Law	CZ24B	CO1: Understand the classification of companies under the act	U
		CO2: Examine the contents of the share capital and debenture	A
		CO3: Know the qualification and disqualification of women directors	U
		CO4: Understand the meeting and resolution of company	U
		CO5: Analyze the modes of winding up	A
Financial Service	CZ24C	CO1: Summaries the role and function of the financial system	U
		CO2: Gain practical knowledge on key areas relating to management of financial products and services	E
		CO3: Familiarize students about Venture Capital, Leasing.	U
		CO4: Infer the importance of the Credit Rating system.	U
		CO5: Understand various types of Mutual funds schemes and the roles of NSDL and CSDL.	U
Indirect Taxation	CZ24D	CO1: Acquaintance with Indirect tax laws	U
		CO2: Exposed to the overview of GST.	U
		CO3: Apply provisions of CGST and IGST	P
		CO4: Summaries procedures of GST	U
		CO5: Discuss aspects of Customs Duty in India	U

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Elements Of Operation Research	CZ34A	CO1: Frame a linear programming problem for quantitative decisions in business planning.	U
		CO2: Optimize economic factors by applying transportation and assignment problems.	P
		CO3: Apply the concept of game theory and simulation for optimal decision making.	P
		CO4: Analyze and manage inventories to meet the changes in market demand.	A
		CO5: Construct networks including PERT, CPM for strategic management of business projects.	R
Environmental Studies	ENV4B	CO1: Introduction to Environmental Studies	U
		CO2: Understanding of Ecosystem	U
		CO3: Study of Natural Resources Renewable and Non-renewable Resources	U
		CO4: Understanding of Biodiversity and Conservation	U
		CO5: Understanding of Environmental Pollution	U
Soft Skill-IV- Computing Skills	TSSE1	CO1: Overview of introduction of computer	U
		CO2: Understanding of Word processing	U
		CO3: Study of importance of file management	U
		CO4: Understanding of Spreadsheets	U
		CO5: Study of Networking process	U
III Year: V Semester			
Course Name and Course Code		Course Outcome	Cognitive Level
Elements of Cost Accounting	CZ25A	CO1: Remember and recall the various concepts of cost accounting	R
		CO2: Demonstrate the preparation and reconciliation of cost sheet.	U
		CO3: Analyze the various valuation methods of issue of materials.	A
		CO4: Examine the different methods of calculating labour cost.	U
		CO5: Critically evaluate the apportionment of Overheads	E
Practical Auditing	CZ25B	CO1: Define auditing and its process.	U
		CO2: Compare and contrast essence of vouching and verification.	E
		CO3: Define the concept audit and accounting standards	U
		CO4: Identify the role of auditors and audit report of the companies.	U
		CO5: Understanding online computer system of audit	P
Logistics and Supply Chain Management	CZ25C	CO1: Examine the importance of Customer Service in Logistics Management	U
		CO2: Develop an understanding on the inventory carrying warehouse, technology in the warehouse.	U

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		CO3: Develop an understanding on the Transportation Network and Decision	U
		CO4: Develop an understanding on the Distribution Channel Management	U
		CO5: Identify the performance bench marking for chain improvement	U
Financial Management	CZ25D	CO1: Recall the concepts in financial management.	R
		CO2: Apply the various capital structure theories	P
		CO3: Determine dividend pay-outs.	U
		CO4: Estimate the working capital of an organization.	U
		CO5: Apply capital budgeting techniques to evaluate investment proposals.	P
Income Tax Law and Practice -I	CV25A	CO1: Assess the residential status of an assesse & the incidence of tax.	U
		CO2: Compute income of an individual under the head salaries.	P
		CO3: Ability to compute income from house property.	U
		CO4: Evaluate income from a business carried on or from the practice of a Profession	E
		CO5: Apply procedures learnt about E-filling & Submission of Return.	P
Value Education	VAE5Q	CO1: Understanding of culture and civilization	U
		CO2: Understanding of Salient value for life	U
		CO3: Apply the knowledge of human rights	P
		CO4: Remember and recall basic of environmental and ecological balance	R
		CO5: Evaluate the social evils and corruptions	U
III Year: VI Semester			
Advanced Cost Accounting	CZ26A	CO1: Apply the knowledge in contract costing	P
		CO2: Analyze and assimilate concepts in process costing	A
		CO3: Understand various bases of classification cost and prepare operating cost statement.	U
		CO4: Understand varies marginal cost statement	U
		CO5: Set up standards and analyse variances	A
Management Accounting	CZ26B	CO1: Remember and recall basics in management accounting	U
		CO2: Apply the knowledge of preparation of Financial Statements	P
		CO3: Analyse the concepts relating to fund flow and cash flow	A
		CO4: Evaluate techniques of budgetary control	E

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		CO5: Formulate criteria for decision making using principles of marginal costing.	U
Entrepreneurial Development	CZ26C	CO1: Identify the various traits of an entrepreneur	U
		CO2: Turn ideas into business opportunities	U
		CO3: Do feasibility study before starting a project	U
		CO4: Identify the sources of funds for funding a project	U
		CO5: Develop an understanding about the Government schemes available for women entrepreneurs	U
Income Tax Law and Practice -II	CV26A	CO1: Remember and recall provisions on capital gains	U
		CO2: Apply the knowledge about income from other sources	P
		CO3: Analyze the set off and carry forward of losses provisions	A
		CO4: Learn about assessment of individuals	U
		CO5: Apply procedures learnt about assessment procedures.	P
Human Resource Management	CV26B	CO1: Examine the role of HRM in the new age organization and plan man power requirements and implement techniques of job design.	U
		CO2: Formulate action plans for employee Recruitment and Selection.	U
		CO3: Choose appropriate methods of Training	U
		CO4: Estimate, defend and handle legal compliance in HRM involving trade union disputes and employee retention.	U
		CO5: Formulate strategies for employee welfare	U

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BSc BIOCHEMISTRY

I Year: I Semester			
Course Name and Course Code		**Course Outcome** **At the end of this course the students will be able to**	**Cognitive Level**
Nutritional Biochemistry	122C1A	**CO 1:** Cognizance of basic food groups viz. Carbohydrates, proteins and lipids and their nutritional aspects as well as calorific value	**U**
		CO 2: Classify the food groups and its significance	**R**
		CO 3: Describe the importance of nutraceuticals and pigments	**R**
Chemistry I	122E1A	**CO 1:** State the theories of chemical bonding,nuclear reactions and its applications.	**U**
		CO 2: Explain the type of hybridization, electronic effect and mechanism involved in the organic reactions	**R**
		CO 3: Analyse various methods to identify an appropriate method for the separation of chemical components	**P**
Medicinal Diet	122S1C	**CO 1:** Possess basic knowledge about diet	**U**
		CO 2: Sketch diet plan for liver diseases	**R**
		CO 3: Prepare diet chart for Diabetes Renal and Cardio-vascular diseases	**R**
Health and Nutrition	122SOC	**CO 1:** Understand about the importance of health and diet	**U**
		CO 2: Understand about sources and functions of fats and lipids on health	**R**
		CO 3: Detail about the different typed of minerals and its role in health	**R**
FC- Bridge Course	122B1A	**CO 1:** Establishing a stronger foundation in historical background and basic biomolecules of living system	**U**
		CO 2: Awareness on the scope & interdisciplinary nature of Biochemistry	**U**
		CO 3: Learning safety and good laboratory practices	**U**
Practical I	122C11	**CO 1:** Estimate the important biochemical constituents in the food samples	**P**
		CO 2: Prepare the macronutrients from the rich sources.	**P**
		CO 3: Determine the ash and moisture content of the food samples	**P**
Chemistry Practical 1	122E11	**CO 1:** Design, carryout, record and interpret the results of volumetric titration.	**P1**
		CO 2: Apply their skill in the analysis of water/hardness.	**P**
		CO 3: To create the awareness about food adulterants	**P**

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I Year: II Semester			
Course Name and Course Code		**Course Outcome** **At the end of this course the students will be able to**	**Cognitive Level**
Cognitive level: Remember (R), Understand(U), Apply(P), Analyse(A), Evaluate(E), Create(C).			
Cell Biology	122C2A	**CO 1:** Explain the structure and functions of basic components of prokaryotic and eukaryotic cells, especially the organelles.	**R**
		CO 2: Illustrate the structure, composition and functions of cell membrane related to membrane transport	**U**
		CO 3: Elaborate the phases of cell cycle and cell division mitosis and meiosis and characteristics of cancer cells.	**A**
Chemistry II	122E2A	**CO 1:** Write the IUPAC name for complex, different theories to explain the bonding in coordination compounds and water technology.	**R**
		CO 2: Enlighten the biological role of transition metals, amino acids and nucleic acids.	**U**
		CO 3: Apply/demonstrate the electrochemistry principles in corrosion, electroplating and fuel cells.	**A**
Life style Diseases	122S1B	**CO 1:** Define Life style diseases and describe the contributing factors	**U**
		CO 2: Elaborate the treatment and prevention measures of common lifestyle diseases	**U**
		CO 3: Illustrate the various measures for prevention of life style diseases	**U**
Bioinstrumentation	122SOE	**CO 1:** Illustrate the functions of instruments used for measuring blood pressure.	**U**
		CO 2: Understand the operation of the imaging and sonographic instruments.	**R**
		CO 3: Differentiate between the action of pacemakers, defibrillators and ventilators.	**R**
Practical II	122C21	**CO 1:** Identify the parts of microscope	**P**
		CO 2: Identify the stages of mitosis & meiosis	**P**
		CO 3: Visualize nucleus and mitochondria by staining methods	**P**
Chemistry Practical II	122E21	**CO 1:** design, carry out, record and interpret the results of organic analysis.	**P**
		CO 2: apply their skill in the analysis of functional group present in organic compounds.	**P**
		CO 3: analyze the chemical constituents in allied chemical products	**P**
II Year: III Semester			

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Course Name and Course Code		Course Outcome At the end of this course the students will be able to	Cognitive Level
Biomolecules	SB23A	**CO 1:** Demonstrate the chemistry and the role of mono, disaccharides and polysaccharides in living systems.	**U**
		CO 2: Gain insight into the reactivity of aminoacids and nutritional importance of proteins	**R**
		CO 3: Elucidate the various levels of organization of Proteins and its biological importance	**A**
Statistics I	SP3AA	**CO 1:** Know the uses of statistics in Society	**U**
		CO 2: Organize, manage and present data	**R**
		CO 3: Analyze the statistical data graphically using distribution and cumulative frequency distribution.	**P**
Personality Enrichment	TSSEG	**CO 1:** Characteristics of Self-description, Disclosure and awareness	**U**
		CO 2: Handling putdowns techniques and to manage provocations	**P**
		CO 3: Using techniques of memory enhancer, short-term and long-term goals and once ability to live a balanced life	**E**
Environmental Studies	ENV4B	**CO 1:** To understand the concept of sustainability and sustainable development	**U**
		CO 2: Levels of biological diversity and its biodiversity services	**R**
		CO 3: Students develop critical thinking skills analyzed real environmental problem, understand power of narrative to create sustainable solution for local and global communities	**C**
II Year: IV Semester			
Biomolecules &b Biochemical Techniques	SB24A	**CO 1:** Gain insight into the classes of lipids and characterization of fats by their constant.	**U**
		CO 2: Establish the role of purine and pyrimidine bases in nucleic acid structure.	**U**
		CO 3: Acquire knowledge about principle of various centrifugation types and its applications.	**R**
Statistics II	SP3AB	**CO 1:** Understand the basic concept of Probability	**U**
		CO 2: Identify the characteristics of different discrete and continuous distributions	**R**
		CO 3: To understand how to apply statistical tests to get information from data	**P**
		CO 1: Introducing the course is to impart hand on training to students in Microsoft office essentials like MS word, MS Excel and MS access	**U**

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Computing Skill	TSSE1	**CO 2:** Offered at two levels exclusively meant for students who have no computer knowledge	**R**
		CO 3: Course is designed as a practical oriented course.	**P**
Practical II	SB241	**CO 1:** Identify the biomolecules carbohydrate and aminoacids by qualitative test	**P**
		CO 2: Determine the quality of Lipids by titrimetric methods	**P**
		CO 3: Isolate nucleic acids from plant and animal source	**P**
Statistics Practical	SP3A1	**CO 1:** Analyzed the statistical data using frequency distribution and cumulative frequency distribution.	**A**
		CO 2: To identify statistical situation to which different sampling distribution can be applied	**P**
		CO 3: To understand how to apply statistical test to get information from data	**P**
III Year: V Semester			
Course Name and Course Code		**Course Outcome** **At the end of this course the students will be able to**	**Cognitive Level**
Enzymes	SB25A	**CO 1:** Identify the major classes of enzymes, differentiate between a chemical catalyst and a biocatalyst and define the units of enzymes.	**R**
		CO 2: Explain the mechanism of enzyme catalysis and the role of coenzymes in enzyme action	**U**
		CO 3: Illustrate the steady state kinetics, interpret M M plot and L B plot based on kinetics data, and determine Km and Vmax.	**U**
Metabolism	SB25B	**CO 1:** State the concepts of bioenergetics and illustrate the mechanism of flow of electrons and the production of ATP	**R**
		CO 2: Elaborate the biochemical reactions and integration of pathways of carbohydrate metabolism	**A**
		CO 3: Sketch the oxidation and biosynthesis of fatty acids, phospholipids, triglycerides and cholesterol with suitable examples	**U**
Analytical Biochemistry	SB25C	**CO 1:** Describe types of rotors and identify the centrifugation technique for the separation of biomolecules	**R**
		CO 2: Demonstrate the principles, operational procedure and applications of planar and column chromatography	**U**
		CO 3: Specify the factors and explain the separation of DNA and protein using electrophoretic technique.	**A**
		CO 1: Understand the structure and function and different components of Digestive and urinary system.	**U**

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Physiology	SB45A	**CO 2:** To inculcate knowledge about the muscular and nervous system role of neurotransmitters in Physiology.	**A**
		CO 3: To introduce the organization of endocrine system and classification of hormones	**U**
Value Education	VAE5Q	**CO 1:** To gain knowledge of the values are inculcated through education	**R**
		CO 2: Describe values for life and interpersonal and intrapersonal relationship	**U**
		CO 3: Understand the universal declaration of human rights and Dr.APJ kalam's ten points for enlightened citizenship	**U**
III Year: VI Semester			
Clinical Biochemistry	SB26A	**CO 1:** To gain knowledge on scope of clinical biochemistry.	**R**
		CO 2: To understand the alteration in biochemical components during various clinical conditions.	**U**
		CO 3: To highlight the importance of various biochemical parameters in the diagnosis of diseases.	**U**
Molecular Biology	SB26B	**CO 1:** Gain knowledge about the various types of DNA, the organization of genes to chromosomes in prokaryotes and eukaryotes.	**U**
		CO 2: Understand the process of RNA synthesis, post transcriptional modifications and apply the same to understand the role of antibiotics	**R**
		CO 3: Detail the mechanism of DNA mutation, Repair system and understand the use of molecular process in disease diagnosis.	**U**
Immunology	SB46A	**CO 1:** Understand about the types of immunity, lymphoid organs and the cellular basis of immunity	**R**
		CO 2: Gain insight into various in vitro reactions between antigen and antibody and its application in clinical diagnosis	**P**
		CO 3: Acquire knowledge on autoimmunity, hypersensitivity and transplantion immunology	**R**
Biotechnology	SB46B	**CO 1:** Acquire basic knowledge of recombinant DNA technology	**U**
		CO 2: Acquainted with the use of cloning and vectors, creation of genomic and cDNA libraries and their applications	**R**
		CO 3: Understand the methods for production of proteins using recombinant DNA technology and their applications	**P**

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Practical III	SB261	**CO 1:** To gain the knowledge about collection and preservation of biological samples	**R**
		CO 2: To acquire knowledge and skill in estimation of different biochemical parameters in blood and urine	**U**
		CO 3: The students will able to assess liver function test	
Project	SB26Q	**CO 1:** To acquire knowledge of literature collection	**U**
		CO 2: Skill to frame a hypothesis and design an experiment	**C**
		CO 3: Evaluate the results and conclude their findings	**A**

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B.Sc BIOTECHNOLOGY

I Year: I Semester (2023-24)			
Course Name and Course Code		**Course Outcome**	**Cognitive level**
Biological Chemistry	123EIA	CO1: Comprehend the importance of chemistry	U
		CO2. Demonstrates the formation of different types of solution	R
		CO3: Recall the structure, classification, Chemistry of Carbohydrates	U
Cell and Molecular Development Biology	123C1A	CO1: Components of Microscope	R
		CO2: Blood smear Preparation and Identification of blood cells	U
		CO3: Buccal smear preparation	R
Biological chemistry Practical	123C11	CO1: Qualitative Analysis of carbohydrates	R
		CO2: Qualitative Analysis of Glucose	U
		CO3: Qualitative Analysis of fructose, maltose, sucrose	R
Mushroom Cultivation	123S1A	CO1 : Morphology of Mushroom	U
		CO2: Types of Mushroom, Mushroom Cultivation	R
		CO3: Life Cycle of Pleuratus	U
Introduction to Biotechnology	123BIA	CO1: History & Introduction to Biotechnology	R
		CO2: Physiology – Plant physiology: Fundamentals of Photosynthesis,	U
		CO3: Brief introduction - Plant Biotechnology, Animal Biotechnology,	R
II YEAR II SEM			
Genetics And fundamentals of Microbiology Practical II	123C21	CO1: Simple staining, Gram staining,	R
		CO2: Standardization by Autoclave	U
		CO3: ABO Blood Grouping	U
Genetic	1232A	CO1: Learn about classical genetics	
		CO2: obtain strong foundation for advanced genetics	R
		CO3: Properties of genetic material	U
Fundamentals Of Microbiology	123E2A	CO1: Understand the classification of Microorganisms and structure of bacteria	R
		CO2: Understand the various microbiological techniques, different types of media, and techniques involved in culturing microorganisms.	U
		CO3: Categorize the methods of sterilization and identify the significance of culture media in the growth of different microbes.	R
Clinical Aromatherapy	123S2A	CO1: Describe methods of essential oil application	U
		CO2: List out the various safety guidelines in aromatherapy	R
		CO3: Uncover the meticulous process behind the extracting this potent oil	U

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Biotechnology for Society	123S2B	CO1: Will understand the role of Biotechnology in Sericulture, Apiculture and Mushroom Cultivation	U
		CO2: Will gain knowledge about the production of Bio fertilizer and advantages of Biopestisides	R
		CO3: Will understand the significance of microorganisms in Biodegradation	U
II Year III Semester			
Genetic Engineering	SC22A	CO1: Tools in rDNA Technology, cloning techniques	U
		CO2: Biomacromoleculesand Micromolecules, structure and Function	R
		CO3: Expression system and their application	U
Essential of Biochemistry	SB33A	CO1: Classification of carbohydrates, aminoacids, fats	U
		CO2: Deamination, transamination, urea cycle	R
		CO3: Simple fatty acid, lipoproteins, saturated and unsaturated fatty acids	U
Genetic Engineering Practical III	SC321	CO1:Identification of blood group	U
		CO2: Mitotic stages of onion root tip	R
		CO3: Giant Chromosome from larvea	U
Allied Biochemistry III	SC341	CO1:Preparation of buffers	R
		CO2: Estimation of glycine	U
		CO3: Estimation of Protein	R
ORGANIC FARMING	SS51A	CO1: Soil – physical, chemical properties. Soil pollution – oil, chemicals –fertilizers, pesticide	U
		CO2: Organic farming – definition, basic concept of organic farming	R
		CO3: Management of organic wastes and green manures	U
IIYEAR IV SEMESTER			
Plant Biotechnology	SC24A	CO1: Plant Genome, organization,stucture of plant gene	U
		CO2: Hormones, Regulation of gene regulation	R
		CO3: plant tissue culture , media preparation, phytochrome	U
Bioinstrumentation and Biostatistics	SC34A	CO1: Measurement of ph, microscopy, centrifuge	R
		CO2: chromatography, Tlc, ion exchange, affinity, gel filtration	
		CO3: Radio isotopes, GLC,and HPLC	
Plant Biotechnology – Practical - IV	SC241	CO1: Plant tissue culture sterilization techniques.	U
		CO2: Plant tissue culture media preparation	R
		CO3: Generation of Callus from leaf,root,bud, shoot apex	U
Bioinstrumentation and Biostatistics Allied practical IV	SC24A	CO1: Preparation of bar diagram, line diagram and pie diagram using MS EXCEL.	R
		CO2: Calculation of Central tendency-mean, geometric mean, median using MS EXCEL	U
		CO3: Calculation of dispersion – Mean deviation,quartile deviation and standard deviation using MSEXCEL	U
Environmental Studies	ENV4B	CO1: Introduction to Environmental Studies	U
		CO2:Food Chain, food Web, Ecosystem	R

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		CO3: Ecology and its pyramids, natural resources	U
III YEAR V SEMESTER			
Animal and Medical Biotechnology.	SC25A	CO1: Historical aspects , Basics of Developmental Biology, animal biotechnology	R
		CO2: To understand the Manipulation of reproductive process, artificial	U
		CO3: To study the concepts of medical Biotechnology, and Zoonotic diseases.	R
Bioinformatics	5C25B	CO1: Overview and Definition and applications of Bioinformatics, Primary Data base	U
		CO2: To understand the Sequence Similarity, identify and homology and definition of homologous and orthologous.	R
		CO3: To study the multiple sequence alignment and different method of multiple sequence alignment	U
Immunology	5C25C	CO1: Historical Development of Immunology, Cell involved in primary and secondary lymphoid organ	R
		CO2: To understand the characteristics and types of Antigen and Antibodies, structure and its Properties	U
		CO3: To study the Immunodiffusion and Immunoelectrophoresis	R
Pharmaceutical Biotechnology	SC45A	CO1: Pharmaceutical Biotechnology and Drug Develop.	U
		CO2: Special area of Pharmaceutical Biotechnology	R
		CO3: Pharmaceutica product and their uses	U
Animal and Medical Biotechnology &Immunology Practical V	SC261	CO1: Instruments and equipment needed for setting up the animals cell line laboratory	U
		CO2: Preparation of Tissue culture medium and membrane filtration	R
		CO3: Preparation of Single cell Suspension	U
III YEAR VI SEMESTER			
Industrial Biotechnology	SC26A	CO1: Biotechnology and Bioprocess Engineering	U
		CO2: To understand the Design of Bioreactors and fermenter design	R
		CO3: Downstream processing filtration, centrifugation , cell disruption	U
Environmental Biotechnology	SC26B	CO1: Environmental Pollution – Sources and types - Water, Air, Thermal, Industrial	U
		CO2: Waste water treatment: Aerobic and anaerobic methods (Primary, Secondary and Tertiary)	R
		CO3: Bioremediation: Biotechnology approaches for industrial effluent (Paper, tannery and dye).	U
Bio Entrepreneurship	SC46A	CO1: Basics of Bio entrepreneurship -biotechnology in a global scale;	U
		CO2: Business plan preparation; business feasibility analysis by SWOT	R
		CO3: Vermicomposting-earthworm	U
Basic of Research methodology	SC46C	CO1: Foundation of Research	U
		CO2: Sampling and Data Analysis	R
		CO3: Research Process and Design	U

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Industrial and Environmental Biotechnology Practical VI	SC262	CO1: Separation of serum and Plasma	U
		CO2: To Understand and preparation of Blood grouping and Rh typing	R
		CO3: To Study the preparation of WBC	U

B.Sc. MICROBIOLOGY

Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: I Semester			
Course Name and Course Code		Course Outcome	Cognitive Level
Core-I: Fundamentals of Microbiology and Microbial Diversity	136C1A	CO1: Study the historical events that led to the discoveries and inventions and understand the Classification of Microorganisms.	U
		CO2: Gain Knowledge of detailed structure and functions of prokaryotic cell organelles.	U
		CO3: Understand the various microbiological techniques, different types of media, and techniques involved in culturing microorganisms.	U
		CO4: Explain the principles and working mechanism of different microscopes/Microscope, their function and scope of application.	U
		CO5: Understand the concept of asepsis and modes of sterilization and disinfectants.	U
Core-II: Practical I – Fundamentals OF Microbiology And Microbial Diversity	136C11	CO1: Practice sterilization methods; learn to prepare media and their quality control.	P
		CO2: Learn streak plate, pour plate and serial dilution and pigment production of microbes.	P
		CO3: Understand Microscopy methods, different Staining techniques and motility test.	P
		CO4: Observe culture characteristics of microorganisms.	P
		CO5: Study on Microbial Diversity using Hay Infusion Broth-Wet mount	P
Elective-I: Basic And Clinical Biochemistry	136E1A	CO1: Explain the structure, classification , biochemical functions and significance of carbohydrates and lipids	U
		CO2: Differentiate essential and non-essential amino acids, biologically important modified amino acids and their functions, Illustrate the role, classification of Proteins and recognize the structural level organization of proteins, its functions and denaturation	U
		CO3: Assess defective enzymes and Inborn errors. Recognize diseases related to carbohydrate and lipid metabolism	U
		CO4: Discuss and evaluate the pathology of aminoacid metabolic disorders	U
		CO5: Appraise the imbalances of enzymes in organ function and relate the role of Clinical Biochemistry in screening and diagnosis.	U
SEC-1 (NME): Social and Preventive Medicine	136S1A	CO1: Identify the health information system	U
		CO2: Associate various factors with health management system	U
		CO3: Choose the appropriate health care services	U
		CO4: Appraise the role of preventive medicine in community setting	U
		CO5: Recommend the usage of alternate medicine during outbreaks	U
136B1A Foundation Course – Introduction to Microbial World	136B1A	CO1: Learners will develop interest in the subject of Microbiology and it will also be useful to fill the gap.	U
		CO2: Stimulating interest and curiosity in Microbiology will increase student motivation to learn applied areas of microbiology.	U

Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: II Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Core-III: Microbial Physiology and Metabolism	136C2A	CO1: Describe microorganisms based on nutrition	U
		CO2: Know the concept of microbial growth and identify the factors affecting bacterial growth.	U
		CO3: Explain the methods of nutrient uptake	U
		CO4: Describe anaerobic and aerobic energy production	U
		CO5: Elaborate on the process of bacterial photosynthesis and reproduction.	U
Core-IV: Practical-II Microbial Physiology and Metabolism	136C21	CO1: Describe hanging drop, wet mount preparation, semi-solid agar, Craigie's tube method.	P
		CO2: Demonstrate Smear preparation, permanent specimen preparation, Capsular, and Acid-fast staining.	P
		CO3: Explain antibiotic sensitivity testing: Disc diffusion test-quality control with standard strains.	P
		CO4: Describe demonstration of the size of yeast, fungal filaments and protozoa.	P
		CO5: Elaborate on the bacterial identification- morphological, physiological, and biochemical methods.	P
Elective-II: Bio Instrumentation	136E2A	CO1: Gain knowledge about the basics of instrumentation.	U
		CO2: Exemplify the structure of atoms and molecules by using the principles of spectroscopy.	U
		CO3: Evaluate by separating and purifying the components.	U
		CO4: Understand the need and applications of imaging techniques.	U
		CO5: Categorize the working principle and applications of fluorescence and radiation	U
SEC-II (NME): Nutrition & Health Hygiene	136S2A	CO1: Learn the importance of nutrition for a healthy life	P
		CO2: Study the nutrition for life cycle	U
		CO3: Know the health care programmes of India	U
		CO4: Learn the importance of community and personal health & hygiene measures	R
		CO5: Create awareness on community health and hygiene	P
SEC-III: Sericulture	136S2B	CO1: Discuss the overall aspects of Sericulture and the biology and varieties of mulberry plant.Creates awareness among students about the economic importance and suitability of Sericulture in Indian conditions.	U
		CO2: Familiarize with the lifecycle of silk worm.	U
		CO3: Explain common diseases of silkworm encountered during rearing, sources of infection, disease symptoms, pre-disposing factors and their management practices.	U
		CO4: Attain thorough knowledge about the cultivation of mulberry, maintenance of the farm, seed technology, silkworm rearing, post cocoon techniques like stifling, reeling, and utilization of by-products.	P
		CO5: Plan the facilities required for establishment of insectary. Competent to transfer the knowledge and technical skills to the Serifarmers.Analyze the importance of sericulture in entrepreneurship development and emerge as potential entrepreneur.	P

Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
II Year: III Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Molecular Biology	SN23A	CO1: Understand the chemical components of DNA and various forms of DNA. Know about the organization of prokaryotic and eukaryoticgenome.	U
		CO2: Understand the DNA replication, repair and recombination in prokaryotes with that ofeukaryotes.	U
		CO3: To know about RNA synthesis and processing and function of different types of RNA.	U
		CO4: To know about protein synthesis and inhibition factors of protein synthesis.	U
		CO5: To Understand prokaryotic and eukaryotic gene expression and control of gene expression.	U
Molecular Biology Practical	SN241	CO1: Learn to estimate DNA and RNA.	P
		CO2: Learn to isolate Plasmid, Genomic and Chromosomal DNA	P
		CO3: Learn to isolate RNA and antibiotic resistant mutants.	P
		CO4: Acquire Knowledge in Preparation of competent cells.	P
		CO5: Acquire Knowledge in Transformation of E. coli.	P
Clinical Lab Technology (Theory)	SN33A	CO1: Outline the structure of organization of clinical laboratory and safety regulation	U
		CO2: Impart knowledge on biological specimen collection	U
		CO3: Describe haematology process	U
		CO4: Focus on basic concepts routine urine analysis	U
		CO5: Study about Laboratory Standard Accreditation Boards	U
Clinical Lab Technology (Practical)	SN341	CO1: Focus on basic concepts in biosafety	P
		CO2: Study about Cell Counts- RBC, WBC and Platelets	P
		CO3: Learn basic steps for tissue processing	P
		CO4: Estimation of Glucose, albumin, Serum cholesterol in blood.	P
		CO5: Study the Physical examination of urine	P
Environmental Studies	ENV4B	CO1: Demonstrate mastery of core ecological and physical science concepts and methods as they pertain to environmental problem-solving.	U
		CO2: Demonstrate mastery of core social science concepts and methods as they pertain to environmental problem-solving.	U
		CO3: Recognize and integrate the international, cross-cultural, and transdisciplinary nature of environmental problems in analyses and solutions.	U
		CO4: Produce a culminating/multi-scale piece of work demonstrating the ability to synthesize concepts and methods to make a contribution to environmental solutions.	U
		CO5: Apply proficiency in analytical methods, critical thinking, communication, and leadership skills sufficient to make a contribution in environmental and related fields.	U

Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
II Year: IV Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Soil and Agricultural Microbiology	SN24A	CO1: Upon successful completion of this course, the student should be able to understand types, structure, formation and microbial flora of soil...	U
		CO2: Understand the role of soil microflora in biogeochemical cycle in the environments	U
		CO3: Know about the mechanism and responsibility of microbial interaction with microbes, plant, animal and insects.	U
		CO4: Be familiar with the role of microorganism in nitrogen fixation and know about the types and mode of action of biopesticides	U
		CO5: Know about defense mechanism, etiology, epidemiology and management various plant diseases caused by microorganisms.	U
Major Practical IV (Soil and Agricultural Microbiology	SN242	CO1: By the end of the course, the student should be able to learn different methods for the isolation and identification soil microorganisms...	P
		CO2: Understand the mechanisms and application of enzymes produced by soil microorganisms	P
		CO3: Know about the role and methods used for the isolation and identification of Rhizobium and Azotobacter.	P
		CO4: Know about the application and methods used for isolation and identification of nitrogen fixing algae	P
		CO5: Understand the causes, symptoms, control and treatment of various plant diseases caused by microorganisms.	P
Clinical Biochemistry	SN34A	CO1: Provide knowledge on blood glucose homeostasis. Maintenance of blood glucose by hormone	U
		CO2: Discuss the Liver function	U
		CO3: Study the function of amino acid and Kidney function tests - Inulin, urea and creatinine clearance tests	U
		CO4: Learn lipid mechanisms and abnormal levels of these lipids in diseases.	U
		CO5: Learn about hormonal disorders - Acromegaly, Cushing's syndrome, Addison's disease, Goitre, Grave'sdisease	U
Clinical Biochemistry (Practical)	SN342	CO1: Learn Collection and preservation of blood sample	P
		CO2: Learn working methods of Haematological studies	P
		CO3: Study the quantitative estimation in blood	P
		CO4: Discuss the principles and working methods of quantitative analysis of Urine	P
		CO5: Learn the working experience of enzyme as says	P
Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
III Year: V Semester			
		CO1: Knowledge of various techniques of sample collection, transport and processing for laboratory diagnosis of bacterial diseases.	U

Medical Bacteriology	SN25A	CO2: Knowledge of basic and general concepts of causation of disease by the pathogenic microorganisms	U
		CO3: Information for the assessment of their severity including the broad categorization of the methods of diagnosis.	U
		CO4: Insights to practical aspects of antibiotic sensitivity testing.	U
		CO5: Knowledge of various zoonotic infections, ways to tackle them and use biosafety precautions	U
Medical Mycology and Parasitology	SN25B	CO1: Information for collection of different clinical samples, their transport, culture and examination by microscopy, staining and biochemical methods for the diagnosis of fungal and protozoan diseases...	U
		CO2: Knowledge of basic and general concepts of causation of disease by the pathogenic microorganisms and the various parameters of assessment of their severity including the broad categorization of the methods of diagnosis.	U
		CO3: Insights to treatment options of fungal and protozoan diseases	U
		CO4: Knowledge about the importance of protozoan in the intestine	U
		CO5: Knowledge of Nematodes as infectious agent	U
Medical Virology	SN25C	CO1: Knowledge about viruses and the chemical nature of viruses, different types of viruses infecting animals, plants and bacteria –Bacteriophages.	U
		CO2: Understanding about the emerging viral diseases.	U
		CO3: Information about the role of viruses in the causation of the cancer	U
		CO4: Gain wider knowledge on clinical aspects and related implications of viral diseases	U
		CO5: Knowledge on viral vaccines and antiviral drugs.	U
Medical Bacteriology, Mycology, Parasitology and Virology Practical	SN261	CO1: Skills to identify medically important bacteria, fungus and parasites from the clinical samples	U
		CO2: Very good information about practical aspects of collection of different clinical samples, their transport, culture and examination by staining, and biochemical tests for diagnosis of bacterial diseases	P
		CO3: In depth knowledge on clinical sample processing.	P
		CO4: Knowledge to promote diagnostic skills, including the use and interpretation of laboratory tests in the diagnosis of infectious diseases.	P
		CO5: Insights to antibiotic sensitivity determination.	P
Biotechnology and Genetic Engineering	SN45A	CO1: Acquire knowledge about the History and the development of biotechnology and genetic engineering with the contribution of the scientist.	U
		CO2: Equipped with various production methods of the widely used biotechnological products	U
		CO3: Gain basic understanding of role of the enzymes as a tool in Biotechnology	U
		CO4: Learn the significance of vector, as a tool in the construction of genetic modification of the organisms.	U
		CO5: Be familiarize with understanding of use of biotechnology and genetic engineering in health, agriculture and industries	U
		CO1: Students will understand the importance of value based living.	U

Value Education	VAE5Q	CO2: Students will gain deeper understanding about the purpose of their life	U
		CO3: Students will understand and start applying the essential steps to become good leaders	U
		CO4: Students will emerge as responsible citizens with clear conviction to practice values and ethics in life	U
		CO5: Students will become value based professionals	U
		CO6: Students will contribute in building a healthy nation	U
III YEAR VI SEMESTER			
Environmental Microbiology	SN26A	CO1: The basic knowledge about the natural ecosystem and role of microorganisms in the ecosystem	U
		CO2: An understanding of the composition of air, air borne organisms and how the organisms causes the diseases and its preventive measures	U
		CO3: Knowledge about different types of microorganism in water causes of water pollution, and methods to analyze the quality of water and treatment for purification of drinking water, hygienic practices to control the water borne diseases.	U
		CO4: An understanding the role and application of microorganisms to degrade the environmental contaminants and microbes involved in solid and liquid waste management.	U
		CO5: Knowledge about the role of microbes in biodegradation and bioremediation of heavy metals and hydrocarbon etc.,	U
Food and Dairy Microbiology	SN26B	CO1: Gain knowledge about food as a substrate for various microbes, the role of factors and its importance	U
		CO2: Understand about the principles and application of different types of food preservation technique, chemical preservative and its advantages and disadvantages	U
		CO3: Equip themselves the pragmatic understanding of food spoilage	U
		CO4: Acquire a thorough understanding of food borne diseases, testing methods, and preventive technique.	U
		CO5: Learn about the various fermented product and its various stage spoilage	U
Environmental, Food and Dairy Microbiology Practical	SN262	CO1: To learn about Detection of number of Bacteria in milk by various method.	U
		CO2: Gains knowledge to determine the quality of milk.	R
		CO3: Learn to isolate the yeast and molds from spoiled nuts, fruits, and vegetables and also to examine specific food for bacterial contamination	U
		CO4: Knowledge gain to determine of BOD and COD of wastewater and Water analysis by MPN and Membrane filter method.	R
		CO5: Learn to Quantify the microorganisms in air settle plate and air sampler methods. Detection of aflatoxin B1 from moldy grains using thin layer chromatography.	U
Industrial and Pharmaceutical Microbiology	SN46A	CO1: Understand the basic knowledge about the fermentation process and the requirements of process.	U
		CO2: Gain the basic knowledge about the designing of fermentation	U
		CO3: Acquire the knowledge about the production of antibiotic and enzymes	U
		CO4: Equip themselves about knowledge of the various separation procedures in pharmaceutical industries	U

		CO5: Understand about the principles of raw material used in pharmaceuticals and validation and sterility of pharmaceutical product	P
Microbial Marketable Products	SN46B	CO1: Acquire the knowledge about Spirullina and its cultivation.	U
		CO2: Gain in depth knowledge about edible mushroom and its cultivation	U
		CO3: Acquire a thorough understanding of the importance of probiotics in human health and their production on a large scale	U
		CO4: Get an awareness of the availability of natural pigment and its application, Bio fertilizers and their application	U
		CO5: Imbibe knowledge on the various marketing strategy such as patenting, trade mark, marketing, license procurement etc	P

B.Sc Mathematics

I Year: I Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
ALGEBRA & TRIGONOMETRY	134C1A	**CO 1:** Classify and Solve reciprocal equations	**U**
		CO 2: Find the sum of binomial, exponential and logarithmic series	**R**
		CO 3: Find Eigen values, eigen vectors, verify Cayley – Hamilton theorem and diagonalize a given matrix	**U&R**
DIFFERENTIAL CALCULUS	134C1B	**CO 1:** : Find the nth derivative, form equations involving derivatives and apply Leibnitz formula	**U**
		CO 2: Find the partial derivative and total derivative coefficient	**R**
		CO 3: Determine maxima and minima of functions of two variables and to use the Lagrange's method of undetermined multipliers	**U&R**
PHYSICS – I	134E1A	**CO 1:** Explain types of motion and extend their knowledge in the study of various dynamic motions analyze and demonstrate mathematically. Relate theory with practical applications in medical field. CO2 CO3	**U**
		CO 2: Explain their knowledge of understanding about materials and their behaviors and apply it to various situations in laboratory and real life. Connect droplet theory with Corona transmission.	**R**
		CO 3: Comprehend basic concept of thermodynamics concept of entropy and associated theorems able to interpret the process of flow temperature physics in the back ground of growth of this technology	**U&R**
BRIDGE MATHEMATICS	134B1A	**CO 1:** Prove the binomial theorem and apply it to find the expansions of any (x + y)n and also, solve the related problems	**U**
		CO 2: Find the various sequences and series and solve the problems related to them. Explain the principle of counting.	**R**
		CO 3: Find the number of permutations and combinations in different cases. Apply the principle of counting to solve the problems on permutations and combinations	**U&R**
I Year: II Semester			
ANALYTICAL GEOMETRY	134C2A	**CO 1:** Find pole, polar for conics, diameters, conjugate diameters for ellipse and hyperbola	**U**
		CO 2: Find the polar equations of straight line and circle, equations of chord, tangent and normal and to find theasymptotes of hyperbola	**R**
		CO 3: Explain in detail the system of Planes	**U&R**
INTEGRAL CALCULUS	134C2B	**CO 1:** Determine the integrals of algebraic, trigonometric and logarithmic functions and to find thereduction formulae CLO 2: CLO 3:	**U**
		CO 2: Evaluate double and triple integrals and problems using change of order of integration	**R**
		CO 3: Solve multiple integrals and to find the areas of curved surfaces and volumes of solids ofrevolution	**U&R**
PHYSICS –II	134E2A	**CO 1:** Explain the concepts of interference diffraction using principles of superposition of waves and rephrase the concept of polarization based on wave patterns	**U**

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		CO 2: Outline the basic foundation of different atom models and various experiments establishing quantum concepts. Relate the importance of interpreting improving theoretical models based on observation. Appreciate interdisciplinary nature of science and in solar energy related applications.	**R**
		CO 3: Summarize the properties of nuclei, nuclear forces structure of atomic nucleus and nuclear models. Solve problems on delayrate half-life and mean-life. Interpret nuclear processes like fission and fusion. Understand the importance of nuclear energy, safety measures carried and get our Govt. agencies like DAE guiding the country in the nuclear field.	**U&R**
LATEX	134S2C	**CO 1:** : Know the essential of LaTeX, Document Classes and the Overall Structure	**U**
		CO 2: Know the Packages, Inputting Files, Inputting Pictures, Making a Bibliography	**R**
		CO 3: Prepare the Sample Article, Sample Report, Sample presentation and Sample Poster	**U&R**
Practical II	LECTIVE PHYSICS PRACTICAL–II	**CO 1:** To describe the basic concepts of relativity like equivalence principle, inertial frames and Lorentz transformation. Extend their knowledge on concepts of relativity and vice versa.	**U**
		CO 2: Relate this with current research in this field and get an overview of research projects of National and International importance, like LIGO, ICTS, and opportunities available.	**R**
		CO 3: Summarize the working of semiconductor devices like junction diode, Zenerdiode, transistors and practical devices we daily use like USB chargers and EV charging stations.	**U&R**
II Year: III Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
DIFFERANTIAL EQUATION	SM23B	**CO 1:** Determine solutions of homogeneous equations, non-homogeneous equations of degree onein two variables, solve Bernoulli's equations and exact differential equations	**U**
		CO 2: Find the solutions of equations of first order but not of higher degree and to determineparticular integrals of algebraic, exponential, trigonometric functions and their productsFind the solutions of equations of first order but not of higher degree and to determineparticular integrals of algebraic, exponential, trigonometric functions and their products	**R**
		CO 3: Find solutions of simultaneous linear differential equations, linear equations of second orderand to find solutions using the method of variations of parameters	**U&R**
ANALYTICAL GEOMETRY	SM23A	**CO 1:** : Find pole, polar for conics, diameters, conjugate diameters for ellipse and hyperbola CLO	**U**
		CO 2: Find the polar equations of straight line and circle, equations of chord, tangent and normal and to find theasymptotes of hyperbola	**R**
		CO 3: Explain in detail the system of Planes	**U&R**

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CHEMISTRY I	SD3AB	**CO 1:** gain in-depth knowledge about the theories of chemical bonding, nuclear reactions and its applications.	**U**
		CO 2: evaluate the efficiencies and uses of various fuels and fertilizers	**R**
		CO 3: explain the type of hybridization, electronic effect and mechanism involved in the organic reactions	**U&R**
II Year: IV Semester			
TRANSFORM TECHNIQUES	SM24A	**CO 1:** : Expansion of Periodic Functions of Period 2, Expansion of Odd and Even Functions,Half Range Fourier Series and Change of Intervals	**U**
		CO 2: Find the Fourier Transforms, Infinite Fourier Transforms and their properties	**R**
		CO 3: Evaluate Fourier sine and cosine transform, Parseval's identity and learn convolution theorems.	**U&R**
STATICS	SM24B	**CO 1:** Define Projectile, impulse, impact and laws of impact. Prove that the path of a projectile is a parabola. Find the direct and oblique impact of smooth elastic spheres	**U**
		CO 2: Define Moment of a force and Couple with examples. Define Parallel Forces and Forces acting along a Triangle, Solve problems on frictional forces	**R**
		CO 3: Define central orbits, explain conic as centered orbits and solve problems related to central orbits	**U&R**
CHEMISTRY II	SD3AD	**CO 1:**) On completion of the course the students should be able to write the IUPAC name for complex, different theories to explain the bonding in coordination compounds and water technology	**U**
		CO 2: explain the preparation and property of carbohydrate, amino acids and nucleic acids.	**R**
		CO 3: apply/demonstrate the electro chemistry principles in corrosion, electroplating and fuel cells. .	**U&R**
CHEMISTRY PRACTICALS I& II		**CO 1:** gain in-depth knowledge about the theories of chemical bonding, nuclear reactions and its applications.On completion of the course the students should be able to write the IUPAC name for complex, different theories to explain the bonding in coordination compounds and water technology	**U**
		CO 2: Define Moment of a force and Couple with examples. Define Parallel Forces and Forces acting along a Triangle, Solve problems on frictional forcesexplain the preparation and property of carbohydrate, amino acids and nucleic acids	**R**
		CO 3: explain the type of hybridization, electronic effect and mechanism involved in the organic reactions outline the various type of photochemical process	**U&R**
III Year: V Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
ALGEBRAIC STRUCTURES I	SM25A	**CO 1:** Explain groups, subgroups and cyclic groups	**U**
		CO 2: Explain about Normal subgroup, Quotient groups, Homomorphisms and Automorphisms and verify the functions for homomorphism and automorphism properties	**R**

		CO 3: Explain Permutation groups and apply Cayley's theorem to problems	**U&R**
REAL ANALYSIS I	SM25B	**CO 1:** Explain the concepts of Continuous and Discontinuous functions, open and close sets, Connectedness, Completeness and Compactness	**U**
		CO 2: Explain the concepts of bounded and totally bounded sets, continuity of inverse functions and Uniform continuity	**R**
		CO 3: Define the sets of measure zero, to Explain about the existence and properties of Riemann integral	**U&R**
DYNAMICS	SM25C	**CO 1:** Define Resultant, Component of a Force, Coplanar forces, like and unlike parallel forces, Equilibrium of a Particle, Limiting equilibrium of a particle on an inclined plane. CLO 2: CLO 3:	**U**
		CO 2: Define Moment of a force and Couple with examples. Define Parallel Forces and Forces acting along a Triangle, Solve problems on frictional forces	**R**
		CO 3: Define work, energy, power, rectilinear motions under varying forces. Define Simple Harmonic Motion and find its Geometrical representation.	**U&R**
DISCREATE MATHEMATICS	SM25D	**CO 1:** Students will gain an understanding of the Basic definition of Logics with examples.	**U**
		CO 2: Students will gain knowledge of Predicate Logic.	**R**
		CO 3: Students will be able to implement and evaluate types of Lattices and Boolean Algebra	**U&R**
PROGRAMMING LANGUAGE "C"	SM45A	**CO 1:** Recalling various concepts relating to languages and applications	**U**
		CO 2: Understanding various functions of C++ language	**R**
		CO 3: Applying various classes and objects	**U&R**
PROGRAMMING LANGUAGE "C" (PRACTICALS)	SM451	**CO 1:** : Analyzing different types of inheritance system	**U**
		CO 2: Understanding working bout files and exception handling	**R**
		CO 3: Understanding various functions of C++ language	**U&R**
III Year: VI Semester			
ALGEBRAIC STRUCTURES II	SM26A	**CO 1:** Acquire a detailed knowledge about vector spaces and subspace	**U**
		CO 2: Explain the concepts of Linear Dependence, Linear Independence, Bases and Dimension of basis	**R**
		CO 3: Explain the concept of Linear Transformations, their Matrix representation and the notion of dual spaces	**U&R**
REAL ANALYSIS II	SM26B	**CO 1:** Explain the concept of differentiability and to Explain Rolle's theorem, Law of mean, and Fundamental theorem of calculus	**U**
		CO 2: Explain the point wise and uniform convergence of sequence of function and to derive the Taylor's theorem	**R**
		CO 3: the Cauchy integral formula, Liouvlle's theorem, Fundamental theorem of Algebra and Maximum Module Principle	**U&R**
COMPLEX ANALYSIS	SM26C	**CO 1:** Explain about analytic functions, their differentiation and continuity and to verify the Harmonic functions using analyticity conditions CLO 2: CLO 3:	**U**
		CO 2: Explain the concept of Conformal mappings and mappings by linear transformations and linear fractional transformations	**R**
		CO 3: Explain about the integrations of functions over simply and multiply connected domains and to derive	**U&R**

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GRAPH THEORY	SM4AG	**CO 1:** : Graphs, representation of graphs and basic concepts	**U**
		CO 2: Eulerian, Hamiltonian properties	**R**
		CO 3: Bipartite graph, tree and connectivity	**U&R**
OPERATION RESEARCH	SM4AH	**CO 1:** analyze and evaluate deterministic inventory control model.	**U**
		CO 2: CO2 describe the concept of Queueing theory.	**R**
		CO 3: demonstrate the concept of network models.	**U&R**

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BSc COMPUTER SCIENCE

Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: I Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Problem solving using Python	125C1A	CO 1: Develop and execute simple Python programs	E
		CO 2: Write simple Python programs using conditionals and looping for solving problems	P
		CO 3: Decompose a Python program into functions	U
Problem Solving using Python Lab.	125C11	CO1:To understand the problem solving approaches	U
		CO2: To learn the basic programming constructs in Python	U
		CO3: To practice various computing strategies for Python-based solutions to real world	P
Mathematics I	125E1A	CO1: Understand the concepts of Summation of Series.	U
		CO2: Understand the concepts of Cayley Hamilton Theorem and inverse matrices.	U
		CO3: Understand the concepts off initedifferences.	U
		CO4: Understand the knowledge about expansions, hyperbolic and inverse hyperbolic functions.	U
Skill Enhancement Course: Office Automation	125S1A	CO1: Understand the basics of computer systems and its components.	**U**
		CO2: Understand and apply the basic concepts of a word processing package.	**U**
		CO3: Understand and apply the basic concepts of electronic spreadsheet software.	**U**
Foundation Course: Fundamentals of Computers	125B1A	CO1:Fundamental concepts of computer	**U**
		CO2: Fundamental mathematical techniques and how they relate to computer	**U**
		CO3: The architecture of processing and file storage in a computer system	**P**
Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: II Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Computer Organization	125C2A	CO1: Remember the Basic binary codes and their conversions. Binary concepts are used in Microprocessor programming and provide a good understanding of the architecture of 8085.	**R**
		CO2: Understanding the 8085 instruction set and their classifications, enables the students to write the programs easily on their own using different logic.	**U**
		CO3: Applying different types of instructions to convert binary codes and analysing the outcome. The instruction set is applied to develop programs on multibyte arithmetic operations.	**P**

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Computer Organization Lab	125C21	CO 1: Remember the Basic binary codes and their conversions. Binary concepts are used in Microprocessor programming and provide a good understanding of the architecture of 8085.	**R**
		CO2:Understanding the 8085-instruction set and their classifications, enables the students to write the programs easily on their own using different logic.	**U**
		CO3: Applying different types of instructions to convert binary codes and analysing the outcome. The instruction set is applied to develop programs on multibyte arithmetic operations	**P**
Mathematics - II	125E2A	CO1: Understand the various concepts of Bernoulli's and Reduction Formula.	**U**
		CO2:Understand the concepts of Fourier Series	**U**
		CO3:Understand the concepts of Non-Homogenous and Partial Differential Equations	**U**
Quantitative Aptitude	125S2A	CO1: To gain knowledge on LCM and HCF and its related problems	**U**
		CO2: To get an idea of age, profit and loss related problem solving.	**U**
		CO2:Able to understand time series simple and compound interests	**U**
Problem Solving Techniques	125S2B	CO1: Understand the systematic approach to problem solving.	**U**
		CO2: Know the approach and algorithms to solve specific fundamental problems	**U**
		CO3: Understand the efficient approach to solve specific factoring-related problems	**U**
II Year: III Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Language through Literature I	LZ13B	CO1: Extend their vocabulary and use them appropriately to communicate in contexts.	**U**
		CO2: Infer the commonly occurring errors to avoid committing them in language use.	**U**
		CO3: Demonstrate improvement in their pronunciation.	**U**
Java and Data structures	SE23A	CO1: Develop Java Standalone applications and Applets.	**P**
		CO2: Choose the appropriate data structure for modelling a given problem	**P**
Data structures using java Lab	SE231	CO1: Write functions to implement linear and non-linear data structure operations	**P**
		CO2: Suggest appropriate linear and non-linear data structure operations for solving a given problem.	**P**
Statistics I	SP3AA	CO1: Understand the statistics and its Applications.	**A**
		CO2: Recall the meaning & definition of statistics, concept of collection, tabulation and presentation of statistical data.	**U**
		CO3: Illustrate the concept of measures of central tendency.	**U**
		CO4: Analyze statistical data using measures of dispersion and location	**U**
Essentials of Language and	TSSEB	CO1: Interpret the process and concepts pertaining to listening, speaking and reading.	**U**
		CO2: Demonstrate their writing skills to fulfill the requirements	**U**

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Communication Skills		for employment.	
		CO3: Demonstrate their ability to use Business correspondences and its types.	**U**
II Year: IV Semester			
Language through Literature -II	LZ14B	CO1: Show the ability to gather ideas and information to collaborate and write with clarity and ease	**U**
		CO2: Demonstrate different kinds of writing	**U**
		CO3: Show the ability to Construct itineraries, Check list and Write about Social events, festivals, Sports, nature and environment	**U**
Web Technology	SE24A	CO1: Understand the general concepts of PHP Scripting Language for the development of Internet Websites	**A**
		CO2: Understand the basic function of MySQL, Database program and XML concepts	**A**
		CO3: Learn the relationship between the client side and server side scripts	**U**
Web Technology Lab	SE241	CO1: Obtain the Knowledge and develop application program using Python	**P**
		CO2: Create dynamic Web Application such as content Management,User Registration,and e-commerce using PHP and to understand the ability to post and publish a PHP website.	**P**
		CO3:Develop a MySQL database and establish connectivity	**P**
Statistics-II	SP3B	CO1: Apply the basic concepts of probability in real life problems	**A**
		CO2: Identify the basic characteristics of discrete distributions	**I**
		CO3: Identify the basic characteristics of continuous distributions	**I**
EVS	ENV4B	CO1: Explain the concepts of ecosystem and biodiversity	**U**
		CO2 : Explain the environmental problems, policies, and practices	**U**
III Year: V Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Computer Network	SE25A	CO1: Analyze different network models.	A
		CO2: Describe, analyze and compare a number of data link, network and transport layer	U
		CO3: Analyzing key networking protocols and their hierarchical relationship in the conceptual modal like TCP/IP and OSI	A
Operating System	SE25B	CO1: Understand the structure and functions of Operating System	U
		CO2: Compare the performance of Scheduling Algorithms	U
		CO3: Analyze resource management techniques.	A
Relational Database Management System	SE25C	CO1: Describe basic concepts of database system.	U
		CO2: Design a Data model and Schemas in RDBMS	C
		CO3: Competent in use of SQL.	P
Operating System Lab	SE251	CO1: Understand the process management policies and scheduling process by CPU.	U
		CO2: Analyze the memory management and its allocation policies.	A

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		CO3: Evaluate the requirement for process synchronization.	E
PL/SQL Lab	SE252	CO1: Implement the DDL, DML, Commands and Constraints.	P
		CO2: Create, Update and query on the database.	P
		CO3: Design and implement simple project with Front End and Back End.	P
Artificial Intelligence and Expert System	SE45A	CO1: Gain a working knowledge of the foundations of modern applications in Artificial intelligence, heuristic search, knowledge representation and logic.	U
		CO2: Outline the heuristic search, knowledge representation and Expert Systems.	U
		CO3: Understand and compare the Algorithms.	U
Value Education	VAE5Q	CO1: Understand the basic concept of values in life.	U
		CO2: Acquire the values oriented to education in life.	A
III Year: VI Semester			
Software Engineering	SE26A	CO1: Specify software requirements, design the software using tools.	P
		CO2: Write test cases using different testing techniques.	P
Introduction to Data Science	SE26B	**CO 1:** Describe what Data Science is, What Statistical Interference means, probability distributions, fit a model to data and use tools for basic analysis and Communication. Science practice.	U
Introduction to Cloud Computing	SE26C	CO1: Explain and apply levels of service of cloud.	U
		CO2: Describe the security aspects in cloud.	U
		CO1: Explain and apply levels of service of cloud.	A
Case Tools and Testing Tools Lab	SE261	CO1: Analyze and Design the problem at hand.	P
		CO2: Use UML tools for the designing the software and test the correctness and soundness of their software through testing tools.	U
Mobile Computing	SE45D	CO1: Explain the basics of mobile telecommunication system.	P
		CO2: Choose the required functionality at each layer for given application.	P
		CO3: Use simulator tools and design Ad hoc networks and develop a mobile application.	U
Mini Project	SE46Q	CO1: Build real time software development environment.	A
		CO2: Gain a thorough knowledge in the problem and make use of the selected language /software for solving the problem.	P

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BSc Electronics And Communication Science

Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: I Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Circuit Theory	129C1A	**CO 1:** Differentiate between passive and active components	**R**
		CO 2: Identify different types of inductors and types of cores in transformers.	**U &A**
		CO 3: Apply Ohm's Law to calculate voltage, current, and resistance in simple electrical circuits.	**P**
		CO 4: Define the Superposition Theorem, Thevenin's Theorem and Norton's Theorem.	**U**
		CO 5: Explain the operation of filters and values in AC signals.	**E**
Mathematics-I	129E1A	**CO 1:** Understand the concepts of Summation of Series	**U**
		CO2: Understand he concepts of Cayley Hamilton Theorem and inverse matrices.	**E&U**
		CO 3: Understand the concepts of finite differences.	**U&A**
		CO4: Understand the knowledge about expansions, hyperbolic and inverse hyperbolic functions.	**P&E**
		CO 5: Understand the concept of Leibnitz theorem and functions of two variables	**U&C**
Home Appliances and Wiring	129S1A	**CO 1:** Define the basics of home appliances and wiring	**E**
		CO 2: Identify of various tradition and modern electronic gadgets.	**P&U**
		SCO 3: Implement the fundamentals of wiring	**R**
		CO 4: Demonstrate the utilization of home appliances, Electricity billing, and installation and safety procedures.	**U&P**
Handling of Domestic Appliances	109B1A	**CO 1:** Identify the circuits of Fan and luminous light	**U&C**
		CO 2: Perform fuse replacement	**U&P**
		CO 3: Describe switches and its power rating.	**U&E**
Core Practical I	129C1B	**CO 1:** To apply circuit theorems to simplify and find solutions to electrical circuits	**R&A**
		CO 2: To solve simple circuits using ohm's law, Kirchhoff's laws and the properties of the elements.	**U&A**
		CO 3: To build up basic problem solving skills through organizing available information andapplying circuit laws.	**U&C**
		CO 4: To Build up strong problem solving skills by effectively formulate a circuit problem into a mathematical problem using circuit laws and theorems.	**A**
		CO 5: To Simplify circuits using series and parallel equivalents and using Thevenin and Norton equivalents.	**E&A**

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Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: II Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Electronic Devices	129C2A	**CO 1:** Recognize the diodes as rectifiers	**R**
		CO 2: Identify the operation of transistors and as switching circuits	**U&P**
		CO 3: Compare the operation of transistors and FETs	**U&E**
		CO 4: Describe the fundamental operation of semiconductor electronic devices	**A&C**
		CO 5: Explain the operation of SCR or Thyristor device and control and convert V & I	**U,R&C**
Mathematics II	129E2A	**CO 1:** Understand the various concepts of Bernoulli's and Reduction Formula.	**U&R**
		CO 2: Understand the concepts of Fourier Series	**U&A**
		CO 3: Understand the concepts of Non-Homogenous and Partial Differential Equations	**C**
		CO 4: Understand the Laplace Transforms	**R&A**
		CO 5: Understand the concepts of Vector Differentiation.	**E&U**
Printed Circuit Board Design	129S2A	**CO 1:** Understand a single layer and multilayer PCB	**U&R**
		CO 2: Create and fabricate a PCB	**C**
		CO 3: Evaluate and test a PCB	**U&E**
Soldering Practices	129S2B	**CO 1:** Removing and replacing conformal coating to access components for network	**R&U**
		CO 2: Repairing damaged holes needed for soldering	**U&C**
		CO 3: Broken or lifted metal trace repair using jumper wires, sealers, and adhesives	**C**
Electronic Devices Practical-I	129C21	**CO 1:** Recognize the diodes as rectifiers	**U&R**
		CO 2: Identify the operation of transistors and as switching circuits.	**P&C**
		CO 3: Compare the operation of transistors and FETs	**A&E**
II Year: III Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Analog Electronics	SG23A	**CO 1:** Design and analyze of electronic circuits,	**U**
		CO 2: Recognize power amplifier circuits, their design and uses in electronics andcommunication circuits.	**A&P**
		CO 3: Know the concept of Multistage and feedback amplifier and their characteristics Know the concept of Multistage and feedback amplifier and their characteristics	**A&E**
		CO 4: Design the different oscillator circuits for various frequencies Design the different oscillator circuits for various frequencies	**U**

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		CO 5: Design of circuits using Operational Amplifier and IC 555 Design of circuits using Operational Amplifier and IC 555	**P&C**
Digital Electronics	SG23C	**CO 1:** Identify the structure of various number systems and its application in digital design	**U**
		CO 2: Analyze various combinational and sequential circuits.	**R**
		CO 3: Analyze how to interface digital circuits with analog components.	**A&E**
Numerical Methods	SG23B	**CO 1:** Demonstrate the mathematical skills of the students in the areas of numerical methods	**U**
		CO 2: Analyze the accuracy of common numerical methods	**P**
		CO 3: Categorize to solve the numerical problems.	**A**
Allied Basic Physics-I	SG33A	**CO 1:** Define the basics of properties of matter, how Young's modulus and rigidity modulus aredefines and how they are evaluated for different shapes of practical relevance	**U&A**
		CO 2: Describe the fundamentals of harmonic oscillator model, including damped and forced oscillators and grasp the significance of terms like quality factor and damping coefficient.	**U&P**
		CO 3: Describe the general equation of wave motion in general and TM waves in stretchedstrings and longitudinal waves in gases.	**E&U**
		CO 4: Recognize the general terms in acoustics like intensity, loudness, reverberation etc., andstudy in detail about production, detection, properties and uses of ultrasonic waves	**A&E**
Core Practical-III	SG231	**CO 1:** To analyze the operation of single stage amplifier. .	**U&A**
		CO 2: To analyze operation of multistage amplifiers	**A&E**
		CO 3: To analyze operation of the negative feedback amplifier. To analyze operation of the negative feedback amplifier.	**U,P&E**
		CO 4: To analyze operation of power amplifiers	**U&C**
Core Practical-IV	SG232	**CO1:** Explain number systems, basic logic gates, Boolean algebra and define characteristics of logic families and calculate their parameters. Explain number systems, basic logic gates, Boolean algebra and define characteristics of logic families and calculate their parameters.	**U&A**
		CO 2: Illustrate the working mechanism and design guidelines of different combinational circuits in the digital system.	**A & E**
		CO 3: Analyze the working mechanism and design guidelines of different sequential circuits.	**U & P**
		CO 4: Evaluate the fundamental knowledge of analog and digital electronics to get different types analog to digitalized signal and vice-versa converters in real world with different changing circumstances.	**U&C**
II Year: IV Semester			
Principles of Communication	SG24A	**CO 1:** Describe the basic principles of communication system	**U**
		CO2: Differentiate analog and digital communication systems.	**U & P**
		CO 3: Demonstrate the parameters for various types of modulation and demodulation techniques.	**U & A**
		CO 4: Identify basic communication problem	**E**

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Programming in C	SG24B	**CO 1:** Implement programs using Functions, Pointers and Structures in C language	U
		CO 2: Implement files and perform file operations.	**P & A**
		CO 3: Perform the execution of programs written in C language Perform the execution of programs written in C language	E&C
		CO 4: Identify the C code for a given algorithm.	**U,P & R**
Microprocessor-Intel 8085	SG24C	**CO 1:** Describe the architecture of 8085 microprocessor	**U**
		CO 2: Analyze assembly language programs	**U & P**
		CO 3: Implement program efficiency using various addressing modes	**U & E**
		CO 4: Perform Interfacing of memory & various I/O devices with 8085 microprocessor	**C**
Allied Basic Physics – II	SG34A	**CO 1:** Define the basic concepts behind Optics, Nuclear Properties and Radio Activity.	**U & P**
		CO 2: Describe the basics in Laser.	**U**
		CO 3: Implement the applications of Fibre Optics.	**U & C**
Core Practical V	SG242	**CO 1:** Understand and apply the fundamentals of assembly level programming of microprocessors and microcontroller.	**U & C**
		CO 2: Work with standard microprocessor real time interfaces including GPIO, serial ports, digital-to-analog converters and analog-to-digital converters.	U & A
		CO 3: Troubleshoot interactions between software and hardware.	**A**
		CO 4: Analyze abstract problems and apply a combination of hardware and software to address the problem.	P
		CO 5: Use standard test and measurement equipment to evaluate digital interfaces.	**A**
ALLIED BASIC PHYSICS-I & II (PRACTICAL)	SG341	**CO 1:** Apply various Physics concepts to understand concepts of Light, electricity and magnetism and waves, set up experimentation to verify theories, quantify and analyses, able to do error analysis and correlate results	**U**
		CO 2: Explain the concepts of interference diffraction using principles of superposition of waves and rephrase the concept of polarization based on wave patterns	**U & A**
III Year: V Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Microcontroller	SG25A	**CO 1:** Describe the architecture of 8051 microcontroller.	**U & A**
		CO 2: Describe the operation of microcontroller	**U**
		CO 3: Implement the machine language programming	**A**
		CO 4: Demonstrate keyboard, display, stepper motor, ADC & DAC interfaces	**U**
		CO 1: Categorize DC and AC indicating instruments.	**U**
		CO 2: Recognize various AC and DC bridges.	**P**

Electrical and Electronic Instrumentation	SG25B	**CO 3:** Recognize the basic features of oscilloscope and different types of oscilloscopes.	**A**
		CO 4: Identify the complete knowledge of various electronics instruments/transducers to measurethe physical quantities in the field of science and technology.	**U & R**
Antenna Theory and Radar System	SG25C	**CO 1:** Define the concept of Antenna parameters and types.	**U**
		CO 2: Explain the fundamental concepts of television transmission, reception and scanning methods.	**U & R**
		CO 3: Define the fundamental concepts of Wave Propagation.	**U**
		CO 4: Describe the working principles of latest digital TV and HDTV, LED and OLED. Recognize the concept of RADAR.	**U,A & P**
Industrial Electronics	SG4AC	**CO 1:** Explain the principle and application of Thyristor.	**U**
		CO 2: Implement the triggering mechanism in various applications.	**U**
		CO 3: Describe the basic operation of Invertors.	**U**
		CO 4: Analyze the applications of LASER, Ultrasonic and Radar in various fields.	**U & A**
Core Practical - VI	SG251	**CO1** Design and implement 8051 microcontroller based systems	**U**
		CO 2 To Understand the concepts related to I/O and memory interfacing	**U**
		CO 3 Prepare professional quality textual and computational results, incorporating accepted data analysis and synthesis methods, simulation software, and word-processing tools.	**U & A**
Value Education	VAE5Q	**CO 1:** Know the values of human life.	**U**
		CO 2: Know the ethics in everyday life and analyze the behavior of day to day life.	**U**
		CO 3: Apply the concept of love and relations.	**U**
III Year: VI Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Computer Network	SG26A	**CO 1:** Explain the OSI Reference Model	**U**
		CO 2: Analyze the requirements for a given organizational structure and select the most appropriatenetworking architecture and technologies	**U & A**
		CO 3: Describe the functions of Physical, Data Link, Network layers in OSI model	**U & P**
		CO 4: Define the transport, session and presentation layers	**U**
Real Time Embedded System	SG26B	**CO 1:** Explain Arduino environment and its applications	**U & P**
		CO 2: Design Smart systems applications	**P**
		CO 3: Implement circuits using Arduino Perform Raspberry Pi using the programming language Python	**A & E**
		CO 4: Analyze the IOT based applications.	**A**
		CO 1: Describe the origin of bio potentials and explain the role of bio potential electrodes	**U**

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BioMedical Instrumentation	SG26C	**CO 2:** Design and operate bio potential amplifiers	**U**
		CO 3: Describe common biomedical signals and distinguish characteristic features	**U & E**
		CO 4: Measure biomedical information and Demonstrate the position of biomedical instrumentation in modern hospital care.	**U & A**
Consumer Electronics	SG4AD	**CO 1:** Explain the functions of microwave oven	**U**
		CO 2: Perform electronic fund transfer and online ticketing	**U**
		CO 3: Describe the working of Air conditioner and Refrigerator	**U**
		CO 4: Define the basics behind facsimile machine, calculators and digital clocks	**U & A**
Core Practical - VII	SG261	**CO 1:** Embedded System design : Basics	**U**
		CO 2: Learning Arduino Platform	**U & P**
		CO 3 : The basic sensors and actuators using Arduino	**U & P**
Project	SG26Q	**CO 1:** Identify various technologies and fields for making project.	**U**
		CO 2: Understand the process to make reports and presentations.	**A**
		CO 3: Apply engineering knowledge to solve various industrial problems	**U & R**
		CO 4: Analyze ethical practices and tools used for different technologies.	**U & P**

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BSc HOTEL AND CATERING MANAGEMENT

Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: I Semester			
Course Name and Course Code		Course Outcome	Cognitive Level
Basic Course in Food Production	133C1A	CO 1: Able to understand the basic food commodities	U
		CO 2: Able to understand the different cooking styles and gain knowledge on kitchen equipment's	U
		CO 3: Able to prepare different continental recipes	P
Basic Course in Food and Beverage Service	133C1B	CO 1: The Student will gain basic knowledge about Hospitality and Catering sector.	U
		CO 2: The student will learn the staff hierarchy of food and beverage service department	U
		CO 3: The student will learn about the food & beverage outlets and their characteristics	U
Basic Course in Front Office –I	133E1A	CO 1: Create An Awareness To The Students About The Hospitality And Tourism Industry	C
		CO 2: Understand The Basic front office Role In Execution of the Hotel	U
		CO 3: Familiarize With The Classification and Operations of the Hotel	R
Nutrition and Food Science	133S1A	CO 1: To enable the students to understand the basics aspects of nutrition	U
		CO 2: To enhance their knowledge about various nutrients and its uses.	A
		CO 3: To enable students to obtain knowledge of vitamins and minerals present in foods	A
Tourism Management	133B1A	CO 1: Describe the essentials of Tourism and hospitality management.	E
		CO 2: Explain various motivational factors of tourism.	A
		CO 3: Distinguish various elements & components of tourism business	A
Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: II Semester			
Course Name and Course Code		Course Outcome	Cognitive Level
Food Production Operations	**133C2A**	CO 1: The students will able to know the Hierarchy and kitchen staffing and general layout of all kitchens.	U
		CO 2: The students will know about Rice, Cereals, Wheat, Flour, Pasta, Shorting's, Raising agents and sugar.	U
		CO 3: The students will know about indenting, purchasing, storage & portion control.	U
		CO 1: To introduce the students to the basics of Meal & Menu Planning.	U

Food and Beverage Operations	133C2B	CO 2: To teach the students about the extensive seventeen course French Classical Menu	R
		CO 3: To make them aware of different types of food service.	U
Accommodation And Front Office Operations-II	133E2A	CO 1: Understand The Bases For Establishing Room Tariff Such As Cost, Competition, Level Of Service, Location And Target Market	U
		CO 2: Study The Stages Of Guest Cycle During The Stay In Hotel And The Role Of FO In Taking The Guest Through Each Of These Stages	R
		CO 3: Understand The Welcoming Process In The First Phase Of The Guest Cycle And Room Selling Techniques	U
Hotel Accountancy	133S2A	CO 1: After completing the course, the students will be able to develop skills in advanced level of accounting methods applied in special types of business organizations.	C
		CO 2: Cite opportunities for education, training and career development in the hospitality industry.	A
		CO 3: Explain the relation of lodging and food service operations to the travel and tourism industry	U
Food Safety and Quality	133S2B	CO 1: To understand the concepts of safety enforcement, safety education, and risks.	U
		CO 2: The students will be able to gain knowledge about the principles and methods of preservation.	U
		CO 3: The students will be aware of types of infections, intoxications and types of adulterants.	U
Food Production Operations Lab	133C21	CO 1: The students will know about meat fabrication Chocolate, Milk, and Cream, Butter, Chesses and culinary items.	U
		CO 2: The students will know about different kitchen equipment's	U
		CO 3: The students will know able to do plating and improve presentation skills	U
Food and Beverage Operations Lab	133C22	CO 1: To introduce the students to the basics of Meal & Menu Planning.	C
		CO 2: To teach the students about the extensive seventeen course French Classical Menu.	R
		CO 3: To make them aware of different types of food service.	A
Accommodation And Front Office Operations Lab -II	133E21	CO 1: Create An Awareness To The Students About The Hospitality And Tourism Industry	A
		CO 2: Understand The Inevitability Of Front Office Functions	U
		CO 3: Familiarize With The Classification And Operations Of The Hotel	A

II Year: III Semester

Course Name and Course Code		Course Outcome	Cognitive Level
Food Production Operations		CO 1: To develop professional competence on quantity food production.	R
		CO 2: To enable students develop their skill in Indian cuisines	P

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	SH23A	based on different regions/states of India	
		CO 3: To provide in-depth knowledge on various sectors of volume feeding.	**U**
Food and Beverage Operations	SH23B	**CO 1:** To introduce the students to the basic of Alcoholic Beverages and Dispense Bar.	**U**
		CO 2: To teach the students about Wines.	**R**
		CO 3: To make them aware of different types of Beer.	**A**
Front Office Operations	SH23C	**CO 1:** FO accounting and its functions, different kinds of vouchers, various folios, ledgers, types of accounts and FO accounting cycle.	**U**
		CO 2: Fourth stage of guest cycle, departure procedures, modes of bill settlement, potential check out problems and its solutions.	**U**
		CO 3: Process of night audits, duties and responsibilities and its purpose.	**P**
Accommodation Operations	SH23D	**CO 1:** Enumerate areas of coordination between Linen & Laundry.	**R**
		CO 2: Will possess knowledge of various linen used in hotels, effective handling of linen par stock and possess purchase techniques of linen	**U**
		CO 3: Will be able to effectively reuse discarded linen.	**P**
Hotel Accounting system	SH33A	**CO 1:** Students will come with a detailed knowledge about uniform system of accounts in hotel industry	**R**
		CO 2: Students about the preparation of Income statement and balance sheet in a hotel	**U**
		CO 3: Students will aware of the importance of Internal Control	**U**
Personality Enrichment – Level – I	TSSEG	CO 1: Characteristics of Self-description, Disclosure and awareness	**U**
		CO 2: Handling putdowns technique and to manage provocations	**P**
		CO 3 : Using Techniques of memory enhancer, short term and long term goals and once ability to live a balanced life	**E**
Food Production Operations Lab	SH241	**CO 1:** Introduction to Indian cookery	**U**
		CO 2: Spices used in Indian cookery	**U**
		CO 3: Masalas - Concepts of masalas- Classification of masalas- Types of masalas	**R**
Food and Beverage Operations Lab	SH242	**CO 1:** To introduce the students to the basic of Alcoholic Beverages and Dispense Bar.	**U**
		CO 2: To teach the students about Wines service.	**R**
		CO 3: To make them aware of different types of Beer service.	**A**
Front Office Operations Lab	SH243	**CO 1:** Perceiving the front office accounting system followed in the hotel	**U**
		CO 2: Be acquainted with the procedures adopted during check out	**R**
		CO 3: Initiating the night auditing process	**P**
		CO 1: Effectively design the layout of linen room and laundry	**U**

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Accommodation Operations Lab	SH244	**CO 2:** Operational knowledge of various laundry equipment's and machineries	**R**
		CO 3: Understand and practice various stain removal techniques	**U**
Hotel Engineering and Maintenance Lab	SH245	**CO 1:** This practical will improve the basic knowledge of hotel maintenance accessories.	**U**
		CO 2: This practical will improve the maintenance of hotel equipment and safety equipment's.	**R**
		CO 3: Demonstration of usage of various fire extinguishers.	**P**
II Year: IV Semester			
Food Production Operations Lab	SH241	**CO 1:** Introduction to Indian cookery	**U**
		CO 2: Spices used in Indian cookery	**U**
		CO 3: Masalas - Concepts of masalas- Classification of masalas- Types of masalas	**R**
Food and Beverage Operations Lab	SH242	**CO 1:** To introduce the students to the basic of Alcoholic Beverages and Dispense Bar.	**U**
		CO 2: To teach the students about Wines service.	**R**
		CO 3: To make them aware of different types of Beer service.	**A**
Front Office Operations Lab	SH243	**CO 1:** Perceiving the front office accounting system followed in the hotel	**U**
		CO 2: Be acquainted with the procedures adopted during check out	**R**
		CO 3: Initiating the night auditing process	**P**
Accommodation Operations Lab	SH244	**CO 1:** Effectively design the layout of linen room and laundry	**U**
		CO 2: Operational knowledge of various laundry equipment's and machineries	**R**
		CO 3: Understand and practice various stain removal techniques	**U**
Industrial Exposure Training	SH24Q	**CO 1:** Students to choose (or) apply for IET in any reputed BRAND Hotels	**U**
		CO 2: After joining the IET, Students to get involved actively and to be part of the Hotel Operation Team	**R**
		CO 3: Students quickly learn the SOP of the Hotel Brand / Group.	**P**
Environmental Studies	ENV4B	CO1: Introduction to Environmental Studies	**U**
		CO2:Food Chain, food Web, Ecosystem	**R**
		CO3: Ecology and its pyramids, natural resources	**U**
Personality Enrichment Level –II	TSSEH	CO 1: The student will be able to understand, analyse develop and exhibit accurate sense of self.	**U**
		CO 2: Demonstrate knowledge of personal beliefs and values and a commitment to continuing personal reflection and reassessment.	**A**
		CO 3: Personal development goals give people a better understanding of their own strengths and weaknesses	**U**
III Year: V Semester			

Course Name and Course Code		Course Outcome	Cognitive Level
Advanced Food Production Operations - I	SH25A	**CO 1:** Students will acquire knowledge on functions of cold kitchen.	**U**
		CO 2: Students gain knowledge on preparing and presenting cold cuts	**U**
		CO 3: Students will able to identify and use different cooking equipment's in larder department	**A**
Advanced Food and Beverage Operations I	SH25B	**CO 1:** To introduce the students to the basic of Planning and Operating various F & B Outlet.	**E**
		CO 2: To teach the students about Banquets, Banquets protocols	**R**
		CO 3: To teach the students about Gueridon Service	**R**
Accommodation Management	SH25C	**CO 1:** Demonstrate step by step planning and organizing process for ensuring efficient, effective and economic operations of Housekeeping department.	**U**
		CO 2: To understand different concepts in budgeting.	**U**
		CO 3: To understand different types and styles of flower arrangements.	**U**
Hotel Financial Management	SH35A	**CO 1:** Students learn basics of financial management.	**R**
		CO 2: Students know how to analyses financial statement analysis.	**A**
		CO 3: Gain knowledge of implementing ratio.	**U**
Human Rights and Relation Education	SH35B	**CO 1:** It provides the student with the capacity to identify issues and problems relating to the realization of human rights	**A**
		CO 2: It helps to identify different aspects of human right of children and women	**A**
		CO 3: Students learn not only their basic rights but also can understand the duties to be carried out in the day to day.	**U**
Marketing and Sales	SH35C	**CO 1:** It introduces the student a insight to marketing mix	**R**
		CO 2: It helps the student to understand the four keys of marketing	**U**
		CO 3: It helps the Students to understand the sales and Management	**U**
Culinary Art	SH45A	**CO 1:** To summarize the students with the techniques and skills used for Quantitative production.	**U**
		CO 2: To Gain insight knowledge on Culinary Arts.	**R**
		CO 3: To Hone skills on Food plating techniques.	**A**
Value Education	**VAE5Q**	**CO 1:** Value are socially accepted norms to evaluate objects, persons and situations that form part and parcel of sociality.	**E**
		CO 2: Knowledge of the values are inculcated through education	**R**
		CO 3: It contributes in forming true human being, who are able to face life and make it meaningful	**C**
Advanced Food Production Operations lab –I	SH261	**CO 1:** Students will gain knowledge on classic French cuisine which includes method of preparation, standard recipes and plating techniques.	**U**
		CO 2: Students will acquire knowledge on food safety and personal Hygiene during the course of practical.	**U**

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		CO 3: Students will hone the skills and innovate and create new dishes and standard recipes.	**C**
Advanced Food and Beverage Operations Lab- I	SH262	**CO 1:** To make them aware of different types of Buffets.	**A**
		CO 2: To equip the students about the basic knowledge about Kitchen Stewarding.	**U**
		CO 3: To teach the students about Gueridon Service.	**U**
Accommodation Management Lab	SH263	**CO 1:** Knowledge on various first aid procedures	**U**
		CO 2: Devising and developing SOP	**C**
		CO 3: Designing of various training modules	**C**
III Year: VI Semester			
Advanced Food Production Operations –II	SH26A	**CO 1:** Students will acquire knowledge on different International cuisine with geographical location, Historic back ground, and different recipes	**R**
		CO 2: Students gain knowledge on Bread fabrication with preparation method and different toppings, icings used in bakery and confectionary department	**U**
		CO 3: Students will acquire insight about classical frozen dessert	**E**
Advanced Food and Beverage Operations – II	SH26B	**CO 1:** To teach the students about managing Food and Beverage Outlet	**R**
		CO 2: To make them aware of different types of Bar Operations.	**A**
		CO 3: To teach the students about Cocktails and mixed drinks.	**U**
Front Office Management	SH26C	**CO 1:** Different PMS (Micros, Fidelio, IDS, shawman, Opera)	**U**
		CO 2: Yield management strategies in case of high and low demand periods	**E**
		CO 3: Classification on the basis of ownership	**A**
Advanced Food Production Operations lab – I & II	SH261	**CO 1:** Students will gain knowledge on classic French cuisine which includes method of preparation, standard recipes and plating techniques.	**U**
		CO 2: Students will acquire knowledge on food safety and personal Hygiene during the course of practical.	**U**
		CO 3: Students will hone the skills and innovate and create new dishes and standard recipes.	**C**
Advanced Food and Beverage Operations Lab- I & II	SH262	**CO 1:** To teach the students about managing Food and Beverage Outlet.	**P**
		CO 2: To make them aware of different types of Bar Operations.	**A**
		CO 3: To teach the students about Cocktails and mixed drinks.	**U**
Front Office Management Lab	SH263	**CO 1:** Identify the yield management concept	**A**
		CO 2: Acquire knowledge in basic concepts of marketing	**U**
		CO 3: Develop new and upcoming techniques introduced in FO department	**E**
Project & Viva Voce		**CO 1:** Identify and clarify professional and career goals through critical analysis of the internship experience	**A**
		CO 2: Associate to a professional environment, how they can draw skills from experience and process challenges, how they can contribute to a company's project and teamwork	**E**

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	SH26Q	**CO 3:** Acquire a knowledge of workplace dynamics, professional expectations.	**U**
Application of Computers	SH36A	**CO 1:** The learners will understand the evolution of computer and application in business industry	**E**
		CO 2: Identify categories of programs, system software and applications. Organize and work with files and folders	**P**
		CO 3: The learners will get knowledge about Operating system enables you to solve complex, challenging problems in data operation.	**U**
Applications of Computer Lab	SH361	**CO 1:** Recognize when to use each of the Microsoft Office programs to create professional and academic documents.	**U**
		CO 2: Use Microsoft Office programs to create personal, academic and business documents following current professional and/or industry standards	**C**
		CO 3: They can able to analysis and use network devices	**A**
HACCP	SH36B	**CO 1:** To understand the basic concept of food safety in National (FSSAI) & International standards (HACCP)	**U**
		CO 2: To understand the different types of food safety and standards Act	**U**
		CO 3: To understand about the international food safety standards of HACCP	**U**
Food & Beverage Control and Management	SH36C	**CO 1:** Basic Cost Control with respect to the Hospitality Industry	**R**
		CO 2: To provide knowledge about basic Material Management Functions, Responsibilities & controlling measures.	**R**
		CO 3: To be familiar with Inventory Management	**R**
Bar Control Management	SH46A	**CO 1:** To introduce the students to the basic of Bar Operations.	**A**
		CO 2: To make them aware of various concerns of bar Operations.	**A**
		CO 3: To teach the students about various trends in Mixology	**A**
Guest Relation Management	SH46B	**CO 1:** Perceive outstanding Front Office personnel	**E**
		CO 2: Resolving critical situation	**E**
		CO 3: Articulating decision along with communication	**E**

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BSc VISUAL COMMUNICATION

Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: I Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Introduction To Human Communication	152C1A	**CO 1:** Define and differentiate between different types of communication, evaluate the impact of communication on society, and create effective communication strategies for different contexts.	**R**
		CO 2: Analyze communication processes and barriers, synthesize solutions to overcome communication barriers, and evaluate the effectiveness of communication strategies in real-world scenarios.	**A**
		CO 3: Apply nonverbal communication and active listening skills to improve interpersonal relationships, evaluate the effectiveness of communication skills in relationships, and create communication plans for building and maintaining professional relationships.	**P**
Visual Art And Aesthetics	152C1B	**CO 1:** To study the evolution of art and the various styles and movements in Western and Eastern art.	**U**
		CO 2: To analyze the role of art in society and the artist as an agent of change and understanding of the elements of art and principles of composition	**A**
		CO 3: To explore the connection between art and everyday life, including the role of aesthetics in enhancing the human experience.	**A**
Graphic Design And Typography	152E11	**CO 1:** To learn how to communicate effectively through graphic design	**U**
		CO 2: To acquire knowledge of different design elements and principles	**R**
		CO 3: To be able to apply design principles and skills to real-world graphic design projects.	**P**
Digital Drawing And Painting	152B1A	**CO 1:** Develop an understanding of Digital Painting and Drawing as an art form and as a visual effects technique, including the ability to differentiate it from other related disciplines such as concept art and fantasy art.	**C**
		CO 2: Acquire practical skills in digital painting and drawing tools and techniques, including using a digitizing tablet, customizing brushes, and creating patterns and textures.	**R**
		CO 3: Learn to apply fundamental principles of perspective, color, and lighting in the creation of paintings and drawings, including using atmospheric perspective, vanishing points, and different types of lighting.	**U**
Digital Storytelling And Scriptwriting	152S1A	**CO 1:** To understand the process involved in writing script and story development	**U**
		CO 2: To demonstrate understanding of techniques, principles, genres of story, and scriptwriting and analyze the process of research concepts and elements of the script	**U**
		CO 3: To Develop a story, characters, and dialogues for the script and Communicating clear ideas in the script, Review, Revision, and Edit scripts	**C**
I Year: II Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Understanding Visual Communication	152C2A	**CO 1:** Apply the principles of design and visual communication to create impactful and ethical visual communication that aligns with specific goals and objectives.	**P**
		CO 2: Demonstrate an understanding of the role of visual communication in shaping cultural, social, and political narratives, and critically evaluate the use of visual images in various contexts.	**P**

		CO 3: Develop and present a final project that showcases their ability to create effective visual communication, including narrative development, visual design, and ethical considerations.	**C**
Photography And Videography	152C21	**CO 1:** Demonstrate the proper use of cameras and equipment such as lenses, lighting, and composition.	**P**
		CO 2: Apply techniques for capturing portraits, landscapes, action shots, and low light scenes.	**P**
		CO 3: Analyse and critique photographs and videos for aesthetics and effectiveness and create a portfolio of photographs and short videos using skills and techniques from the course	**A**
Publication Design	152E22	**CO 1:** Utilize software and tools such as Adobe InDesign, Illustrator, and Photoshop to design and create print and digital media publications, advertising materials, and illustrations.	**P**
		CO 2: Analyse and evaluate the effectiveness of designs in terms of layout, composition, typography, and color palette selection.	**A**
		CO 3: Develop critical thinking and problem-solving skills by creating advertising campaigns and materials that are designed to meet the needs of a specific target audience, convey a message, and drive a call to action.	**C**
Image Editing And Color Management	152S21	**CO 1:** Understand the fundamental principles of digital photography and the importance of photo editing in enhancing digital images	**U**
		CO 2: Demonstrate the ability to manage color profiles and optimize images for different output formats, including print and web, while maintaining color accuracy and consistency.	**P**
		CO 3: Apply critical thinking and problem-solving skills to identify and resolve common issues in digital images, such as lens distortion, perspective distortion, and noise, using a range of photo editing techniques and tools	**P**
II Year: III Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Communication Aesthetics	BV23B	**CO 1:** Knowledge of computer technologies in communication design, the practice of design in professional areas, Commercial design applications in advertising, advertising campaign	**U**
		CO 2: Knowledge of animation in communication design, Animated Info graphic applications in professional areas like education, Medicine, Television and film making, 2D and 3D animation techniques, interactive graphic design, user interface design and design in mobile applications and e- content design .	**P**
		CO 3: Knowledge of design in social media, Social media advertising, mobile and social media design and the role of designer today. Color and its applications in design, Color symbolism and energy, Sight sound and motion in media.	**C**
Advertising And Publication Design	BV23A	**CO 1:** Knowledge of advertising ,History, types, principles and nature of advertising and its roles and function, corporate and promotional advertising, web advertising, advertising agency and media, full-fledged agency services, legal and ethical aspects of advertising .	**U**
		CO 2: Knowledge of planning in advertising business, client briefing, brand management, brand image responsibilities in advertising industry, ideas and concepts in advertising, layout designing and copy writing, slogans, logos, typography , story board, advertising campaign concept and execution.	**P**
		CO 3: Knowledge on advertising agency and its functions, Marketing strategies, Client Brief, Account Planning, Creative Strategy and Brief, Brand Management - Positioning, brand personality, brand image, brand equity.	**A**
		CO 1: Knowledge of publication design,graphic designing with the	**C**

Computer Graphics	BV331	relevant design software involved, Designing for advertising agency, commercial organizations, non-profit organizations, government agency and service industry	
		CO 2: Knowledge of designing the promotional materials for advertising, Newsletters, Packaging designs, Posters and product campaigns	**P**
		CO 3: Knowledge on Designing of any object for Interior decoration, Costume designing and designing portrait in digital painting mode.	**P**
II Year: IV Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Film Studies	BV24A	**CO 1:** Knowledge of Indian Cinema, Hollywood cinema, German expressionism, French impressionism and surrealism, soviet montage, cinema after coming of sound.	**U**
		CO 2: Knowledge of concept and screenplay writing, budget allocation, production and postproduction process, digital distribution, web series and over the top platforms(OTP)	**U**
		CO 3: Knowledge of Mis-en-scene technique, cinematographer's properties, Dimensions of editing and fundamentals of film sound, film form and genres in film, style and ideology in films	**A**
Basic Photography	BV24B	**CO 1:** Knowledge of human eye and camera, basics and types of camera and its operations. Types of lenses, filters, bellows and converters and photographic applications in mobile, understanding indoor and outdoor lighting, exposing and focusing, natural and artificial lighting and other photographic accessories	**A**
		CO 2: Knowledge of film speed, sensitivity, temperature, manipulation of colour and light, materials, processing of black & white and colour photography	**U**
		CO 3: Knowledge of Basic requirements and equipments in the developing process of photography, fixing ,washing and drying, special effects techniques and manipulation of images, aesthetic principles and basics of photojournalism, photo features, photo essays, caption writing, visual storytelling, advertising photography, consumer and industrial photography and casting.	**P**
Practical Photography	BV341	**CO 1:** Knowledge of taking photographs about landscape and natural scenaries, portraits, photo feature, photo language, silhouette, freezing movement, panoramic view, indoor photography, industrial photography, special effects, photojournalism, product photography, street photography and wildlife photography. .	**U**
		CO 2: Knowledge on camera handling and light settings and color theory to create quality images	**P**
		CO 3: Knowledge on composition rules, and also learn to take photos handheld or on a tripod and how to identify and apply suitable focal length	**A**

III Year: V Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Communication	BV25A	**CO 1:** Knowledge of understanding the media, role of social media in public opinion, effects and power of media and media in Indian society	**U**
		CO 2: Knowledge of media audience and audience theories, textual approaches to media, semiotics, Marxism, psychoanalysis, sociology and media realism, media industry, role of media in social change, social	**A**

Culture And Society		construction, media myth and cultural approaches to media.	
		CO 3: Knowledge of popular culture, culture and subculture, celebrity, hero worship and Acquisition and transformation of popular culture	**P**
Television Production	BV25B	**CO 1:** Knowledge of visualization, writing to visuals, TV and Ad films, telecasting standards, television crew, TV direction, art direction, floor management and budget, script writing principles and creative writing, story board screenplay writing, set design and researching the locations for shooting .	**U**
		CO 2: Knowledge of Basic camera mounts and camera techniques and operation, video formats, aspect ratio, white balance, camera angles and shot movements, types of lenses, filters, lighting for TV	**P**
		CO 3: Knowledge of video recording format, techniques in audio, various kinds of mic and audio recording, various applications of editing for TV, television graphics and special effects, audio techniques and background music and recording of live programs	**A**
Web Publishing	BV251	**CO 1:** Knowledge to design and develop web applications and integrate HTML coding in a web page	**C**
		CO 2: Knowledge of web publishing and its tools, webpage creation and its relevant designing software tools in the industry today.	**P**
		CO 3: Knowledge to create an information Architecture document for a Website.	**C**
Advertising Photography	BV252	**CO 1:** Knowledge of advertising photography and the process involved in making the advertising images for product promotion, creating trade characters, learning about montage techniques in photography and model photography.	**U**
		CO 2: Knowledge on Lightings, Studio Set Up, Product Photography for Advertising and Marketing	**P**
		CO 3: Knowledge on deep intricacies of Advertising Product Photography covering essential techniques, Lighting Composition and Post processing.	**C**
Audio And Video Editing Practical	BV253	**CO 1:** Knowledge of Audio and Video editing techniques for advertisements, PSA, story book, jingles, interviews, Video songs, learning video transitions, special effects techniques.	**U**
		CO 2: .Knowledge to design and create digital video project that incorporates audio and graphic elements.	**C**
		CO 3: Knowledge to capture and transfer digital audio and video from various devices and camera and to edit and compress video for use in different digital media delivery modes using standard editing software	**P**
III Year: VI Semester			
Visual Culture Of India And Tamilnadu.	BV26A	**CO 1:** Knowledge Visual culture of India and Tamil Nadu, about cinema, cartoons, photography, poster communication, wall paintings, monuments and Statues, Visual arts, Art galleries and Museums, Art Schools and its Functions	**U**
		CO 2: Knowledge of monuments and its maintenance through archeological survey of India	**U**
		CO 3: Knowledge of Popular culture, folk arts and artists, Storytelling and Storytellers, Theatre art and artist, Television and its Celebrities Social media functions, cartoons and cartoonists.	**P**
		CO 1: Knowledge of making short films in Television production with making proper script writing techniques. Knowledge of Handling video cameras and its accessories Knowledge on Hands on training in making short films and	**C**

TV Production Practice	BV261	documentaries and TV commercial.	
		CO 2: Knowledge of Handling video cameras and its accessories	**P**
		CO 3: Knowledge on Hands on training in making short films and documentaries and TV commercial	**P**
3 D Animation	BV262	**CO 1:** Knowledge of 3D animation and its techniques with relevant software used in the industry.	**U**
		CO 2: Knowledge in Creative aspects of animation technology and gets hands on training in the animation field.	**P**
		CO 3: Knowledge to execute and create concepts of ideas and techniques in computer generated, 2D&3D, Storyboard and Animatic.	**C**
Media Internship	BV26Q	**CO 1:** Knowledge from the media industry in advertising, photography, journalism, television channels, social media organizations, art direction, animation industry, film industry and various organizations which involves visual communication.	**U**
		CO 2: This internship gives exposure to the students and overview of media and its functions involved	**P**
		CO 3: This internship provides hands on training of field experience in help manage and create content for an organization different social media	**P**

B.Sc. PSYCHOLOGY

Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year - I Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
INTRODUCTION TO PSYCHOLOGY - I	140C1A	CO 1: Acquire knowledge on the history, methods and special areas in the field of Psychology	R
		CO 2: Explain sensory systems through which information processing happens	P
		CO 3: Relate the process of attention to perception and infer how we make sense of the world around us	A
		CO 4: Critically examine the process of learning	E
		CO 5: Gain insight into complex emotional experiences of human being and analyse the experience of self in day to day life.	R & A
BIOLOGICAL PSYCHOLOGY	140C1B	CO 1: Describe recent research methods and perspectives on the emerging field of Behavioural neuroscience and the reciprocal relationship between brain and behaviour.	U
		CO 2: Understand anatomy and functions of the basic cell of the nervous system and explain the process of communication between neurons	U
		CO 3: To understand and analyse the regulations of internal body states.	A
		CO 4: To understand the function of endocrine glands and relate the knowledge to Analyse various human behaviour.	R & A
		CO 5: Describe the complex orchestrated functioning of the nervous system describe the manifestation of biological deficits in behaviour.	U
BUILDING PSYCHOLOGICAL CAPITAL	140E1A	CO 1: To analyse the positive and negative approach and its effect on work determinants like, job motivation, satisfaction and performance.	A
		CO 2: To understand the role of self-efficacy and ways to improve it.	U
		CO 3: To distinguish the various conditions that implicate in developing hope and hopelessness and analyse ways to inculcate hope and build mental wellbeing.	U
		CO 4: To distinguish the ways to build optimism and locus of control for better performance.	U
		CO 5: To analyse and apply7C's Model of Resilience.	P & A
FOUNDATION COURSE - CAREERS AND ETHICS IN	140B1A	CO 1: Gain insight into various subfields in the field of psychology	U
		CO 2: Apply knowledge of psychology to formulate career choices.	E
		CO 3: Understand the purpose of ethics in psychological research	U

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PSYCHOLOGY		CO 4: Identify and address ethical concerns in human and animal research with consideration of the American Psychological Association's code of Ethics	U
		CO 5: Evaluate research studies for their adherence to ethical guidelines	E
SOCIAL WORK AND PERSONS WITH DISABILITY	140S0E	CO 1: Demonstrate understanding of the needs and problems of persons with disability.	U
		CO 2: Understand policies, programmes and services available to persons with disability	U
		CO 3: Point out skills and techniques of working with the differently able	A
		CO 4: Articulate current laws and policies for the differently able	P
		CO 5: Understand policies, programmes and services available to persons with disability	U
Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year - II Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
INTRODUCTION TO PSYCHOLOGY - II	140C2A	CO 1: To Understand the different types of cognition and thinking processes and to analyse the steps in problem solving and decision making.	U & A
		CO 2: To summarize and compare the various functions and memory processes involved in memory and forgetting.	A
		CO 3: To outline the various theories of motivation and to understand the implications of it.	R
		CO 4: To explain the theories of intelligence and the ways to assess intelligence.	P
		CO 5: To explore the various theories of Personality and examine the uses of personality assessments.	P
PSYCHOLOGY OF CHILDHOOD	140C2B	CO 1: To explicate the developmental stage of conception through birth.	U
		CO 2: To elucidate the developmental tasks of early childhood.	R & U
		CO 3: To describe the various emotions and socialization patterns of early childhood.	U
		CO 4: To distinguish the hazards and happiness of late childhood	A
		CO 5: To critically analyze the behavior the cognitive and personality development in childhood.	A
CROSS CULTURAL PSYCHOLOGY	140E2A	CO 1: To describe and discuss the various theoretical orientations/paradigms that describe cultural differences	U
		CO 2: To analyze and discuss the ways in which different cultures influence our socialization and enculturation process.	A

		CO 3: To discuss and evaluate the impact of culture on human development concepts like temperament, attachment styles and morality.	C
		CO 4: To understand the interaction of language, culture and communication and analyze methods to improve intercultural communication.	U & A
		CO 5: Examine the role of culture in the understanding gender roles, stereotypes and ideology development.	P
BASICS OF HEALTH CARE MANAGEMENT	140S0A	CO 1: Know about Health care Management.	R
		CO 2: Interpret insights about Family and Communal health	U
		CO 3: Describe the advancements happening in community health	U
		CO 4: Analyze Various Health Awareness Initiatives In India	A
		CO 5: Explain disaster management techniques	U
PSYCHOLOGICAL FIRST AID	140S2B	CO 1: Learn and apply psychological first aid	P
		CO 2: Manage psychological crisis reactions	C
		CO 3: Understand goals and principles of PFA	U
		CO 4: Practice self-care	C
		CO 5: Increasing the learners' abilities in managing psychological crisis situations	E
II Year - III Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
LANGUAGE THROUGH LITERATURE - I	LZ13B	CO 1: Extent of enhancement of their vocabulary and use them appropriately to communicate in contexts	U
		CO 2: Aware of commonly occurring errors and avoid committing them in language use	U
		CO 3: Rewrite words and sentences by changing their forms and use them appropriately	U
		CO 4: Attempt different kinds of writing – essays, emails, blogs, letters etc.	U
		CO 5: Awareness of contemporary issues and themes that are socially relevant by reading texts of different literary genres.	U
DEVELOPMENTAL PSYCHOLOGY-I	ST23A	CO 1: Summarize the developmental stage of conception through birth	U
		CO 2: Explain the developmental stage of infancy and babyhood	U
		CO 3: Relate various Developmental stages of socialization, family relations and personality development	U
		CO 4: Recall the various developmental process of early childhood	U
		CO 5: Recall the various developmental process of late childhood	U

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EXPERIMENTAL PSYCHOLOGY	ST231	CO 1: Demonstrate the effect of distraction, division and span of attention	E
		CO 2: Demonstrate the concepts of transfer of learning, trial and error learning, insight learning and learning through the knowledge of results	E
		CO 3: Explain the factors involved in errors of perception & Relate to one's own level of aspiration and achievement motivation	E
		CO 4: Infer various emotional patterns in oneself and others & Illustrate the use of the motor-skills in manual and Tweezer dexterity	E
		CO 5: Demonstrate assessment of IQ levels	E
STATISTICS IN PSYCHOLOGY	ST33A	CO 1: Explain the different levels of measurement and methods of organizing data in statistics	U
		CO 2: Make use of mean, median, mode and variability	U
		CO 3: Illustrate and apply the concepts of normal distribution & Find out correlation	U
		CO 4: Test for significance in hypotheses testing	E
		CO 5: Select and utilize appropriate non-parametric statistics	U
PERSONALITY ENRICHMENT – LEVEL - I	TSSEG	CO 1: Explain about the Self Disclosure & self-awareness	U
		CO 2: Explain the ways of coping Anger, Stress and Managing Feelings	U
		CO 3: Describe the Interpersonal Effectiveness	U
		CO 4: Describe about the importance & methods of Study Skills	U
		CO 5: Explain about Goal Setting and Managing Time	U
II Year - IV Semester			
LANGUAGE THROUGH LITERATURE - II	LZ14B	CO 1: Critique and analyze various information and write opinions, reviews and appraisals	A
		CO 2: Prepare itineraries, checklists and write about social events, festivals, sports, nature and environment	C
		CO 3: Analyze and critique the unity and diversity in Indian cultures	A
		CO 4: Write outlines and stories based on text and picture-based hints	U
		CO 5: Enhance the skills of creative, critical thinking that will help them form opinions, make decisions and seek solutions	U
DEVELOPMENTAL PSYCHOLOGY-II	ST24A	CO 1: Summarize the developmental process of puberty and adolescence	U
		CO 2: Summarize the developmental process of adolescence	U
		CO 3: Relate the various development process of young adulthood	U
		CO 4: Explain the developmental tasks of middle age	U

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		CO 5: Identify problems related to old age	P
PSYCHOLOGICAL ASSESSMENT	ST241	CO 1: Assess Personality, and interpret the results	E
		CO 2: Assess Aptitude & Interest and interpret the results	E
		CO 3: Measure and interpret achievement test, stress and coping levels	E
		CO 4: Select appropriate test to measure attitude, behavior and discuss the results	E
		CO 5: Select appropriate test to measure creativity and discuss the results	E
CONSUMER BEHAVIOUR AND ADVERTISING	ST34A	CO 1: Explain the field and scope of consumer behaviour and impact of new technology on marketing strategies	U
		CO 2: Outline the different aspects of research in the field of consumer process	U
		CO 3: Apply concepts of motivation and perception on consumer behaviour	A
		CO 4: Explain the features, goals, functions, types and models of advertising	U
		CO 5: Determine the framework in advertising, role of media in advertising and ethical standards in advertising	P
ENVIRONMENTAL STUDIES	ENV4B	CO 1: Outline the importance of Environmental Studies & Ecosystem	U
		CO 2: Describe about the Renewable and Non – renewable Resources	U
		CO 3: Explain the Biodiversity and Conservation & Environmental Pollution	U
		CO 4: Explain the Environmental Policies & Practices	U
		CO 5: Explain the Human Communities and the Environment & Field Work	U
COMPUTING SKILLS – LEVEL - I	TSSE1	CO 1: Apply formatting features and mail merge features in MS Word	P
		CO 2: Create data base and tables using MS Access	P
		CO 3: Create spreadsheets in MS Excel	P
		CO 4: To create presentations	P
		CO 5: Apply graphics and multimedia	P
III Year - V Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
ABNORMAL PSYCHOLOGY–I	ST25A	CO 1: Distinguish between normal & abnormal behavior and outline the historical background and need for classification	U
		CO 2: Summarize the various models of abnormality	U
		CO 3: Identify clinical features and causes of neurodevelopmental disorder, conduct disorder & neurocognitive disorder	P

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		CO 4: Explain the clinical features and causal factors of anxiety related disorder	U
		CO 5: Outline the clinical features and causal factors of somatic and dissociative disorder	U
SOCIAL PSYCHOLOGY–	ST25B	CO 1: Outline the nature, history, principles and scope of social psychology and methods used in social psychology research	U
		CO 2: Illustrate the significance of self- presentation behaviors in relation to the multifaceted development of the self	U
		CO 3: Infer the interconnections between attitude and behavior	U
		CO 4: Compare the reasons of conformity, compliance and obedience	U
		CO 5: Summarize the conditions promoting helping behavior and infer conditions of bystander effect	U
INTRODUCTION TO RESEARCH METHODOLOGY	ST25C	CO 1: Explain the needs, objectives , importance , problem and process of research based on review of literature	U
		CO 2: Identifying research problems and formulating hypothesis	P
		CO 3: Distinguish between the different types of sampling	U
		CO 4: Examine the methods used in data collection	U
		CO 5: Demonstrate an understanding of writing a research report	U
HEALTH PSYCHOLOGY	ST25D	CO 1: Outline the definition and scope of Health Psychology	U
		CO 2: Explain the various models of health behavior	U
		CO 3: Identify types of pain, symptoms and suitable intervention	P
		CO 4: Summarize theories of stress, sources of stress and coping	U
		CO 5: Explain health promoting strategies	U
SPORTS PSYCHOLOGY	ST45A	CO 1: Explain the need, importance and research methods in sports psychology	U
		CO 2: Relate physical activity and Mental Health	U
		CO 3: Describe the nature, measurement of attitude towards sports behavior	U
		CO 4: Classify various abilities and skills	U
		CO 5: Explain the prevalence, etiology and intervention of alcohol and drug use among athletes	U
VALUE EDUCATION	VAE5Q	CO 1: Outline the definition and importance of value education	U
		CO 2: Explain the Salient values for life	U
		CO 3: Describe the Human Rights	U

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		CO 4: Explain the Environment and Ecological balance	U
		CO 5: Describe the Social Evils	U
III Year - VI Semester			
ABNORMAL PSYCHOLOGY-II	ST26A	CO 1: Explain the causes of unipolar and bipolar disorder and treatment	U
		CO 2: Outline the clinical feature, causal factor and treatment of schizophrenia and other psychotic disorder	U
		CO 3: Summarize types, causes and treatment of Personality disorder	U
		CO 4: Explain the types ,causal and treatment of substance related disorder	U
		CO 5: Identify the different types of prevention and summarize the different models of therapies	P
SOCIAL PSYCHOLOGY-II	ST26B	CO 1: Outline the theories of persuasion and illustrate the factors in resisting persuasion	U
		CO 2: Determine the influence of various group behaviors in relation to individual's performance	P
		CO 3: Outline the nature, sources and consequences of prejudice and illustrate methods to counteract effects of prejudice	U
		CO 4: Summarize the theories of aggression and strategies to regulate aggression	U
		CO 5: Identify the dynamics of intimate relationships in relation to internal and external sources of attraction	P
INTRODUCTION TO THEORIES OF PERSONALITY	ST26C	CO 1: Explain the concept, assessment, measurement and research methods of Personality	U
		CO 2: Outline the various psychoanalytic perspectives of Personality	U
		CO 3: Summarize the life span and trait perspective of Personality	U
		CO 4: Outline the existential humanistic perspective of Personality	U
		CO 5: Explain Behavioral, Cognitive and Social perspectives of personality	U
GUIDANCE AND COUNSELLING PSYCHOLOGY	ST46A	CO 1: Identify the need and importance of counselling in the current context	P
		CO 2: Explain the various approaches in counselling and the types , uses & diagnosis in counselling process	U
		CO 3: Summarize the interpretation of psychological tests in counselling	U
		CO 4: List the qualities of an effective counsellor	U

		CO 5: Identify the special areas of counselling and Spell out the ethical guidelines laid down by the American Psychological Association and the role of counsellor in promoting good Mental Health	P
HUMAN RESOURCE MANAGEMENT	ST46B	CO 1: Outline the basic concepts of human resource management	U
		CO 2: Relate the need for job analysis in relation to Human Resource Planning and Recruiting	U
		CO 3: List strategies for analysing training needs and developing employees	U
		CO 4: Explain the techniques of performance appraisal	U
		CO 5: Spell out how stress management, conflict management and employee empowerment help in employee motivation	U

BSc CHEMISTRY

Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: I Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
General Chemistry- I	124C1A	**CO1:** Explain the atomic structure, wave particle duality of matter, periodic properties bonding, and properties of compounds.	**U**
		CO2: Classify the elements in the periodic table, types of bonds, reaction intermediates electronic effects in organic compounds, types of reagents.	**U**
		CO3: Apply the theories of atomic structure, bonding, to calculate energy of a spectral transition, Δx, Δp electronegativity, percentage ionic character and bond order.	**U**
Quantitative Inorganic Estimation & Preparation (Practical)	124C11	**CO1:** Explain the basic principles involved in titrimetric analysis and inorganic preparations.	**R**
		CO2: Compare the methodologies of different titrimetric analysis.	**U**
		CO3: Calculate the concentrations of unknown solutions in different ways and develop the skill to estimate the amount of a substance present in a given solution.	**A**
Ancillary-Botany-I	124E1B	**CO1:** Increase the awareness and appreciation of human friendly algae and their economic importance.	**R**
		CO2: Develop an understanding of microbes and fungi and appreciate their adaptive strategies.	**U**
		CO3: Compare the structure and function of cells and explain the development of cells.	**U**
Foundation Course FC: Role of Chemistry in Daily Life	124B1A	**CO1:** Learn about the chemicals used in everyday life as well as air pollution and water pollution.	**R**
		CO2: Get knowledge on building materials cement, ceramics, glass and plastics, polythene, PVC bakelite, polyesters	**U**
		CO3: acquire information about Food and Nutrition. Carbohydrates, Proteins, Fats Also have an awareness about Cosmetics Tooth pastes, face powder, soaps and detergents.	**U**
Skill Enhancement Course SEC-1: Food Chemistry	124S1A	**CO1:** Learn about Food adulteration - contamination of Wheat, Rice, Milk, Butter.	**U**
		CO2: Get an awareness about food poisons like natural poisons (alkaloids - nephrotoxin) pesticides, DDT, BHC, Malathion	**U**
		CO3: Get an exposure on food additives, artificial sweeteners, Saccharin, Cyclomate and Aspartate in the food industries.	**U**
Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: II Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**

General Chemistry-II	124C2A	**CO1:** Explain the concept of acids, bases and ionic equilibria; periodic properties of s and p block elements, preparation and properties of aliphatic and aromatic hydrocarbons	**R**
		CO2: Discuss the periodic properties of sand p- block elements, reactions of aliphatic and aromatic hydrocarbons and strength of acids	**R**
		CO3: Classify hydrocarbons, types of reactions, acids and bases, examine the properties s and p-block elements, reaction mechanisms of aliphatic and aromatic hydrocarbons	**U**
Qualitative Organic Analysis and Preparation (Practical)	124C21	**CO1:** Observe the physical state, odour, colour and solubility of the given organic compound.	**A**
		CO2: Identify the presence of special elements and functional group in an unknown organic compound performing a systematic analysis.	**A**
		CO3: Compare mono and dicarboxylic acids, primary, secondary and tertiary amines, mono and diamides, mono and polyhydric phenols, aldehyde and ketone, reducing and nonreducing sugars and explain the reactions behind it.	**A**
Ancillary-Botany-II	124E2B	**CO1:** Understand the fundamental concepts of plant anatomy and embryology.	**U**
		CO2: Analyze and recognize the different organs of plants and secondary growth.	**R**
		CO3: Understand water relation of plants with respect to various physiological processes	**U**
Ancillary-Botany-Practical - I & II	124E21	**CO1:** To study the internal organization of algae and fungi.	**U**
		CO2: To study the classical taxonomy with reference to different parameters.	**U**
		CO3: Understand the fundamental concepts of plant anatomy and embryology.	**U**
Skill Enhancement Course SEC-2 (NME) Dairy Chemistry	124S2A	**CO1:** Understand about general composition of milk – constituents and its physical properties	**U**
		CO2: Acquire knowledge about pasteurization of Milk and various types of pasteurization - Bottle, Batch and HTST Ultra High Temperature Pasteurization.	**U**
		CO3: Learn about Cream and Butter their composition and how to estimate fat in cream and Ghee	**A**
Skill Enhancement Course SEC-3 (Cosmetics and Personal care Products)	124S2B	**CO1:** know about the composition of various cosmetic products	**R**
		CO2: Understand chemical aspects and applications of hair care and dental care and skin care products.	**U**
		CO3: Understand chemical aspects and application soap, perfumes and skincare products	**U**
II Year: III Semester			

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Course Name and Course Code		Course Outcome	Cognitive Level
General Chemistry–III	SD23A	**CO1:** To understand the general characteristics of Nitrogen and Oxygen families.	**U**
		CO2: To know about the chemistry of Halogens and noble gases.	**R**
		CO3: To learn the mechanism of Nucleophillic substitution and Elimination reactions.	**U**
Ancillary - Physics – I	SR3AA	**CO1:** Explore the fundamental concepts of physics	**R**
		CO2: Import knowledge about the importance of material properties, heat, sound, optics, atomic and nuclear physics.	**U**
		CO3: Get depth knowledge of physics in day today life	**A**
Personality Enrichment-Level-I	TSSEG	**CO1:** Acquire knowledge of Self Disclosure and Self Awareness	**R**
		CO2: Get knowledge of Handling managing stress through social support systems	**A**
		CO3: Acquire knowledge of Goal Setting and Managing Time	**A**
II Year: IV Semester			
General Chemistry–IV	SD24A	**CO1:** To understand the General characteristics of d-Block elements	**U**
		CO2: To learn about the preparation and properties of Heterocyclic compounds and dyes	**U**
		CO3: To know about the nomenclature, preparation and properties of alcohols, thiols, ethers and thioethers.	**U**
Ancillary-Physics – II	SR3AB	**CO1:** Acquire knowledge on elementary ideas of electricity and magnetism	**U**
		CO2: Emphasize the significance of laws involved in electric circuits	**U**
		CO3: Apply the principles of electronics in day to life	**A**
Qualitative Inorganic Analysis- (Practical-II)	SD241	**CO1:** Analysis of simple acid radicals: Carbonate, sulphide, sulphate, thiosulphate, chloride, bromide, iodide, nitrate	**A**
		CO2: Identify the cations and anions in the unknown substance.	**A**
		CO3: Analysis of interfering acid radicals: Fluoride, oxalate, borate, phosphate, arsenate	**A**
Ancillary-Physics (Practical – I &II)	SR3A1	**CO1:** Apply various physics concepts to understand Properties of Matter and waves	**A**
		CO2: Set up experimentation to verify theories, quantify and analyses	**A**
		CO3: Acquire knowledge of error analysis and correlate results	**U**
Soft Skills (Computing Skills-Level-I)	TSSE1	**CO1:** Get Knowledge of Microsoft Office essentials like MS Word, MS Excel and MS Access	**U**
		CO2: Acquire Knowledge of Importance of file management, backing of files, files and folders- editing, deleting, retrieving, renaming, subfolders	**U**

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		CO3: Get knowledge of charts- creating, formatting and printing, header and footer	**U**
Environmental Studies (EVS)	ENV4B	**CO1:** Get knowledge of Multidisciplinary nature of environmental studies	**U**
		CO2: Understand the knowledge of Causes and impacts due to mining, dam building on environment	**U**
		CO3: Acquire knowledge of Environmental pollution: types, causes, effects and controls	**U**
III Year: V Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Inorganic Chemistry I	SD25A	**CO1:** To learn about the unique characteristics of lanthanide and actinide series	**U**
		CO2: Learning the fundamentals of coordination chemistry and its applications in analytical chemistry	**U**
		CO3: Understanding the biological importance of complexes	**U**
Organic Chemistry I	SD25B	**CO1:** Understanding acidic nature of phenol and its properties	**U**
		CO2: Learning the reactions of aldehydes and ketones	**U**
		CO3: Learning the chemistry of carboxylic acids and their derivatives	**U**
Physical Chemistry I	SD25C	**CO1:** Learning fundamental concepts about solutions and the basis of separation techniques such as steam distillation and solvent extraction	**R**
		CO2: Acquire knowledge of phase rule and its application to one component and two component systems	**U**
		CO3: Get knowledge of colligative properties and methods of their determination	**U**
Elective Paper- I (Pharmaceutical Chemistry)	SD45A	**CO1:** Define the pharmaceutical terminologies; describe the principles in pharmacological activity, drug development, clinical chemistry, hematology, therapeutic drugs and treatment of diseases; list the types of IPR and trademarks.	**U**
		CO2: Apply the principles involved in structural activity and drug designing, functions of haematological agents; estimation of clinical parameters and therapeutic application of drugs for major diseases.	**A**
		CO3: Discuss the development of drugs, structural activity, disease types, physiochemical properties of therapeutic agents, significance of medicinal plants, clinical tests and factors for patentability.	**U**
Elective Paper-II (Polymer Chemistry)	SD45D	**CO1:** Get knowledge of polymers thermoplastics and thermosetting plastics	**U**
		CO2: Learn about preparation, properties and applications. Polyethylene, polypropylene, polyamides, polyvinylchloride	**U**
		CO3: Acquire Knowledge of oxidative, mechanical and photo degradation methods	**U**
Value Education	VAE5Q	**CO1:** Acquire Knowledge of Equal rights for all, Excellence deserves admiration. People should be treated with respect and dignity.	**R**

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		CO2: Learn about Values tend to influence attitudes and behavior and help to solve common human problems	**U**
		CO3: Get Knowledge of the values are inculcated through education. It contributes in forming true human being, who are able to face life and make it meaningful	**U**
III Year: VI Semester			
Inorganic Chemistry II	SD26A	**CO1:** Learning the theories of metallic bonding	**U**
		CO2: Get knowledge of fundamental concepts of nuclear chemistry and radioactivity	**U**
		CO3: Learning the chemistry of clathrates, phosphazenes, silicates	**U**
Organic Chemistry II	SD26B	**CO1:** Learning the chemistry of biopolymers – carbohydrates and proteins	**U**
		CO2: Learning the chemistry of natural products – alkaloids and terpenoids.	**U**
		CO3: Learning the mechanism of various types of molecular rearrangement	**U**
Physical Chemistry II	SD26C	**CO1:** Understanding the basics of catalysis and adsorption	**U**
		CO2: Learn about the basics of chemical kinetics	**U**
		CO3: Acquire knowledge of fundamentals of electrochemical cells	**U**
Elective Paper- III (Analytical Chemistry)	SD46A	**CO1:** Learn about Separation techniques	**R**
		CO2: Learn about Thermal analytical methods	**U**
		CO3: Acquire knowledge of translational, vibrational, rotational and electronic energies	**R**
Practical-III (Inorganic Quantitative Analysis Gravimetric Analysis)	SD261	**CO1:** Estimation of lead as Lead chromate	**A**
		CO2: Estimation of barium as Barium sulphate	**A**
		CO3: Estimation of sulphate as Barium sulphate	**A**
Practical-IV (Organic Analysis and Preparation)	SD262	**CO1:** Observe the physical state, odour, colour and solubility of the given organic compound.	**A**
		CO2: Identify the presence of special elements and functional group in an unknown organic compound performing a systematic analysis.	**A**
		CO3: Compare mono and dicarboxylic acids, primary, secondary and tertiary amines, mono and diamides, mono and polyhydric phenols, aldehyde and ketone, reducing and nonreducing sugars and explain the reactions behind it.	**A**
Practical-V (Physical Chemistry)	SD263	**CO1:** Describe the principles and methodology for the practical work	**R**
		CO2: Explain the procedure, data and methodology for the practical work	**U**
		CO3: Apply the principles of phase rule and electrochemistry for carrying out the practical work	**A**

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B.Sc Home Science-Clinical Nutrition and Dietetics

Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: I Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Human Physiology	130C1A	**CO 1:** Recall the structure and functions of the cell, its organelles and the various tissues	**U**
		CO 2: Describe the structure and functions of the various organs and systems in the body.	**R**
		CO 3: Evaluate the role of the nervous and endocrine system in regulating the activities of other systems.	**E**
Basics in food microbiology	130C1B	**CO 1:** Understand the interaction between micro-organisms and food	**U**
		CO 2: Obtain a basic understanding of the microbial phenomena occurring in food products and factors affecting the growth of microbes	**U**
		CO 3: Recognize the microbes causing food spoilage and food borne illnesses.	**R**
Chemistry Practical for Physical and Biological Sciences	130E11	**CO 1:** Gain an understanding of the use of standard flask and volumetric pipettes, burette.	**U**
		CO 2: Apply their skill in the analysis of water/hardness.	**P**
		CO 3: To create the awareness about food adulterants	**C**
Chemistry for Biological Sciences	130E1A	**CO 1:** State the theories of chemical bonding, nuclear reactions and its applications.	**R**
		CO 2: Evaluate the efficiencies and uses of various fuels and fertilizers	**E**
		CO 3: Analyse various methods to identify an appropriate method for the separation of chemical components.	**A**
Foundation Course in Clinical Nutrition and Dietetics	130B1A	**CO 1:** Describe basic concepts in Food Science, Clinical Nutrition and Therapeutic Dietetics	**R**
		CO 2: Identify the relationship between food, nutrition, diet and health.	**R**
		CO 3: Explain the concept of biochemical changes and nutrition implications of disease conditions.	**U**
Women's Health and Wellness	130S1A	**CO 1:** Define terms related to nutrition, physical, reproductive, mental and social health.	**U**
		CO 2: Discuss the need for right nutrition, exercises and skills needed for the overall well- being of women.	**R**
		CO 3: Explain the significance of maintaining physical, reproductive, mental and social health for the overall well-being of women.	**A**
Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: II Semester			

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Course Name and Course Code		Course Outcome	Cognitive Level
Basic Cookery Practical	130C21	**CO 1:** Understand the scientific principles underlying the preparation of food.	**U**
		CO 2: Apply the principles of cookery in cooking foods to preserve its nutrient content and minimize cooking time.	**P**
		CO 3: Acquire skills in preparation of foods with good palatability and preservation of nutritive value	**C**
Food Science	130C2A	**CO 1:** Understand the classification of foods according to their functions.	**U**
		CO 2: Gain knowledge on the composition and nutritive value of foods.	**P**
		CO 3: Know the basic methods of cooking and its influence on food.	**U**
Chemistry Practical For Physical and Biological Sciences-II	130E21	**CO 1:** Explain the preparation and property of carbohydrate.	**U**
		CO 2: Enlighten the biological role of transition metals, amino acids and nucleic acids	**R**
		CO3: Apply/demonstrate the electrochemistry principles in corrosion, electroplating and fuel cells.	**P**
Chemistry Practical For Physical And Biological Sciences-II	130E21	**CO 1:** Gain an understanding of the use of test tubes, boiling tubes, fusion tubes.	**U**
		CO 2: Design, carry out, record and interpret the results of organic analysis.	**A**
		CO 3: Apply their skill in the analysis of functional group present in organic compounds.	**P**
Foundations Of Baking	130S2A	**CO 1:** Understand the role of ingredients in different types of baked products.	**U**
		CO 2: Apply techniques learnt in preparing cakes, buns, pastries: and use alternative healthy ingredients to prepare baked products to cater to special dietary needs.	**P**
		CO 3: Develop skills in preparing baked goods.	**C**
Fundamentals In Food Preservation	130S2B	**CO 1:** Explain how food can be preserved by high and low temperatures, drying and addition of natural and chemical additives.	**U**
		CO 2: Illustrate the principle of food preservation in the various preservation techniques.	**E**
		CO 3: Compare the uses of various food preservation methods and choose the method most suited for each type of food.	**P**
Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
II Year: III Semester			
Course Name And Course Code		**Course Outcomes**	**Cognitive level**
Family Meal Management	SL23A	**CO 1:** Gain knowledge of the principles of planning die	**U**
		CO 2: Plan balanced diets for various stages of life cycle	**P**
		CO 3: Create awareness about World Alliance for Breast feeding Action.	**C**

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Biochemistry	SB3AA	**CO 1:** Outline the metabolic pathways of Carbohydrate, Protein and Fats	**U**
		CO 2: Evaluate the mechanisms of energy production	**E**
		CO 3: Discuss the role of nucleic acids	**R**
Human Nutrition II	SL23B	**CO 1:** Explain the importance of water as a nutrient	**U**
		CO 2: Learn the nutritional importance of the micronutrients in human health	**U**
		CO 3: Evaluate the role of food and nutrients in health and disease prevention	**E**
Personality Enrichment	TSSEG	CO 1: Characteristics of Self-description, Disclosure and awareness	**U**
		CO 2: Handling putdowns technique and to manage provocations	**P**
		CO 3 : Using Techniques of memory enhancer, short term and long term goals and once ability to live a balanced life	**E**
Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
II Year: IV Semester			
Course Name And Course Code		**Course Outcomes**	**Cognitive level**
Clinical Nutrition	SJ24A	**CO 1:** Understand the clinical implications of improper metabolism of macronutrients	**U**
		CO 2: Analyze the clinical significance of biochemical findings	**A**
		CO 3: Identify the different markers for various conditions	**P**
Clinical Nutrition Practical	SJ241	**CO 1:** Understand the implications of abnormal values of serum protein	**U**
		CO 2: Estimate serum cholesterol levels	**P**
		CO 3: Develop skills necessary to understand serum parameters for a normal lifestyle	**p**
Principals Of Interior Decoration	SL34A	**CO 1:** Create understanding of the basic art principles	**C**
		CO 2: Apply color harmony in interiors	**P**
		CO 3: Understand the basic Principles of House Keeping	**U**
Computing Skills	TSSE1	CO 1: Introducing the course is to impart hands on training to students in Microsoft office essentials like MS word MS Excel and MS access	**U**
		CO 2: Offered at two levels exclusively meant for students who have no computer knowledge	**R**
		CO 3 : Course is designed as a practical oriented course	**P**
Environmental Studies	ENV4B	CO 1: To understand the concept of sustainable development	**U**
		CO 2: Levels of Biological diversity and its biodiversity services	**R**
		CO 3 : Students develop critical thinking skills analyzed real environmental problems understand power of narrative to create sustainable solution for local and global communities	**C**
III Year: V Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Human Development	**SL25A**	**CO 1:** Understand the principals of development and developmental stages of the human lifespan	**U**
		CO 2: Establish an understanding of the physical and motor, emotional, social, cognitive, language and moral development of all the stages of human life	**U**
		CO 3: Know the significance of preschool education	**E**
Food Service Management - I	**SL25B**	**CO 1:** Analyse the difference between the different types of food service establishments and their current trends	**E**
		CO 2: Figure out the efficient methods and procedures of quantity food purchase and storage.	**E**
		CO 3: Develop skills in menu planning, recipe standardization	**C**

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		and effective portion control	
Public Health and Nutrition	**SJ25A**	**CO 1:** Understand the signs of a good nutritious diet of an individual and community	**U**
		CO 2: Develop skills needed for assessment of the nutritional status	**C**
		CO 3: Conduct action-based research in the community.	**A**
Sports Nutrition	**SL25D**	**CO 1:** Demonstrate an understanding of the basic principles associated with sports nutrition	**U**
		CO 2: Use sports supplements judiciously to enhance sports performance.	**P**
		CO 3: Identify particular dietary trends or eating behaviors to suit the individual athlete.	**E**
Fundamentals of Textiles and Clothing	**SL45A**	**CO 1:** Able to identify difference between the different types of fabrics for selection of appropriate fabrics.	**E**
		CO 2: Analyze and understand the kind of woven fabric based on texture, design and appearance	**U**
		CO 3: Utilize and analyse different types of fabric finishes.	**A**
Value Education	**VAE5Q**	**CO 1:** Value are socially accepted norms to evaluate objects, persons and situations that form part and parcel of sociality.	**E**
		CO 2: Knowledge of the values are inculcated through education	**R**
		CO 3: It contributes in forming true human being, who are able to face life and make it meaningful	**C**

III Year: VI Semester

Course Name and Course Code		Course Outcome	Cognitive Level
Advanced Dietetics	**SJ26A**	**CO 1:** Understand the causes and symptoms of various diseases.	**U**
		CO 2: Identify the causes for malnutrition related problems.	**E**
		CO 3: Gain knowledge on the implications of non-communicable diseases and develop strategies for prevention	**R**
Food Service Management - II	**SJ26B**	**CO 1:** Examine the use and operation of the various catering equipment	**E**
		CO 2: Analyse the concepts of space allocation and arrangements and sketch sample layouts of food service units	**A**
		CO 3: Develop managerial skills	**C**
Nutrition and Advanced Dietetics (Practical)	**SJ261**	**CO 1:** Identify nutrients using qualitative tests	**E**
		CO 2: Demonstrate techniques needed for quantitative estimation of nutrients	**U**
		CO 3: Plan menus based on estimation of nutrients	**E**
Entrepreneurship Development	**SL46A**	**CO 1:** Understand the Concept of entrepreneur and entrepreneurship with its characteristics, functions and types	**U**
		CO 2: Evaluate the Role of small enterprises in economic development and problems	**E**
		CO 3: Understand the Concept of Selection, significance, content, identification of project and can be able to create project report.	**U**
Family Management and Counseling	**SL46B**	**CO 1:** Gain competence to lead a successful marital life	**P**
		CO 2: Develop an understanding about the prenatal development and postnatal care.	**U**
		CO 3: Attain knowledge in life – on the most span human development and family science based current research and theory.	**R**

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Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: I Semester			
Course Name and Course Code		Course Outcome	Cognitive Level
Business Finance	413C1A	CO 1: Explain the important finance concepts	U
		CO 2: Estimate Risk and determine its impact on Return	U
		CO 3: Examine leasing and other sources of finance for startups	P
		CO 4: Summarize cash , receivable and inventory management techniques	A
		CO 5: Evaluate techniques of long term investment decision incorporating risk factor	U
Digital Marketing	413C1B	CO 1: Explain the dynamics of digital marketing	U
		CO 2: Examine online marketing mix	U
		CO 3: Compare digital media channels	U
		CO 4: Explain online consumer behavior	U
		CO 5: Analyze social media data	U
Banking and insurance	413C1C	CO 1: Relate the transformation in banking from traditional to new age	U
		CO 2: Apply modern techniques of digital banking	U
		CO 3: Evaluate the role of insurance sector	U
		CO 4: Examine the regulatory mechanism	U
		CO 5: Assess risk mitigation strategies	U
Security analysis and portfolio management	413E1A	CO 1: Examine investment options and structure a portfolio	U
		CO 2: Assess the value of equity shares , preference shares and bonds	U
		CO 3: Examine stock performance through fundamental and technical analysis	U
		CO 4: Examine the various portfolio theories	U
		CO 5: Evaluate the portfolio Performance	U
Labour Laws	413E1C	CO 1: Recall the basic labour legistlations pertaining to trade unions	U
		CO 2: Explain various provisions of the Factories Act and Equal Remuneration Act	U
		CO 3: Access provisions relating to the workmen's compensation and state insurance	U
		CO 4: Examine provisions relating to payment of wages and minimum wages	U
		CO 5: Explain the provisions of provident fund, gratuity and bonus schemes.	U

Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: II Semester			
Course Name and Course Code		Course Outcome	Cognitive Level
Strategic cost management	413C2A	CO 1: Explain strategic cost management QC	U
		CO 2: Choose the appropriate technique for cost control	P
		CO 3: Make use of activity based costing in practice	P
		CO 4: Choose transfer pricing methods to solve problems	A
		CO5: Construct cost structure for agriculture and IT Sector	E
Corporate Accounting	413C2B	CO 1: Determine profit and financial position by preparing financial statements of companies as per schedule III of Companies Act, 2013	U
		CO 2: Apply the provisions of IRDA regulations in the preparation of final accounts of Life Insurance and General Insurance Companies	P
		CO 3: Determine the overall profitability and financial position by preparing consolidated financial statements of holding companies in accordance with AS21	P
		CO 4: Analyze contemporary accounting methods	E
		CO 5: Examine financial reporting based on appropriate accounting standards and provisions of Companies Act 2013 with respect to Corporate Social Responsibility	A
Setting up of Business Entities	413C2C	CO 1: Compare the various avenues of acquiring finance to setup a business entity	U
		CO 2: Recall the legal requirements for Section 8 Company	U
		CO 3: Examine the provisions for LLP and joint venture	U
		CO 4: Analyze the registration and licensing procedure	U
		CO 5: Examine the compliance of regulatory framework regarding environment	U
Business Ethics and Corporate Sustainability	413E2A	CO 1: Analyze the concepts of business ethics in practice	U
		CO 2: Demonstrate ethical decision making by applying various theories	U
		CO 3: Evaluate moral issues relating to business, marketing, advertising, finance, HR and environmental protection	U
		CO 4: Explain the concepts of corporate sustainability	U
		CO 5: Construct reports disclosing sustainability information	U
Rural and Agricultural Marketing	413E2C	CO 1: Recall the concepts of rural marketing	U
		CO 2: Analyze the buying behavior of rural consumers	U
		CO 3: Develop the strategies relating to rural product, branding, packaging, etc.	A
		CO 4: Construct distribution and promotional mix in the rural market relating to food processing industry	U
		CO 5: Explain the principles and functioning of co-operative marketing	U
		CO 1: Create their own Advertisement Copy	C

Advertising and Media Management	413S2A	CO 2: Analyze individual media businesses and understand the economic drivers of the media economy	A
		CO 3: Gain a perspective on the facets of media	A
		CO 4: Develop an integrated marketing plan using a wide variety of media	C
		CO 5: Create their own Advertisement Copy	U
II Year: III Semester			
Course Name and Course Code		Course Outcome	Cognitive Level
RESEARCH METHODOLOGY	KD23A	CO 1: Explain the basic concept of research and the steps involved in the research and the research problem	A
		CO 2: Demonstrate the formulation of hypothesis , sampling techniques and sample size determinations	A
		CO 3: Outline the methods of data collection, construction of questionnaire, tools for data collection, testing validity and reliability	U
		CO 4: Analyze and interpret data through statistical applications .	E
		CO 5: Develop the contents, types and methods of report writing	C
INFORMATION TECHNOLOGYFOR BUSINESS	KD23B	CO 1: Explain the basic concepts of computers and naming conversions.	R
		CO 2: Explain the computerization in Banks	U
		CO 3: Apply the methods in electronic funds transfer and document handling systems	P
		CO 4: Examine the use of computer in additional banking applications	A
		CO 5: Apply the software applications like WordStar, Lotus 123, dbase III+, Graphics in real time project	P
INCOME TAX LAW AND PRACTICE	KD23C	CO 1: Understand the fundamental concepts of income tax including tax laws and regulations.	P
		CO 2: Identify and explain various types of taxable income, deductions and credits of capital assets	U
		CO 3: Identify the permissible inter-source and inter-head adjustments	P
		CO 4: Construct the Gross Total Income, total income and the tax liability of an individual	U
		CO 5: Outline the domestic and international transfer pricing under Income Tax 1961	U
CORPORATE GOVERNACE AND SOCIAL RESPONSIBILITY	KD33A	CO 1: Explain the fundamentals of ethics and its implications in business	U
		CO 2: Interpret the concepts of ethics in advertisement and environment	U
		CO 3: Demonstrate the corporate social responsibility and promoting corporate responsiveness	U
		CO 4: Interpret the concepts of corporate government and identify the board mechanism	U
		CO 5: To outline the formation of the Birla Committee Report and its recommendations	U
		CO 1: Demonstrate the similarities and differences and physical based	U

MARKETING OF SERVICES	KD43A	product activities	
		CO 2: Illustrate the challenges and marketing issues in a changing technological landscape	U
		CO 3: Interpret the extended marketing mix for services	U
		CO 4: Explain the overall marketing environment of financial services	U
		CO 5: Relate the technological and human issues relating to the implementation of CRM in the organization.	U
CONSUMER BEHAVIOUR	KD43C	CO 1: Identify Consumer Behavior Models	P
		CO 2: Examine the impact of psychological variables and explain the importance of consumer motivation, perception and attitude in shaping behavior	A
		CO 3 Demonstrate the impact of various social variables	U
		CO 4: Interpret the consumer decision-making process	U
		CO 5: Explain family and household decision making process	U
INTENSHIP		Apply the theoretical knowledge acquired from the course to the assigned job function.	P
II Year: IV Semester			
MANAGEMENT INFORMATION SYSTEMS	KD24A	CO 1: Understand the concept, need and components of information system	U
		CO 2: Data base management system- database design, creation and control and recent trends in database	A
		CO 3: Developing – planning, designing and redesigning and approaches for system development	A
		CO 4: Transaction processing and support system	U
		CO 5: Functional information systems-production, finance, HR and audit of information systems	E
INDIRECT TAXES	KD24C	CO 1: Explain the features and benefits of GST	U
		CO 2: Describe the important definitions on GST	U
		CO 3: Outline the registration procedure relating to GST	U
		CO 4: Explain the various aspects of assessment of GST	U
		CO 5:Outline the important provisions of Customs duty	U
INVESTMENT ANALYSIS AND PORTFOLIO MANAGEMENET	KD24B	CO 1: Describe the overview of investments and identify the various financial instruments	U
		CO 2: Apply the relationship between risk and return, to solve problems related to time value of money.	P
		CO 3: Categorize the securities and their valuation to interpret the fundamental and technical analysis of derivatives	A
		CO 4: Illustrate the theories of portfolio management and SEBI regulations	A
		CO 5: Apply the theories relating to portfolio management & portfolio risk & return	U

FINANCIAL MARKETS AND INSTITUTIONS	KD44A	Outline the money market and capital market in the Indian financial system	U
		Describe the role of certificate of deposits, Treasury bills, REPO Accounting in Indian money markets	U
		Classify the Indian money and Capital market and analyze the new financial instruments in the capital market	U
		Demonstrate the functions of financial service institutions in India like CRISIL, DFHIL, ICRA, OTCEI, NSDL AND STCI	U

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MSc Computer Science

I Year: I Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Advanced Data Structures and Algorithms	436C1A	**CO 1:** Analyse programming problem statements.	**R,U**
		CO 2: Comprehend and select algorithm design approaches in a problem specific manner.	**U,P**
		CO 3: Choose appropriate datastructures for a specific problem.	**P,A**
		CO 4: Utilize necessary mathematical abstractions to solve problems.	**E,C**
		CO 5: Come up with analysis of efficiency and proof of correctness.	**C**
Advanced Python Programming	436C1B	**CO 1:** Be able to program decorators, closures, lambda, iterators and generators comprehensions with in OOP.	**R,U**
		CO 2: Learn modern data structures to include collections, array and queues.	**U,P**
		CO 3: Use platform independent file manipulation, file pattern matching using CSV, HTML,XML, JASON.	**P**
		CO 4: Be able to set up a client server program and also multi process applications.	**A,E**
		CO 5: Be able to use Python as an analytical and presentation tool.	**E,C**
Practical - III Advanced Data Structures and Algorithms Practical	436C1C	**CO 1: D**esign and analysis programming problem statements .	**R,U**
		CO 2: Choose appropriate data structures and algorithms, understand the ADT/libraries , and use it to design for a specific problem .	**R,U**
		CO 3: Be familiar with programming language constructs available for rapid application development.	**P,A**
		CO 4: Understand the necessary programmatic abstraction to solve problems.	**A,E**
		CO 5: Gain the capacity to solve real life problem by matching to the available algorithms.	**E,C**
Practical - IV Advanced Python Programming Practical	436C1D	**CO 1:** Apply exception handling and user defined exception(s) Develop Module(s) and package(s) in python .	**R,U**
		CO 2: possess and ability to write database applications in python.	**R,U**
		CO 3: Implement Object Oriented concepts in programming Apply Collection Modules for the data types.	**P,A**
		CO 4: Possess the Object -oriented programming skills in Python and the skill of design graphical-user interfaces(GUI) in Python.	**A,E**
		CO 5: Make use of Pandas and Numpy Libraries .	**E,C**
Cloud Computing	436E1A	**CO 1:** Understand the concepts of Cloud and its services .	**R,U**
		CO 2: Collaborate Cloud for Event & Project Management.	**P,A**
		CO 3: Analyze an cloud in Word Processing, Spread Sheets, Mail, Calendar, Database.	**A,E**

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		CO 4: Analyze cloud in social networks.	**E,C**
		CO 5: Explore cloud storage and sharing.	**C**
Internet of Things	436E1B	**CO 1:** Understand about IoT, its Architecture and its Applications	**R,U**
		CO 2: Understand basic electronics used in IoT & its role.	**U,P**
		CO 3: Develop applications with using Arduino IDE .	**A**
		CO 4: Analyze about sensors and actuators .	**E,C**
		CO 5: Design IoT in real time applications using today's internet & wireless technologies.	**C**
Advanced Computer Architecture	436E1C	**CO 1:** Identify the limitations of Instruction-level parallelism(ILP).	**R,U**
		CO 2: Discuss the issues related to multi processing and suggest solutions.	**U,P**
		CO 3: Point out the salient features of different multicore architectures and how they exploit parallelism .	**P,A**
		CO 4: Discuss the various techniques used for optimising the cache performance.	**A,E**
		CO 5: Design hierarchical memory system and Point out how data level parallelism is exploited in architectures.	**E,C**
Principles of Compiler Design	436E1D	**CO 1:** Understand the different phases of compilers.	**R,U**
		CO 2: Design a lexical analyzer for a sample language.	**U,P**
		CO 3: Apply different Parsing algorithm to develop the parsers for a given grammar.	**P,A**
		CO 4: Design and implement a scanner and a parser using LEX and YACC tools.	**A,E**
		CO 5: Learn to implement code optimization techniques and a simple code generator.	**E,C**
Natural Language Processing	436E1E	**CO 1:** To tag a given text with basic language features .	**R**
		CO 2: To design and innovative applications using NLP components .	**U**
		CO 3: To implement a rule-based system to tackle morphology /syntax of a language.	**P,A**
		CO 4: To design a tag set to be used for statistical processing for real time applications.	**A,E**
		CO 5: To compare and contrast the use of different statistical approaches for different type NLP applications.	**E,C**
Distributed Database Systems	436E1F	**CO 1:** Apply various fragmentation techniques given a problem .	**R**
		CO 2: Analyse and calculate the cost of enforcing symantic integrity control.	**U,P**
		CO 3: Use the steps of query processing .	**A**
		CO 4: Apply optimization techniques are applies to Distributed Database.	**A,E**

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		CO 5: Apply effectively Query Optimization Algorithms.	**E,C**
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Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Data Mining and Warehousing	436C2A	**CO 1:** Understand the basic datamining techniques and algorithms	**R,U**
		CO 2: Understand the Association rules, Clustering techniques and Data warehousing contents	**U,P**
		CO 3: Compare and evaluate different datamining techniques like classification, prediction, Clustering and association rule mining	**A,E**
		CO 4: Design data warehouse with dimensional modelling and apply OLAP operations	**E,C**
		CO 5: Identify appropriate datamining algorithms to solve real world problems	**C**
Web Techonology and Advanced Java	436C2B	**CO 1:** Design user interactions on web pages	**R,U**
		CO 2: Develop back-end website applications	**R,U**
		CO 3: Develop adaptive content for multiple devices (cell phone, tablets, etc.) Ensure cross-platform optimization for mobile phones	**U,P**
		CO 4: Application of java beans, Servlets, JSP for desinging Web based application	**A,E**
		CO 5: Usage of JDBC connectivity and implementation of the concept to get desired results from database	**C**
Practical VII Data Mining and Warehousing Practical	436C2C	**CO 1:** Able to write programs using python for Association rules, Clustering techniques	**R,U**
		CO 2: To implement datamining techniques like classification, predicition	**U,P**
		CO 3: Able to use different visualization techniques using python	**U,A**
		CO 4: To apply different datamining algorithms to solve real world applications	**E,C**
Practical VIII Web Techonology and Advanced Java Practical	436C2D	**CO 1:** Implement Remote method invocations.	**R,U**
		CO 2: Apply servlet in web applications	**U,P**
		CO 3: Develop Servlets for creating Web based applications using JDBC.	**P,A**
		CO 4: Develop JSP for creating Web based applications using JDBC.	**E**
		CO 5: Test java beans and session tracking	**E,C**
Artificial Intelligence	436E2A	**CO 1:** Solve basic AI based problems.	**R,U**
		CO 2: Defines the concept of Artificial Intelligence.	**U,P**
		CO 3: Apply AI techniques to real - world problems to develop intelligent systems.	**P,A**
		CO 4: Select appropriately from a range of techniques when implementing intelligent systems.	**A,E**

		CO 5: Posses the basic knowledge of different machine learning techniques.	**E,C**
Software Development Technologies	436E2B	**CO 1:** To understand, apply and summarize the basic concepts of micro services communication Microsoft Azure and Dev Ops for software development life cycle.	**R,U**
		CO 2: To illustrate, and implement Azure Kubernetes Service tools for software development life cycle.	**U,P**
		CO 3: To recoginze, analyse and summarize the functionalities of NET Dev Ops for Azure applications.	**P,A**
		CO 4: To understand, design and evalute the principles and architecture service tools for software development life cycle.	**A,E**
		CO 5: To comprehend, implement and review the functionalities of API and API gateways for cloud and Azure applications.	**E,C**
Artificial Neural Networks and Deep Learning	436E2C	**CO 1:** Understand different methodologies to create applications using deep nets.	**R,U**
		CO 2: Identify and apply appopriate deep learning algorithms for analyzing the data for a variety of problems.	**U,P**
		CO 3: Implement different deep learning algorithms	**P,A**
		CO 4: Design the test procedures to assess the efficacy of the developed model	**A,E**
		CO 5: Combine several models in to gain better results	**E,C**
Computer Vision	436E2D	**CO 1:** Ability to understand to computer version pipeline. Ability to build solutions using computer vision algorithms	**R,U**
		CO 2: Identify basic concepts, terminology, theories, models and methods in the field of computer vision	**U,P**
		CO 3: Describe known principles of human visual system	**A**
		CO 4: Describe basic methods of computer version related to multi- scale representation, edge detection and detection of other primitives, stereo, motion and object recognition	**A,E**
		CO 5: Suggest a design of a computer vision system for a specific problem	**E,C**
Agile Software Engineering	436E2E	**CO 1:** Realize the importance of interating with business stakeholders in determine the requirements for a software system	**R,U**
		CO 2: Perform iterative software development processes: how to plan them, how to execute them.	**U,P**
		CO 3: Point out the impact of social aspects on software development success. develop techniques and tools for improving team collaboration and software quality.	**P,A**
		CO 4: Perform Software process improvement as an ongoing task for development teams.	**A,E**
		CO 5: Show how agile approaches can be scaled up to the enterprise level.	**E,C**
		CO 1: Design effective dialog for HCI	**R,U**

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Human Computer Interaction	436E2F	**CO 2:** Design effective HCI for individuals and persons with disabilities.	**U,P**
		CO 3: Assess the importance of user feedback.	**A,E**
		CO 4: Explain the HCI implications for designing multimedia/ ecommerce/ e-learning |Web sites.	**E,C**
		CO 5: Develop a meaningful users interface.	**C**
II Year: III Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Parallel and Distributed Computing	CS23A	**CO 1:** Develop and apply knowledge of parallel and distributed computing techniques andmethodologies.	**R,U**
		CO 2: Apply design, development, and performance analysis of parallel and distributedapplications.	**U,P**
		CO 3: Use the application of fundamental Computer Science methods and algorithms in the development of parallel applications.	**P,A**
		CO 4: Explain the design, testing, and performance analysis of a software system, and to be able to communicate that design to others.	**A,E**
		CO 5: Understand the requirements for programming parallel systems and how they canbe used to facilitate the programming of concurrent systems.	**C**
Deep Learning and Neural Networks	CS23B	**CO 1:** Understand different methodologies to create applications using deep nets.	**R,U**
		CO 2: Identify and apply appropriate deep learning algorithms for analyzing the data for a variety of problems.	**U,P**
		CO 3: Implement different deep learning algorithms	**P,A**
		CO 4: Design the test procedures to assess the efficacy of the developed model.	**A,E**
		CO 5: Combine several models in to gain better results	**C**
Cryptography	CS23C	**CO 1:** Analyze the cryptographic algorithms for information security.	**R,U**
		CO 2: Identify the authentication schemes for membership authorization.	**U,P**
		CO 3: Identify computer and network security threats, classify the threats and develop asecurity model for detect and mitigate the attacks.	**P,A**
		CO 4: Design the test procedures to assess the efficacy of the developed model.	**A,E**
		CO 5: Combine several models in to gain better results.	**E,C**
Deep Learning Lab	CS231	**CO 1:** Understand different methodologies to create application using deep nets.	**R,U**
		CO 2: Identify and apply appropriate deep learning algorithms for analyzing the data for variety of problems.	**U,P**
		CO 3: Implement different deep learning algorithms.	**P,A**

		CO 4: Design the test procedures to assess the efficacy of the developed model.	**A,E**
		CO 5: Combine several models in to gain better results	**C**
Cyber Security	CS43A	**CO 1:** Understand, describe, analyse and examine the basics of Cyber security concepts and its implementation in India.	**R-C**
		CO 2: Comprehend and demonstrate the security tips in browsers, WLAN, social networks, Email security and smart phone. Apply the investigations in post mortem and Forensics.	**R-C**
		CO 3: Understand, apply and evaluate the various investigations roles and WiFi protecting mechanism.	**R-C**
		CO 4: Understand, illustrate and evaluate the method of seize the digital information and evidences forensics data and evaluate the forensics reports.	**R-C**
		CO 5: Comprehend, apply and appraise the methods digital forensics with cybercrime prevention techniques.	**R-C**
Advanced Computer Architecture	CS43B	**CO 1:** Identify the limitations of Instruction-level parallelism (ILP).	**R,U**
		CO 2: Discuss the issues related to multiprocessing and suggest solutions	**U,P**
		CO 3: Point out the salient features of different multicore architectures and how they exploit parallelism.	**P,A**
		CO 4: Discuss the various techniques used for optimizing the cache performance	**A,E**
		CO 5: Design hierarchical memory system	**E,C**
		CO 6: Point out how data level parallelism is exploited in architectures	
Distributed Database Systems	CS43C	**CO 1:** Apply various fragmentation techniques given a problem.	**R,U**
		CO 2: Analyse and calculate the cost of enforcing semantic integrity control.	**U,P**
		CO 3: Use the steps of query processing	**P,A**
		CO 4: Apply optimization techniques are applies to Distributed Database	**A,E**
		CO 5: Apply effectively Query Optimization Algorithms.	**E,C**
Human Computer Interaction	CS43D	**CO 1:** Design effective dialog for HCI	**R,U**
		CO 2: Design effective HCI for individuals and persons with disabilities.	**U,P**
		CO 3: Assess the importance of user feedback.	**P,A**
		CO 4: Explain the HCI implications for designing multimedia/ ecommerce/ e-learning Web sites.	**A,E**
		CO 5: Develop a meaningful user interface.	**E,C**
		CO 1: Realize the importance of interacting with business stakeholders in determining the requirements for a software system	**R,U**
		CO 2: Perform iterative software development processes: how to plan them, how to execute them.	**U,P**

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Agile Software Engineering	CS43E	**CO 3:** Point out the impact of social aspects on software development success.	**A,E**
		CO 4: Develop techniques and tools for improving team collaboration and software quality.	**E**
		CO 5: Perform Software process improvement as an ongoing task for development teams.	**E,C**
		CO 6: Show how agile approaches can be scaled up to the enterprise level.	
Computer Vision	CS43F	**CO 1:** Ability to understand the computer vision pipeline.	**R,U**
		CO 2: Ability to build solutions using computer vision algorithms.	**U,P**
		CO 3: Identify basic concepts, terminology, theories, models and methods in the field of computer vision	**A,E**
		CO 4: Describe known principles of human visual system	**E**
		CO 5: Describe basic methods of computer vision related to multi-scale representation, edge detection and detection of other primitives, stereo, motion and object recognition	**E,C**
		CO 6: Suggest a design of a computer vision system for a specific problem	**E,C**
II Year: IV Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Project & Viva-Voce	PSD4Q	**CO 1:** Construct a project from initial ideas;	**R,U**
		CO 2: Plan, schedule, monitor and control their own work;	**U,P**
		CO 3: Defend their ideas in discussions and presentations;	**A,E**
		CO 4: Use libraries and other information resources;	**E**
		CO 5: Apply tools and techniques from taught courses	**E,C**
		CO 6: Communicate their findings through a written report.	**C**

M.Sc. MICROBIOLOGY

Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: I Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
General Microbiology, Physiology AND Microbial Diversity	416C1A	**CO1**: Examine various microbes employing the microscopic techniques learnt. Measure and compare the size of microbes.	U
		CO2: Differentiate and appreciate the anatomy of various microbes. Plan the growth of microbes for different environmental conditions.	U
		CO3: Identify and cultivate the algae understanding their habitat. Analyze the morphology, classify and propagate depending on its economic importance. Categorize and cultivate a variety of extremophiles	U
		CO4: Create aseptic conditions by following good laboratory practices.	
		CO5: Compare various metabolic pathways and discuss the properties and functions of enzymes. Assimilate methods involved in microbial photosynthesis and bioluminescence	U
Immunology and Microbial Genetics	416C1B	**CO1**: Categorize the immune response to a variety of antigens. Identify different immune cells involved in immunity	U
		CO2: Justify the significance of MHC molecules in immune response and antibody production	U
		CO3 :Design antibodies and evaluate immunological assays in patient samples	U
		CO4: Analyze genomic DNA of prokaryotes and eukaryotes.	U
		CO5: Summarize gene transfer mechanisms for experimental study.	U
Practical-I - General Microbiology, Physiology, Microbial Diversity, Immunology and Microbial Genetics	416C1C	CO1: Apply microscopic techniques and staining methods in the identification and differentiation of microbes	P
		CO2 :Apply the knowledge on the sterilization of glass wares and media by different methods and measurement of cell growth	P
		CO3: Perform and evaluate immunological reactions to aid diagnosis.	P
		CO4 :Assess the level of lymphocytes in a blood sample and purify immunoglobulin employing appropriate techniques	P
		CO5 :Determine the amount of DNA and RNA in samples	P
Microalgal Technology	416E1C	CO1: Cquire knowledge in the field of microalgal technology and their characteristics.	P
		CO2: Identify the methods of algal cultivation and harvesting.	U
		CO3: Recognize and recommend the use of microalgae as food, feed and fodder.	U
		CO4: Promote microalgae in phycoremediation	U
		CO5: Compare and critically evaluate recent applied research in these microalgal applications	P
Bioinstrumentation	416E1D	CO1: Make use of the laboratory instruments- laminar air flow, pH meter, centrifugation methods, biosafety cabinets following SOP.	U
		CO2: Apply chromatography techniques in the separation of biomolecules	U
		CO3: Perform molecular techniques like mutagenesis and their detection.	U
		CO4: Estimate molecules in biological samples by adopting UV spectroscopic techniques	U
		CO5: Cultivate organisms anaerobically.	U

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Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: II Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Medical Bacteriology and Mycology	416C2A	CO1: Collect, transport and process of various kinds of clinical specimens	U
		CO2: Analyze various bacteria based on morphology and pathogenesis.	U
		CO3: Discuss various treatment methods for bacterial disease	U
		CO4: Employ various methods detect fungi in clinical samples and apply knowledge on antifungal agents..	U
		CO5: Apply various immunodiagnostic method to detect fungal infections	U
MEDICAL VIROLOGY AND PARASITOLOGY	416C2B	**CO1**: Cultivate viruses by different methods and aid in diagnosis. Perform purification and viral assay	U
		CO2 Investigate the symptoms of viral infections and presumptively identify the viral disease.	U
		CO3: Diagnose various viral diseases by different methods. (serological, conventional and molecular)	U
		CO4: Educate public about the spread, control and prevention of parasitic diseases.	U
		CO5: Identify the protozoans and helminthes present in stool and blood specimens. Perform serological and molecular diagnosis of parasitic infections	U
PRACTICAL-II - MEDICAL BACTERIOLOGY, MYCOLOGY, VIROLOGY & PARASITOLOGY	416C2C	CO1: Collection of different clinical samples, transport, culture and examination.	P
		CO2: Identify medically important bacteria, fungus and parasites from the clinical samples by staining and biochemical tests.	P
		CO3: Promote diagnostic skills; interpret laboratory tests in the diagnosis of infectious diseases	P
		CO4: Perform antibiotic sensitivity tests and compare with the standard tests.	P
		CO5: Screening of industrially important microbes for metabolite production.	A
BIOREMEDIATION	416E2C	CO1: Differentiate Ex-situ bioremediation and In-situ bioremediation. Assess the roles of organisms in bioremediation.	P
		CO2: Distinguish microbial processes necessary for the design and optimization of biological processing unit operations	U
		CO3: Identify, formulate and design engineered solutions to environmental problems.	U
		CO4: Explore microbes in degradation of toxic wastes and playing role on biological mechanisms.	U
		CO5: Establish the mechanisms of Arbuscular mycorrhizal fungi and Plant growth promoting Rhizobacteria in phytoremediation.	P
BIOENERGY	416E2D	CO1: Evaluate the various aspects of biomass production and their implementation.	U
		CO2: Design and construct a biodiesel plant.	U
		CO3: Carry out the process of fermentation for bio – alcohol fuels.	U
		CO4: Identify the nature of biogas as a biofuel and their technologies and applications	U
		CO5: Design, execute and extract bio hydrogen from algae.	U

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II Year: III Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Microbial Genetics	MQ23A	CO1: Know about the principles of genetics and genetic material.	U
		CO2: Familiarize on the organization of genetic material and gene regulations.	U
		CO3: Learn on the types, properties of plasmids widely used in gene cloning and gene transfer	U
		CO4: Explore the impact of mutation, repair mechanism and detection of mutation.	U
		CO5: Imparts knowledge on genetic recombination, transposons and gene mapping in bacteria, yeast and viruses.	U
Genetic Engineering	MQ23B	CO1: Provides knowledge on the various enzymes used in genetic engineering.	U
		CO2: Familiarize oncloning vectors used in genetic engineering.	U
		CO3: Gain sound knowledge on the gene cloning strategies and transfer methods.	U
		CO4: Acquire knowledge on various blotting techniquesand PCR.	U
		CO5: Learn the techniques of protoplast fusion, DNA finger printing techniques and application of genetic engineering in various fields.	U
Molecular biology	MQ23C	CO1: Gain complete knowledge on biomolecules and Nucleic acids.	U
		CO2: Explores the detailed processes of DNA replication, recombination, damage and repair mechanisms.	U
		CO3: Learn about RNA synthesis and processing and RNA transport.	U
		CO4: Understand the process of protein synthesis, inhibition factors and post translation modification of protein.	U
		CO5: Get an idea on control of gene expression at transcription, translation level and gene silencing.	U
Microbial genetics, Molecular biology & Genetic engineering practical*	MQ231	CO1: Learn the techniques for isolation of plasmid and genomic DNA, estimation of DNA by chemical and U-V method.	P
		CO2: Know the techniques for isolation of RNA from yeast, estimation of RNA by chemical and U-V method and isolation of antibiotic resistant auxotrophic mutants.	P
		CO3: Get hands on training on protein estimation, determination molecular weight of protein, 2D-Gel electrophoresis, Isoelectric focusing, Separation of amino acids by TLC and paper chromatography	P
		CO4: Gains experimental knowledge on separation of proteins using chromatography. Immobilization of enzymes and whole cells. Western blotting. Protoplast and spheroplast isolation. Induction of betagalactosidase activity in E. coli using IPTG	P
		CO5: Acquire knowledge on the lab skills for competent cell preparation, transformation, PCR, Native PAGE and Restriction analysis.	P
Soil and Agricultural Microbiology	MQ43A	CO1: Imparts knowledge on types of soil and microbial interaction in soil.	U
		CO2: Insight on biofertilizers and biopesticides.	U
		CO3: Gain basic knowledge about plant diseases and defense mechanism of plants.	U
		CO4: Familiarize on different plant disease and its management.	U
		CO5: Throws light on biogeochemical cycles and nitrogen fixation.	U

Microbial Remediation	MQ33A	CO1: Imparts basic knowledge on bioremediation, bioaugmentation and risk associated with pollutants.	U
		CO2: Insights on degradation of xenobiotics and other environmental pollutants.	U
		CO3: Gain knowledge about the concepts of aerobic and anaerobic digesters, dendroremediation and biodegradation of industrial waste	U
		CO4: Throws light on enzymes from fungi and its biodegradable properties and to understand the concept of solid and liquid waste treatment.	U
		CO5: Gain in-depth knowledge aboutphycoremediation of domestic wastewater	U
II Year: IV Semester			
Food, Dairy and Environmental Microbiology	MQ24A	CO1: Gain knowledge about different principles involved infood preservation, microbiological quality control and prevention of food-borne diseases.	U
		CO2: Throws light on the role of microorganisms in milk, fermented foods and in food processing, different types of fermented food products	U
		CO3: Familiarize the diversity of microorganisms in air, exemplify the air quality, explore the impact of air borne diseases.	U
		CO4: Learn the role of indicator microorganisms in water quality	U
		CO5: Gain in-depth knowledge about the degradation of xenobiotics in the environment.	p
Soil, Agricultural, Food and Environmental Microbiology Practical	MQ241	CO1: Imparts basic knowledge about soil inhabitingmicrobes and its impact in soil.	p
		CO2: Gain knowledge about plant diseases	P
		CO3: Throws light on food spoilage, enumeration and quality assessment.	p
		CO4: Learn about extracellular enzyme activity & quantification of microbes in air	p
		CO5: Gain knowledge of about the microbiological analysis of water	p
Research Methodology	MQ44A	CO1: Understand the objectives of research, design of research and analysis of data	U
		CO2: Gain basic knowledge about dissertation and publication ethics.	U
		CO3: Provides perceptions about funded projects.	U
		CO4: Learn about research metrics & ethics	U
		CO5: Throws light on statistical tools in biological science, software for plagiarism and reference.	U
Research Project***	MQ24Q	CO1: To impart advanced practical knowledge in conducting a research project..	P
		CO2: To plan and design statistically, retrieve relevant literature, organize and conduct, process the data, photograph relevant observations, evaluate by statistical programmes	P

M.Sc. BIOTECHNOLOGY

I Year: I Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Biochemistry	422C1A	**CO1:** Discovery and Diversity of cells , Structure of Eukaryotic cells	**K2**
		CO2: Bio macromolecules and Biomolecules Structure and its function of cell	**K2**
		CO3: To enlighten the students on Bio-energetics and Biological oxidation pathways.	**K4**
		CO4: To update the knowledge on Amino acids and Protein and appraise the role of Nucleic acids	**K3 & K4**
Molecular Genetics	422C1B	**CO1:** To acquire good knowledge about the molecular mechanisms of gene expression and understand the theories behind the organization and functions of genetic material in the living world	**K2**
		CO2: Identify and distinguish genetic regulatory mechanisms at different levels and explain the processes behind mutations and other genetic changes and study various chromosomal abnormalities	**K4**
		CO3: Make the students understand different range of DNA damage and range of their tools for their detection.	**K2& K4**
Molecular cell Biology	422C1C	**CO1:** To understanding of the molecular machinery of living cells and the principles that govern the structures of macromolecules and their participation in molecular recognition.	**K2**
		CO2: Identify the structures and purposes of basic components in prokaryotic and eukaryotic cells and their molecular mechanism	**K3**
		CO3: Demonstrate knowledge and understanding of the principles and basic mechanisms of nuclear envelope and its functions.	**K2& K4**
Bioinstrumentation	422E1A	**CO1:** Introduction and various types of Microscopic techniques	**K2**
		CO2: Impart understanding on centrifugation instruments and techniques	**K2**
		CO3: Separation of Biomolecules	**K2**
Enzymology	422E1B	**CO1:** Explain the basics of enzyme nomenclature and properties	**K2**
		CO2: Classify and Cognize the native and immobilized enzyme	**K4**
		CO3: Examine the equations of steady state kinetics	**K5**
I Year: II Semester			
Microbiology	422C2A	**CO1:** To understand the major discoveries of microbiology and describe microbial diversity, Microbial growth and metabolism	**K2**
		CO2: To provide basic knowledge about microbial culture, identification of microbes, principle and working of microscopes and sterilization techniques	**K2**

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		CO3: To enlighten the students on host microbe interaction and Epidemiology of microbial disease	**K4**
Plant and Animal Biotechnology	422C2B	**CO1:** To impart theoretical knowledge on various techniques of plant biotechnology like tissue culture, plant genetic transformation and their application in industries.	**K2**
		CO2: Importance of secondary metabolites and production in plants.	**K2**
		CO3: To develop concepts, principles and processes Concept and different types in Animal Cell Culture and animal cell lines	**K3**
Genetic Engineering	422C2C	**CO1:** Understanding the basic steps of gene cloning and the role of enzymes and vectors responsible for gene manipulation, transformation and genetic engineering.	**K2**
		CO2: Getting detailed knowledge of gene transfer methods and identifying suitable hosts for cloning.	**K4**
		CO3: Acquiring theoretical knowledge in the techniques, tools, and application, safety measures of genetic engineering and sequencing methods	**K4**
Pharmaceutical Biotechnology	422E2B	**CO1:** Explain the basic components of pharmaceutical and biotechnology industry and methods and applications of biosensor	**K2**
		CO2: Describe the Scientific, technical and economic aspects of vaccine & rDNA technology	**K3**
		CO3: Describe the basic concepts of protein Engineering, therapeutic proteins, hybridoma technology, gene therapy and enzyme immobilization techniques	**K3**
Environmental Biotechnology	422E2C	**CO1:** Explain various waste management methods and potential methods of biodegrading organic pollutants	**K2**
		CO2: Examine the techniques involved in remediation of polluted environments its control	**K4**
		CO3: Compile biotechnological approaches to degrade xenobiotic compounds	**K5**
Good Laboratory Practice	422S2A	**CO 1:** The students will be able to gain the skill about the lab organization, types of lab and arrangements of lab.	**K4**
		CO 2: To provide the knowledge about regulatory affairs, result recording procedures and interpretation methods.	**K4**
		CO3: Acquiring knowledge about laboratory instruments and waste disposal methods	**K4**
Practical I (Biochemistry, Molecular Genetics and Molecular cell biology)	422C2D	**CO1:** Illustrate basic biochemistry procedures	**K2**
		CO2: Study the methods of estimation of biomolecules	**K2**
		CO3: Isolate & Analyze DNA, RNA & protein and evaluate the quality and purity of Biomolecules	**K4**
Practical II (Microbiology,Plant	422C2E	**CO1:** Isolate, identify and characterize the microbes from various sources.	**K2**

and animal Biotechnology and Genetic engineering)		**CO2:** Examine Plant and Animal cells and their functions	**K5**
		CO3: Demonstrate Genetic engineering techniques	**K2**
II Year: III Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Bioinformatics	MU31A	**CO1:** To get introduced to the basic concepts of Bioinformatics and its significance in Biological data analysis.	**K2**
		CO2: Describe the history, scope and importance of Bioinformatics and role of internet in Bioinformatics.	**K3**
		CO3: Explain about the methods to characterize, different database and sequence alignment of biological data	**K3& K4**
Immunology	MU31B	**CO1:** Illustrate various mechanisms that regulate immune responses and maintain tolerance	**K2**
		CO2: Describe key events and cellular players in antigen presentation, and how the nature of the antigen will shape resulting effector responses	**K4**
		CO3: Learn the concepts of cellular and molecular processes that represents the human immune system and immunological diagnosis	**K4**
Bioprocesses Technology	MU31C	**CO1:** Outline the basis of Bioprocess Engineering, Reactors and fermentation process	**K2**
		CO2: Assess Scale up and Scale down	**K4**
		CO3: Compile the output of fermentation processes	**K5**
Nano biotechnology	MU43A	**CO1:** Understand the bases for Introduction to Nanotechnology	**K2**
		CO2: To impart understanding on Nanoparticle based Drug Delivery, fabrication of nanomaterial for bone tissue grafting and its methods	**K2**
		CO3: Understand the application of Nanotechnology	**K2**
Microbial Remediation	MQ33A	**CO1:** Differentiate Ex-situ bioremediation and In-situ bioremediation. Assess the roles of organisms in bioremediation.	**K1**
		CO2: Identify, formulate and design engineered solutions to environmental problems.	**K2**
		CO3: Establish the mechanisms of Arbuscular mycorrhizal fungi and Plant growth promoting Rhizobacteria in phytoremediation.	**K2**
Soft skill III –Life and Managerial Skill	PSSEC	**CO1:** A course objective describes what a faculty member will cover in a course	**K1**
		CO2: Identify own strengths and develop areas for growth	**K2**
		CO3: apply the principles and practices of their discipline to new or complex environments.	**K4**

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INTERNSHIP	PSSEQ	**CO1:** Student is able to test the theoretical learning in practical situations by accomplishing the tasks assigned during the internship period.	**K4**
		CO2: Student is able to analyze the functioning of internship organization and recommend changes for improvement in processes.	**K5**
		CO3: first-hand experience, professional opportunities and personal growth.	**K4**
II Year: IV Semester			
Research Methodology	MU24A	**CO1:** Understand the bases for research.	**K4**
		CO2: To know about research proposal, dissertation writing and statistical application in research.	**K3**
		CO3: To know about office tools and search engines used in research.	**K3**
Stem cell biology	MU44A	**CO1:** To understand the major discoveries of stem cell biology, basic knowledge about stem cell niche and functions.	**K2**
		CO2: To enlighten the students on Stem cell isolation and culture techniques	**K4**
		CO3: To update the knowledge on Stem cell cycle and applications of Embryonic stem cells	**K4**
Dissertation	MU24Q	**CO1:** Conceptualize the role and developmental nature of experiential learning.	**K4**
		CO2: Enable the students to work on short industry projects and come up with the solutions commensurate with the assigned problem to the students.	**K5**
		CO3: To impart skills in preparing detailed report describing the project and results/findings.	**K6**
Softskill IV - Computing Skill	PSSED	**CO1:** Understanding the concept of input and output devices of Computers	**K2**
		CO2: Understand an operating system and its working, and solve common problems related to operating systems.	**K2**
		CO3: To acquire knowledge on editor, spread sheet and presentation software.	**K4**
Practical III: Laboratory Course (Bioinformatics, Immunology& Bioprocesses Technology)	MU231	**CO1:** To learn the Bioinformatics tools for sequence retrieval and alignment to apply the learned tools for various applications	**K2**
		CO 2: To isolate, identify & enumerate immune cells to learn the technique of immunodiagnostics	**K2**
		CO3: To study upstream & downstream techniques	**K2**

M.Sc.Electronics

Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: I Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Embedded System Design with PIC	415C1A	**CO 1:** The student will be able to develop skills to design their own Embedded System using PIC microcontroller.	**U**
		CO 2: Its internal modules for various applications	**U & P**
Digital Communication Systems	415C1B	**CO 1:** able to design PCM system able to design base band transmission scheme.	**U & A**
		CO 2: able to design and implement band pass signaling scheme	**E**
		CO 3: analyze the spectral characteristics of band pass signaling scheme.	**U**
		CO 4: able to design error control coding schemes	**P & A**
Digital Signal Processing	415E1A	**CO 1:** Able to develop algorithm to analyze the discrete time signal and systems in time domain using convolution and correlation.	**E & C**
		CO 2: Able to develop an algorithm to analyze the discrete time signals in frequency domain using DFT and FFT.	**U,P & R**
		CO 3: Able to develop an algorithm to design and analyze the FIR and IIR filters using Z – transform.	**A**
		CO 4: Able to develop an algorithm to design adaptive filters for system identification, noise cancellation and Equalization	**U**
Fundamentals of Python Programming	415E1B	**CO 1:** Able to develop skill on coding python in python IDE.	**U & P**
		CO 2: Able to handle List, Tuples, sets and Dictionaries in Python.	**U & E**
		CO 3: Able to develop skill to develop python simple programs using statements.	**C**
		CO 4: Able to develop skill to handle arrays and user defined functions.	**U & P**
		CO 5: Able to develop skill to handle objects, classes, inheritance, polymorphism.	**U**
		CO 6: Able to develop skill to develop codes for Data analytic, Digital Signal and Image processing using Python.	**U & C**
Practical-I : Embedded systems Design with PIC and Digital Communication **Lab-I**	415C1C	**CO 1:** able to develop skill to design and implement Embedded System using PIC microcontroller.	**U & C**
		CO 2: able to design digital communication modulators and demodulators	**U & A**
Cognitive level Remember- K1, Understand –K2, Apply – K3, Analyze –K4, Evaluate- K5, Create- K6			
I Year: II Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**

Embedded System Design with AVR	415C2A	CO 1: The student will be able to develop skills to design their own Embedded System using AVR.	**U & A**
		CO2: Microcontroller and its internal modules for various applications using AVR studio IDE.	**A**
CMOS VLSI Design	415C2B	**CO 1:** Model Combinational and sequential digital circuits by Verilog HDL.	**U**
		CO 2: Design and model digital circuits with Verilog HDL at behavioural, structural, and RTL Levels.	**U & A**
		CO 3: Develop test benches to simulate combinational and sequential c ir c u i t s.	**U & P**
		CO 4: Understand the FPGA Architecture	**U**
		CO 5: Implementation of the combinational and sequential digital circuits in FPGA	**U & P**
Digital Signal Processor Programming and Applications	415C2C	**CO 1:** develop skill to develop DSP algorithm using Code composer Studio.	**P**
		CO 2: develop skill to design DSP System using TMS320C5416 DSK	**A & E**
Practical-II: Embedded System Design with AVR, VLSI design and Digital Signal Processor Programming Lab-II	415C2D	**CO 1:** Able to design and develop and embedded hardware and software for AVR microcontroller.	**A**
		CO 2: Able to program on AVR studio IDE	**U**
		CO 3: Able to design combinational and sequential digital circuits using xilinix FPGA program	**U**
		CO 4: Able to develop FPGA programming codes using VHDL/Verilog.	**U & E**
		CO 5: Able to develop C code using code composer studio IDE.	**U & A**
Machine and Deep Learning	415E2A	**CO 1:** Able to collect data and to develop the skill to apply various machine learning for data analytic using matlab and python programming.	**U**
		CO 2: Able to use deep learning and neural networks to find the accuracy of the system design using python	**U**
Computational Statistics With MATLAB	415S2A	CO1:Able to develop MATLAB coding skill for statistical data analysis for their research and project	**A**

Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C

II Year: III Semester

Course Name and Course Code		Course Outcome	Cognitive Level
	MV23A	**CO 1:** Learn about the basic concepts of data communication systems.	**U**
		CO 2: Understand the data transmission model and modem control.	**U & A**
		CO 3: Familiarize the use of Computer Networks to develop the network architecture and transfer the data using networks.	**U & P**

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Data Communication and Computer Networking		**CO 4:** Apply the TCP/IP protocols and Breakout box and line monitors	**U**
		CO 5: Create the Telecommunications in real-time applications	**U & P**
Digital Signal Processing	MV23B	**CO 1:** Understand the basic and fundamental concepts of mathematical representation of digital signal processing	**P**
		CO 2: Learn the basic mathematical concepts of signals and systems	**A & E**
		CO 3: Acquire the method of using various transform techniques to solve DSP problems	**A**
		CO 4: Realize the basic structures of FIR and IIR filter design techniques and their implementation	**U**
		CO 5: Implement the basic DSP problems using DSP hardware and software	**U**
Basic VLSI Design and VHDL	MV23C	**CO 1:** Understand principle of MOS and BI-COMS Circuit design procedure and design rules	**U & E**
		CO 2: Realize the basic circuit and its elements and fundamental components involved in circuit design.	**U & A**
		CO 3: Apply the basics for the structural design of combinational and sequential circuit design.	**U**
		CO 4: Evaluate the CAD design tools and VHDL programming to create simple VLSI designs	**U**
		CO 5: Create ideas by practicing basic VLSI designs using VHDL language.	**U**
DSP Laboratory	MV231	**CO 1:** Able to interface DSP hardware and software tools	**U**
		CO 2: Able to carry out the basic signal processing operations	**U & A**
		CO 3: Able to design and implement Filter, FFT, PWM operations in DSK	**U & P**
		CO 4: Able to design DSP system for simple applications	**U**
		CO 5: Able to perform simple image processing operations in MATLAB	**U & A**
Machine Vision and its Applications	MV33A	**CO 1:** Learn about the types of the sensors used for machine vision system, technologies, principles, and data processing.	**U & P**
		CO 2: Understand the components, concepts, hardware, algorithms and applications of machine vision systems.	**U**
		CO 3: Perceive idea about the functionality, classification, components, and characteristics of robotic systems	**U & P**
		CO 4: Familiarize the various classifications of the robotic sensors, and robotic programming languages.	**P**
		CO 5: Understand the handling and assembling of the robots and realtime applications of the robot.	**A & E**
		CO 1: Understand the basic fundamentals of digital image processing techniques.	**A**

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Digital Image Processing	MV43A	**CO 2:** Apply image enhancement techniques using various domain filtering methods.	**U**
		CO 3: Understand the principles color imaging processing	**U**
		CO 4: Familiarize with the simple image restoration and image compression techniques using the various filtering techniques.	**U & E**
		CO 5: Perform image processing operations like morphological and segmentation techniques.	**U & A**
Soft Skill	PSSEC	**CO 1:** understand time pressures and the need for time management.	**U**
		CO 2: identify managerial activities that contribute to managerial effectiveness	**U**
		CO 3: understand what is meant by management and managerial effectiveness	**U**
II Year: IV Semester			
Neural Networks and Artificial Intelligence	**MV24A**	**CO 1:** Perceive knowledge about artificial neural network (ANN), architecture, components and applications of ANN	**U**
		CO 2: Learn the basics of pattern classification, designing and development of neural network based applications.	**U & A**
		CO 3: Understand the fundamentals of pattern association, training algorithms, associative memory neural networks and applications.	**U & P**
		CO 4: Familiarize the different neural network based simple applications.	**U**
		CO 5: Obtain the skill of defining simple AI problems and their solving methods.	**U & P**
Microwave Electronics	**MV24B**	**CO 1:** Review the basics of electromagnetic theories.	**P**
		CO 2: Understand the functionalities of microwave, waveguides, cavities and resonators.	**A & E**
		CO 3: Familiarize the types of microwave tubes, microwave solid state devices and related circuits.	**A**
		CO 4: Learn the characteristics of microstrip lines, detection and measurement.	**U**
		CO 5: Apply the concepts of microwaves and their radiation hazards in real-time applications.	**U**
Project and viva-voce	**MV24Q**	**CO 1:** Ability to identify a problem in the area of study/interest	**U & E**
		CO 2: Able to collect the evidences to carry out the project	**U & A**
		CO 3: Organize the infrastructure facility to execute the project work	**U**
		CO 4: Develop the skill of doing experiments and analyzing the results	**U**

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		CO 5: Create ideas to solve similar problems in real-time applications	**U**
Elements of Nanotechnology in Electronics	**MV44A**	**CO 1:** Understand the fundamental concepts associated with the nanotechnology in electronics.	**U**
		CO 2: Realize the working principles of different nanofabrication techniques employed in electronic industry.	**U & A**
		CO 3: Familiarize with the nanostructure fabrication and inspection methods	**U & P**
		CO 4: Apply the nanofabrication process for designing the MOS transistors.	**U**
		CO 5: Create design skills in nanostructure based devices.	**U & A**
Soft Skill	**PSSED**	**CO 1:** An ability to work effectively in small groups on medium scale computing projects.	**U & P**
		CO 2: An ability to critically analyze a problem and to design, implement, and evaluate a computing solution that meets requirements.	**U**
		CO 3: An ability to apply mathematics to solving computing problems.	**U & P**

M.Sc. BIOCHEMISTRY

I Year: I Semester			
Course Name and Course Code		**Course Outcome** **At the end of this course the students will be able to**	**Cognitive Level**
Biomolecules	420C1A	**CO 1:** Explain the chemical structure and functions of carbohydrates.	**U**
		CO 2: : Using the knowledge of lipid structure and function, explain how it plays a role in Signaling pathways	**R**
		CO 3: Describe the various levels of structural organization of proteins and the role of proteins in biological system	**U**
Biochemical Techniques	420C1B	**CO 1:** Attain good knowledge in modern used in biochemical investigation and microscopy.	**U**
		CO 2: Demonstrate knowledge to implement the theoretical basis of chromatography and electrophoretic.	**A**
		CO 3: Tackle more advanced and specialized spectroscopic techniques that are pertinent to research.	**R**
Microbiology and Immunology	420E1A	**CO 1:** To classify different types of microorganisms and explain life cycle of the microbes.	**U**
		CO 2: To recognize the microorganisms involved in decay of foods and will be able to apply various counteracting measures.	**A**
		CO 3: To understand the common pathogenic bacterial and fungi that cause toxic effects.	**U**
Physiology and Cell Biology	420E1B	**CO 1:** specifically understand the biological and chemical processes within a human cell.	**U**
		CO 2: identify and prevent diseases	**R**
		CO 3: understand defects in digestion, nutritional deficiencies and intolerances, and gastrointestinal pathologies.	**U**
I Year: II Semester			
Enzymes and Enzyme Technology	420C2A	**CO 1:** Describe the catalytic mechanisms employed by enzymes.	**R**
		CO 2: Choose and use the appropriate methods to isolate and purify enzymes and check the purity of the enzyme.	**U**
		CO 3: Analyze enzyme kinetic data graphically, calculate kinetic parameters, determine the mechanism of inhibition by a drug/chemical.	**U**
Cellular Metabolism with Clinical Correlation - I	420C2B	**CO 1:** Appreciate the modes of synthesis and degradation of glucose.	**U**
		CO 2: Gain knowledge on polysaccharide metabolism and glycogen storage disease.	**R**
		CO 3: Acquaint with the making and braking of nucleotides.	**A**

Biostatistics and Data Science	420E2C	**CO 1:** Concepts of statistical population and sample, variables and attributes. Tabular and graphical representation of data based on variables.	**U**
		CO 2: Conditions for the consistency" and criteria for the independence of data based on attributes.	**R**
		CO 3: Learning different sampling methods and analyzing statistical significance.	**P**
Energy and Drug Metabolism	420E2A	**CO 1:** Appreciate the relationship between free energy and redox potential.	**U**
		CO 2: Gain knowledge on role of mitochondria in the production of energy currency of the cell.	**A**
		CO 3: Acquaint with the process of photosynthesis	**R**
Nutritional Biochemistry (SEC-I)	420S2A	**CO 1:** Plan a balanced diet based on an individual's energy requirement, Assess nutritional status of an individual.	**U**
		CO 2: Describe the biochemical, physiological and nutritional functions of macronutrients.	**A**
		CO 3: Evaluate the functions of vitamins and minerals ,and fluids and electrolyte balance in different physiological states.	**P**
Laboratory course on biomolecule and biochemical techniques	420C1C	**CO 1:** The student will be able to acquire knowledge and skill in the techniques used in the isolation, purification and estimation of different biomolecules.	**P**
		CO 2: The students will get acquainted with Principle, Instrumentation and method of Performing UV absorption studies of DNA, Protein and interpreting the alteration occurred during the process of denaturation.	**P**
		CO 3: .The student will be fine-tune in handling the instruments like colorimeter, spectrophotometer and will be able to estimate the biomolecules and minerals from the given samples.	**P**
Laboratory course in enzymology, microbiology and cell biology	420C2C	**CO 1:** The student will be able to employ the relevant techniques for isolation and purification of enzymes and gain skill in kinetic studies which is essential for research activity.	**P**
		CO 2: Student will acquire ability in performing enzyme assay, and explicate the methods that form the basis of enzyme characterization.	**P**
		CO 3: Learn the Basic concepts in microbiology and cell biology which will be helpful for interdisciplinary research work.	**P**
II Year: III Semester			
Course Name and Course Code		**Course Outcome** **At the end of this course the students will be able to**	**Cognitive Level**
		CO 1: To understand role of laboratory investigations for biochemical parameters and understand the disorders associated with blood cells	**U**

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Clinical Biochemistry - I	MG23A	**CO 2:** To understand the etiology of metabolic diseases	**U**
		CO 3: To understand the quality of testing clinical biochemistry parameters in laboratory with accuracy and precision using standard and updated methods	**U**
Molecular Biology	MG23B	**CO 1:** Comprehend the organization of genomes, the molecular basis of DNA replication, recombination and transposition.	**R**
		CO 2: Gain knowledge about how genes are transcribed and translated in prokaryotes and eukaryotes	**A**
		CO 3: : Comprehend the techniques of gene silencing and its applications	**R**
Applied Biotechnology	MG23C	**CO 1:** To produce recombinant molecule, screen the products and also to identify/analyse various DNA sequences using different methods.	**A**
		CO 2: To clone gene of their interest for several downstream purposes with a robust comprehension about wide variety of applicable vectors	**U**
		CO 3: To design animal and Plant cell culture protocols for transgenic applications with an acquaintance about ethical aspects.	**U**
Biostatistics	MG33A	**CO 1:** Concepts of statistical population and sample, variables and attributes. Tabular and graphical representation of data based on variables.	**P**
		CO 2: Understanding students t test, ANOVA, Chi square test to analyse the significance of various research.	**U**
		CO 3: Learning operating systems, application programs and data analysis using SPSS Package	**U**
Disease and Prevention	MG43A	**CO 1:** Understand the risks of development of obesity, cardiovascular diseases and diabetes mellitus, their treatment and prevention.	**U**
		CO 2: Effectively manage hypertension and renal diseases by making lifestyle and diet changes.	**R**
		CO 3: Prevent pre- mature ageing and age related disorders / disease conditions.	**A**
Soft Skill – III (Life and Managerial Skill)	PSSEC	**CO 1:** Gain self-competency and confidence	**U**
		CO 2: Practice emotional competency	**P**
		CO 3: Gain intellectual Competency	**U**
II Year: IV Semester			
Hormones	MG24A	**CO 1:** To understand and explain the different types and basic concepts of Signalling, types of hormones, significance of Signalling in manipulating life processes.	**U**
		CO 2: To analyze the involvement of hormones in various clinical conditions like diabetes, metabolic syndrome, obesity and reproductive health issues.	**P**
			P

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		CO 3: To critically analyse the underlying abnormality with the symptoms from childbirth till senescence.	
Clinical Biochemistry - II	MG24B	**CO 1:** To appreciate and understand the role of enzymatic biomarkers to assess organ pathologies.	**U**
		CO 2: To understand and evaluate the functions of liver and to monitor the health of the organ based on specific laboratory tests and interpretations.	**U**
		CO 3: To link the serum hormone levels and clinical symptoms with underlying hormonal disturbances.	**R**
Cell Signaling	MG44A	**CO 1:** To understand and explain the basic concepts of cell communication and Signalling, types of receptors, significance of Signalling and their role in manipulating life processes.	**U**
		CO 2: To understand the role of enzymes in activating transcription factors by modification such as phosphorylation, proteolysis, removal from inhibitor	**R**
		CO 3: To appreciate the involvement of Signalling pathways in regulating cell cycle and in cancer progression.	**R**
Immunology	MG44B	**CO 1:** Describe about the cells, organ and the role of Immune system	**U**
		CO 2: Describe about the Humoral and cell mediated immunity and its regulation.	**R**
		CO 3: Applying the immunological techniques knowledge in diagnositic purposes.	**P**
Soft Skill - IV: Computing Skill	PSSED	CO 1: To impart training in Microsoft Office.	**U**
		CO 2: To provides essential skills to get adapted to any work environment.	**R**
		CO3: To apply knowledge of Databases and Information Management	**P**
Practical - III: Laboratory Course on Clinical Biochemistry	MG241	**CO 1:** The student will be able to assess the Liver Function and interpret the biochemical investigation in a given clinical situation.	**P**
		CO 2: Acquire Skill to perform the Renal function test to assess the function of Kidney and report the abnormal parameters.	**P**
		CO 3: To estimate the blood glucose content and lipid profile, to evaluate the alterations	**P**

MSc Mathematics

I Year: I Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
ALGEBRA I	42BC1A	**CO 1:** Recall basic counting principle, define class equations to solve problems, explain Sylow's theorems and apply the theorem to find number of Sylow subgroups	**U**
		CO 2: Define Solvable groups, define direct products, examine the properties of finite abelian groups, define modules	**R**
		CO 3: Define Jordan,canonical form, Jordan blocks, define rational canonical form, define companion matrix of polynomial, find the elementary devices of transformation, apply the concepts to find characteristic polynomial of linear transformation	**U&R**
REAL ANALYSIS I	42BC1B	**CO 1:** Analyze and evaluate functions of bounded variation and Rectifiable Curves.	**U**
		CO 2: Describe the concept of Riemann-Stieltjes integral and its properties.	**R**
		CO 3: Demonstrate the concept of step function, upper function, Lebesgue function and their integrals.	**U&R**
ORDINARY DIFFERENTIAL EQUATIONS	42BC1C	**CO 1:** Establish the qualitative behavior of solutions of systems of differential equations .	**U**
		CO 2: Recognize the physical phenomena modeled by differential equations and dynamical systems.	**R**
		CO 3: Analyze solutions using appropriate methods and give examples.	**U&R**
GRAPH THEORY	42BE1D	**CO 1:**To understand and classify second order equations and find general solutions	**U**
		CO 2: To analyse and solve wave equations in different polar coordinates	**R**
		CO 3: To solve Vibrating string problem, Heat conduction problem, to identify and solve Laplace and beam equations	**U&R**
DISCRETE MATHEMATICS	42BE1G	**CO 1:**Students will gain an understanding of the Basic definition of Logics with examples.	**U**
		CO 2: Students will gain knowledge of Predicate Logic	**R**
		CO 3: Students will be able to implement and evaluate types of Lattices and Boolean Algebra	**U&R**
I Year: II Semester			
ALGEBRA II	42BC2A	**CO 1:** Prove theorems applying algebraic ways of thinking.	**U**
		CO 2: Connect groups with graphs and understanding about Hamiltonian graphs.	**R**

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		CO 3: Compose clear and accurate proofs using the concepts of Galois Theory.	**U&R**
REAL ANALYSIS II	42BC2B	**CO 1:**Understand and describe the basic concepts of Fourier series and Fourier integrals with respect to orthogonal system.	**U**
		CO 2: Analyze the representation and convergence problems of Fourier series.	**R**
		CO 3: Analyze and evaluate the difference between transforms of various functions.	**U&R**
PARTIAL DIFFERENTIAL EQUATIONS	42BC2C	**CO 1:** recognize the major classification of PDEs and the qualitative differences between the classes of equations.	**U**
		CO 2: demonstrate modeling assumptions and derivations that lead to PDEs.	**R**
		CO 3: be critically competent in solving linear PDEs using classical solution methods.	**U&R**
MODELLING AND SIMULATION WITH EXCEL	42BE2C	**CO 1:** variable can vary using probability distributions.	**U**
		CO 2: Use these values to simulate the system's behavior.	**R**
		CO 3: predicts how complex systems behave by simulating outcomes using random values.	**U&R**
NUMERICAL METHODS WITH C++	42BE2F	**CO 1:** Covers algebraic equations, interpolation, boundary value problems, and matrix eigenvalue	**U**
		CO 2: Designed to help students master numerical methods using C++	**R**
		CO 3: Covers optimization, interpolation, numerical integration, and common algorithms.	**U&R**

II Year: III Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
COMPLEX ANALYSIS I	MP23A	**CO 1:** analyze and evaluate local properties of analytical functions and definite integrals.	**U**
		CO 2: describe the concept of definite integral and harmonic functions.	**R**
		CO 3: demonstrate the concept of the general form of Cauchy's theorem.	**U&R**
TOPOLOGY	MP23B	**CO 1:** define and illustrate the concept of topological spaces and the basic definitions of open sets, neighbourhood, interior, exterior, closure and their axioms for defining topological space.	**U**
		CO 2: understand continuity, compactness, connectedness, homeomorphism and topological properties.	**R**
		CO 3: analyze and apply the topological concepts in Functional Analysis.	**U&R**

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OPERATIONS RESEARCH	MP23C	**CO 1:** analyze and evaluate deterministic inventory control model. K4, K5	**U**
		CO 2: describe the concept of Queueing theory.	**R**
		CO 3: demonstrate the concept of network models.	**U&R**
MECHANICS	MP23D	**CO 1:** demonstrate the knowledge of core principles in mechanics.	**U**
		CO 2: interpret and consider complex problems of classical dynamics in a systematic way.	**R**
		CO 3: apply the variation principle for real physical situations.	**U&R**
JAVA PROGRAMMING	MP33A	**CO 1:**compile, and execute Java programs that may include basic data types and control flow constructs using J2SE or other Integrated Development Environments (IDEs) such as Eclipse, NetBeans, and JDeveloper	**U**
		CO 2:compile and execute Java programs using object oriented class structures with parameters, constructors, and utility and calculations methods, including inheritance, test classes and exception handling.	**R**
		CO 3:compile, and execute Java programs using arrays and recursion	**U&R**
NUMBER THOERY AND CRYPTOGRAPHY	MP43B	**CO 1:** demonstrate the knowledge of core principles in mechanics.	**U**
		CO 2: interpret and consider complex problems of classical dynamics in a systematic way. K3,	**R**
		CO 3: apply the variation principle for real physical situations.	**U&R**
		II Year: IV Semester	
COMPLEX ANALYSIS II	MP24A	**CO1:**analyze and evaluate Riemann Zeta Function and Normal Famalies.	**U**
		CO 2:describe the concept of Riemann mapping Theorem .	**R**
		CO 3:demonstrate the concept of Simply periodic functions and Doubly periodic functions.	**U&R**
DIFFERENTIAL GEOMETRY	MP24B	**CO 1:** explain space curves, Curves between surfaces, metrics on a surface, fundamental form of a surface and Geodesics.	**U**
		CO 2: evaluate these concepts with related examples.	**R**
		CO 3: compose problems on geodesics.	**U&R**
FUNCTIONAL ANALYSIS	MP24C	**CO 1:** understand the Banach spaces and Transformations on Banach Spaces.	**U**
		CO 2: prove Hahn Banach theorem and open mapping theorem.	**R**
		CO 3: describe operators and fundamental theorems.	**U&R**
MATHEMATICAL STATISTICS	MP44B	**CO 1:** Able to understand identify random variables and distribution functions. Able to understand the testing of hypothesis.	**U**

		CO 2: Able to identify bivariate distribution characteristic, generating functions.	**R**
		CO 3: Able to understand sampling distributions .Able to understand estimators	**U&R**
TENSOR ANALYSIS AND RELATIVITY	MP44D	**CO 1:** Tensor analysis to physics, engineering, and relativity	**U**
		CO 2: Grasp the mathematical foundations of tensors and their applications.	**R**
		CO 3: Formulate physical phenomena using tensors and understand their implications.	**U&R**

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MCA

Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: I Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Discrete Mathematics	435C1A	**CO 1:** To understand the concepts of relations and functions distinguish among normal forms	**U**
		CO 2: To analyze and evaluate the recurrence relations	**A,E**
		CO 3: To distinguish among various normal forms and predicate calculus	**E**
		CO 4: To solve and know various types of matrices	**R**
		CO 5: To evaluate and solve various types of graphs	**E**
Data Structures and Algorithms	435C1B	**CO 1:** Understand various ADT concepts	**U**
		CO 2: Familiar with implementation of ADT models with Python language and understand how to develop ADT for the various real-time problems	**A,E**
		CO 3: Apply with proper ADT models with problem understanding	**E**
		CO 4: Apply and Analyze right models based on the problem domain	**R**
		CO 5: Evaluate modern data structures with Python language	**E**
Python Programming	435C1C	**CO 1:** Comprehend the programming skills in python and develop applicationsusing conditional branches and loop	**R-C**
		CO 2: Create python applications with strings and functions	**R-C**
		CO 3: Understand and implement the Object Oriented Programming paradigmwith the concept of objects and classes, Inheritance and polymorphism	**R-C**
		CO 4: Evaluate the use of Python packages to perform numerical computationsand data vizualization	**R-C**
		CO 5: Design interactive web applications using Django	**R-C**
Data Structures using Python Programming Practical	435C1D	**CO 1:** Strong understanding in various ADT concepts	**R-C**
		CO 2: To become a familiar with implementation of ADT models.	**R-C**
		CO 3: Apply sort and tree search algorithms	**R-C**
		CO 4: Evaluate the different data structure models	**R-C**
		CO 5: Learn how to develop ADT for the various real-time problems	**R-C**
Data Engineering and Management	435E1A	**CO 1:** Comprehend the Data Management concepts and analyse the relationshipwith the enterprise	**R-C**
		CO 2: Analyze Data Modelling concepts and assess its quality	**R-C**
		CO 3: Understand and implement business modelling techniques	**R-C**

		CO 4: Evaluate the use of Artificial Intelligence and Machine Learning in CRM	**R-C**
		CO 5: Develop CRM applications in cloud	**R-C**
Architecture and Frameworks	435E1B	**CO 1:** Understand, analyze and evaluate the purpose of Software architecture and development methodologies with consideration of risk management.	**R-C**
		CO 2: Comprehend, apply and evaluate the domain knowledge for software development process and determine the impact of quality attributes.	**R-C**
		CO 3: Understand, track and examine the systematic approach for various software design models with effective document process.	**R-C**
		CO 4: Illustrate and summarize the functions of orthogonal systems with complexity, design principles and design pattern for software architecture.	**R-C**
		CO 5: Comprehend, analyze and evaluate the performance and security measures for Server, Web and Database applications in order to create the secure software systems for various domain applications.	**R-C**
Operating Systems and UNIX	435E1C	**CO 1:** Analyze various scheduling algorithms.	**R-C**
		CO 2: Understand deadlock, prevention and avoidance algorithms.	**R-C**
		CO 3: Compare and contrast various memory management schemes.	**R-C**
		CO 4: Understand the functionality of file systems.	**R-C**
		CO 5: To comprehend, use and illustrate the advance concepts such as alternate shell script, data connectivity and bash scripting	**R-C**
Data Engineering and Management Practical	435E1D	**CO 1:** Comprehend the scripting knowledge in MongoDB and perform basicoperations in shell prompt.	**R-C**
		CO 2: Implement, Create, Read, Update and Delete Operations on MongoDBdatabase.	**R-C**
		CO 3: Analyze MongoDB using DbVisualizer.	**R-C**
		CO 4: Assess Zoho CRM features for managing the customer relationships.	**R-C**
		CO 5: Create a customized application in Zoho CRM.	**R-C**
Architecture and Frameworks Practical	435E1E	**CO 1:** Comprehend the programming skills of Software architecture tools and packages.Comprehend the programming skills of Software architecture tools and packages.	**R-C**
		CO 2: Understand and implement the user profiles and authentication with recovery mechanism.	**R-C**
		CO 3: Comprehend and evaluate the access control and content representation use of FTP server.	**R-C**
		CO 4: Understand and implement reading and writing resources for various applications.	**R-C**

		CO 5: Identify and examine the notifications, friends, and follower list of social application protocols.	**R-C**
Operating Systems and Unix Practical	435E1F	**CO 1:** To understand, apply and analyze the concepts and methodology of Unixshell programming.	**R-C**
		CO 2: To comprehend, impart and apply fundamentals of control structure andscript controls.	**R-C**
		CO 3: To understand, analyses and evaluate the functions, graphical desktopinterface and editors.	**R-C**
		CO 4: To collaborate, apply and review the concepts and methodology of regular expression and advanced gawk.	**R-C**
		CO 5: To comprehend, use and analyze the advance concepts such as alternateshell script, dy and bash scripting	**R-C**
Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: II Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Database Management System	435C2A	**CO 1:** Classify the modern and futuristic database applications based on size and complexity .	**R-C**
		CO 2: Map ER model to relational model to perform database design effectively.	**R-C**
		CO 3: Write queries using normalization criteria and optimize queries.	**R-C**
		CO 4: Compare and contrast various indexing strategies in different database systems.	**R-C**
		CO 5: Appraise how advanced database differ from traditional databases.	**R-C**
Big Data Analytics	435C2B	**CO 1:** To understand, illustrate and evaluate the concepts and techniques of Data Science, Big Data Analytics and its tools.	**R-C**
		CO 2: To collaborate, apply and review the computing for big data in Hadoop, and NoSQL environment.	**R-C**
		CO 3: To Comprehend, implement and review the concepts of data science and big data analytics projects using MapReduce, and MongoDB.	**R-C**
		CO4: To understand, use and analyse the concepts of Big Data Analytics projects using HIVE database.	**R-C**
		CO 5: To illustrate , develop and review the concepts of PIG database in Hadoop environment.	**R-C**
Computer Networks	435C2C	**CO 1:** Understand, analyse and examine the concepts of Communication Protocols with its architecture and functions.	**R-C**
		CO 2: Illustrate and apply the appropriate internet architecture along with efficient protocol models for the user defined communication environment.	**R-C**
		CO 3: Comprehend, categorize and formulate the appropriate IP routing protocol to establish a efficient data transfer.	**R-C**

		CO 4: Comprehend, analyse and evaluate the concepts Virtual wired service and IP/optical networking with its functions and development.	**R-C**
		CO 5: Eludicate, analyse and inspect the IP traffic engineering and its models along with the security mechanisms.	**R-C**
RDBMS with VB.NET Practical	435C2D	**CO 1:** Use typical data definitions and manipulation commands.	**R-C**
		CO 2: Design applications to test Nested and Join Queries.	**R-C**
		CO 3: Implement simple applications that use Views .	**R-C**
		CO 4: Implement applications that require Frontend Tool.	**R-C**
		CO 5: Critically analyse the use of Tables, Views, Functions and Procedures.	**R-C**
Social Networking	435E2A	**CO 1:** To understand, impart and summarise the concepts of Social media, Social networking and Webcasts.	**R-C**
		CO 2: To comprehend, design and develop a Word Press Powered Website.	**R-C**
		CO 3: To understand, implement and perform evaluation of Social Networking and Micro-Blogging.	**R-C**
		CO 4: To colloborate, implement and analyse the Widgets and Badges in social netwoking environment.	**R-C**
		CO 5: To understand, illustrate and perform evaluation of web optimization for social networks.	**R-C**
Cyber security	435E2B	**CO 1:** Understand, describe, analyse and examine the basics of Cyber security concepts and its implementation in India.	**R-C**
		CO 2: Comprehend and demonstrate the security tips in browsers, WLAN, social networks, Email security and smart phone. Apply the investigations in post mortem and Forensics.	**R-C**
		CO 3: Understand, apply and evaluate the various investigations roles and WiFi protecting mechanism.	**R-C**
		CO 4: Understand, illustrate and evaluate the method of seize the digital information and evidences forensics data and evaluate the forensics reports.	**R-C**
		CO 5: Comprehend, apply and appraise the methods digital forensics with cybercrime prevention techniques.	**R-C**
Block Chain Technologies	435E2C	**CO 1:** Understand, apply and examine the characteristics of blockchain,vitcoin and consensus algorithm in centralized methods	**R-C**
		CO 2: Comprehend and demonstrate the application of hashing and public key cryptography in protecting the blockchain .	**R-C**
		CO 3: Understand and analyse the elements of trust in a Blockchain:Validation , verification and consensus.	**R-C**
		CO 4: Comprehend and evaluate the alternate coin, Ethereum and smart contract.	**R-C**
		CO 5: Grasp and apply the knowledge of Tools and languages for applications.	**R-C**

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Practical -IV Social Networking Practical	435E2D	**CO 1:** To understand, implement an review the fundamental techniques and principles of social networks.	**R-C**
		CO 2: To design and develop the programs using the tools required to develop and manage social networks like Facebook,LinkedIn,Google+,GitHub.	**R-C**
		CO 3: To create and explore the functionality of social networking tools such as GitHub .	**R-C**
		CO 4: To understand and implement and review the fundamental principles for social network graph.	**R-C**
		CO 5: To comprehend and critically analyse the excisting API for social networks.	**R-C**
Practical -IV Block Chain Technologies Lab	435E2F	**CO 1:** Enable to setup your own private Blockchain and deploy smart context on Ethereum.	**R-C**
		CO 2: Gains familarity and implement with cryptography and Consensus algorithms.	**R-C**
		CO 3: Create and deploy projects using Web3j.	**R-C**
		CO 4: Recall and deploy the structure and mechanism of Bitcoin, Ethereum, Hyperledger	**R-C**
		CO 5: Implement Blockchain for various usecases.	**R-C**
Practical -IV Cyber Security Lab	435E2E	**CO 1:** Comprehend the programming skills in change the wireless device mode as monitor mode.	**R-C**
		CO 2: Understand and implement multiple vulnerabilities webserver.	**R-C**
		CO 3: Evaluate the use of different wireless device mode .	**R-C**
		CO 4: Design to solve related to find the subdomains of webpage .	**R-C**
		CO 5: Create and applyopen ports in the network.	**R-C**
Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
II Year: III Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Machine Learning	MC23A	**CO 1:** Recognize the characteristics of machine learning strategies.	**R-C**
		CO 2: Apply various supervised learning methods to appropriate problems.	**R-C**
		CO 3: Identify and integrate more than one technique to enhance the performance oflearning.	**R-C**
		CO 4: Create probabilistic and unsupervised learning models for handling unknown pattern.	**R-C**
		CO 5: Analyze the co-occurrence of data to find interesting frequent patterns	**R-C**
		CO 6: Preprocess the data before applying to any real-world problem and can evaluate itsperformance	
		CO 1: To tag a given text with basic Language features	**R-C**

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Natural Language Processing	PC32A	**CO 2:** To design an innovative application using NLP components	**R-C**
		CO 3: To implement a rule-based system to tackle morphology/syntax of a language	**R-C**
		CO 4: To design a tag set to be used for statistical processing for real-time applications	**R-C**
		CO 5: To compare and contrast the use of different statistical approaches for different types of NLP applications.	**R-C**
Mobile Applications Development	PC32C	**CO 1:** Distinguish between mobile, web and desktop design considerations and describe android's programming framework.	**R-C**
		CO 2: Utilize rapid application prototyping and development techniques to design interactive andeffective user interfaces	**R-C**
		CO 3: Develop programming skills for the Android operating system using basic and moreadvanced techniques.	**R-C**
		CO 4: Explain the deployment and distribution applications process on the Android market place.	**R-C**
Data Visualization	PC32D	**CO 1:** Identify the different data types, visualization types to bring out the insight.	**R,U**
		CO 2: Relate the visualization towards the problem based on the dataset to analyze and bring outvaluable insight on large dataset.	**P**
		CO 3: Design visualization dashboard to support the decision making on large scale data.	**A,E,C**
		CO 4: Demonstrate the analysis of large dataset using various visualization techniques and tools.	**R,U**
Data Analytics	PCE3A	**CO 1:** Understand Big Data and its analytics in the real world	**R-C**
		CO 2: Analyze the Big Data framework like Hadoop and NOSQL to efficiently store and process Big Data to generate analytics	**R-C**
		CO 3: Design of Algorithms to solve Data Intensive Problems using Map Reduce Paradigm	**R-C**
		CO 4: Design and Implementation of Big Data Analytics using pig and spark to solve data intensive problems and to generate analytics	**R-C**
		CO 5: To have skills that will help them to solve complex real-world problems in fordecision support.	**R-C**
Artificial Intelligence	PCE3B	**CO 1:** Solve basic AI based problems.	**R-C**
		CO 2: Define the concept of Artificial Intelligence.	**R-C**
		CO 3: Apply AI techniques to real-world problems to develop intelligent systems.	**R-C**
		CO 4: Select appropriately from a range of techniques when implementing intelligentsystems	**R-C**
		CO 5: Possess the basic knowledge of different machine learning techniques.	**R-C**

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Deep Learning and Neural Networks	PCE3C	**CO 1:** Understand different methodologies to create application using deep nets.	**R-C**
		CO 2: Identify and apply appropriate deep learning algorithms for analyzing the data forvariety of problems	**R-C**
		CO 3: Implement different deep learning algorithms	**R-C**
		CO 4: Design the test procedures to assess the efficacy of the developed model.	**R-C**
		CO 5: Combine several models in to gain better results.	**R-C**
Internet of Things	PC53A	**CO 1:** Students would have become familiar with IoT and its flavors; realised the IoT ecosystem and topologies; learnt how to integrate IoT with the environment; communicate from and to machines and some aspects of security of IoT	**R-C**
		CO 2: Implement basic IoT applications on embedded platforms.	**R-C**
		CO 3: Design IoT applications in different domain and be able to analyze their performance.	**R-C**
Software Testing	PC53B	**CO 1:** Understand the fundamentals of software testing.	**R,U**
		CO 2: Gain software testing experience by applying software testing knowledge and methods to practice-oriented software testing projects.	**P**
		CO 3: Analyze path testing concept. Analyze state testing concept. Execute programs and test data in Client-Server Architecture	**A,E,C**
		CO 4: Able to debug the project and to test the entire computer based systems at all levels.	**R,U**
		CO 5: Able to apply quality and reliability metrics to ensure the performance of the software.	**P**
		CO 6: Able to evaluate the web applications using bug tracking tools.	**R,U**
Information Security	MC43J	**CO 1:** Test and evaluate security in systems and networks	**A,E,C**
		CO 2: Use methods for planning and designing secure systems	**P**
		CO 3: Apply techniques and tools for secure system deployment and operation.	**R,U**
		CO 4: Perform continuous testing, assessment and updating of system security	**R ,C**
		CO 5: Evaluate vulnerability of an information system and establish a plan for risk management.	**R,U**
		CO 6: Demonstrate how to secure a network. Evaluate a company's security policies andprocedures	**R,U**
Soft Skill – Contemporary Awareness	PSSEN	**CO 1:** Students will analyze and evaluate the fundamental postulates of the discipline of Philosophy of Education and its relevance for Education.	**R,U**
		CO 2: Students will understand and evaluate the problem of Education (aims, curriculum instructional technique, discipline and human relationship) in terms of the	**U,P**

		knowledge and insight provided by Educational Philosophy.	
		CO 3: Students will develop insight into the nature of psychology and psychological processes.	**P,A**
		CO 4: Students will know of individual differences, motivation and good mental health in learning.	**A,E**
		CO 5: Students will develop understanding of significant trends in contemporary education.	**E,C**
Practical – V: Machine Learning Lab.	MC231	**CO 1:** Understand the implementation procedures for the machine learning algorithms.	**R-C**
		CO 2: Design Java/Python programs for various Learning algorithms.	**R-C**
		CO 3: Apply appropriate data sets to the Machine Learning algorithms.	**R-C**
		CO 4: Identify and apply Machine Learning algorithms to solve real world problems.	**R-C**
		CO 5: be capable of confidently applying common Machine Learning algorithms inpractice and implementing their own;	**R-C**
Practical – X: Mini Project	MC232	**CO 1:** Apply the software engineering principles on a real software project	**R-C**
		CO 2: Develop a software product using the methodologies applied in the industry.	**R-C**
		CO 3: Work with different version control system	**R-C**
		CO 4: Apply technology tools to analyze, design, develop and test the application	**R-C**
		CO 5: Design a system, model, component or a process to meet desired/industrial needs	**R-C**
Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
II Year: IV Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Project & Viva-Voce	PC24Q	**CO 1:** Construct a project from initial ideas;	**R-C**
		CO 2: Plan, schedule, monitor and control their own work.	**R-C**
		CO 3: Defend their ideas in discussions and presentations;	**R-C**
		CO 4: Use libraries and other information resources;	**R-C**
		CO 5: Apply tools and techniques from taught courses	**R-C**
		CO 6: Communicate their findings through a written report.	

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M.Sc. Information Technology

II Year: III Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Computer Networks	PSB3G	**CO 1:** Outline the concepts and fundamentals of data communication and computer networks.	**R,U**
		CO 2: Identify the usage and importance of layered model, network security and web security	**U,P**
		CO 3: Classify the techniques based on required application	**P,A**
		CO 4: Analyze the significant applications of protocols and layers used in data communication and networking	**A,E**
		CO 5: Explain the functionality of various techniques and algorithms that works at different layers.	**C**
Design and Analysis of Algorithms	PSB3H	**CO 1:** To define the term Algorithm in the context of problem solving. To make students	**R,U**
		CO 2: Understand the design and analysis process of algorithms for simple problems.	**U,P**
		CO 3: Understand various algorithm design methods, apply them for problem solving and.	**P,A**
		CO 4: Analyze the complexity for simple problems.	**A,E**
		CO 5: Study algorithm design methods for complex problems and compare and analyze	**E,C**
Advanced Java Programming	PSB3J	**CO 1:** Design user interactions on web pages	**R**
		CO 2: Develop back-end website applications	**U**
		CO 3: Develop adaptive content for multiple devices (cell phone, tablets, etc.) Ensure cross-platform optimization for mobile phones	**P,A**
		CO 4: Application of java beans, Servlets, JSP for designing Web based applications	**A,E**
		CO 5: Usage of JDBC connectivity and implementation of the concept to get desired results from database	**C**
Information Security	PEB3A	**CO 1:** Test and evaluate security in systems and networks	**R,U**
		CO 2: Use methods for planning and designing secure systems	**U,P**
		CO 3: Apply techniques and tools for secure system deployment and operation	**P,A**
		CO 4: Perform continuous testing, assessment and updating of system security	**A,E**
		CO 5: Evaluate vulnerability of an information system and establish a plan for risk management.	**C**
		CO 6: Demonstrate how to secure a network. Evaluate a company's security policies andprocedures.	**C**
		CO 1: Identify various concepts of mobile programming that make it unique from programming for other platforms	**R**
		CO 2: Critique mobile applications on their design pros and cons	**U**

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Mobile computing	PSBEL	**CO 3:** Utilize rapid prototyping techniques to design and develop sophisticated mobile interfaces	**P,A**
		CO 4: Program mobile applications for the Android operating system that use basic and advanced phone features	**E,C**
		CO 5: Deploy applications to the Android marketplace for distribution	**E,C**
Artificial Intelligence	PSBEM	**CO 1:** Solve basic AI based problems.	**R,U**
		CO 2: Defines the concept of Artificial Intelligence.	**U,P**
		CO 3: Apply AI techniques to real - world problems to develop intelligent systems.	**P,A**
		CO 4: Select appropriately from a range of techniques when implementing intelligent systems.	**A,E**
		CO 5: Posses the basic knowledge of different machine learning techniques.	**E,C**
Computer Graphics	PSBEN	**CO 1:** Understand the basics of computer graphics, different graphics systems and applications of computer graphics	**R,U**
		CO 2: Discuss various algorithms for scan conversion and filling of basic objects and their comparative analysis	**U,P**
		CO 3: Use of geometric transformations on graphics objects and their application in composite form	**P,A**
		CO 4: Extract scene with different clipping methods and its transformation to graphics display device	**A,E**
		CO 5: Explore projections and visible surface detection techniques for display of 3D scene on 2D screen	**E,C**
Advanced Java Lab	PSB34	**CO 1:** Design user interactions on web pages	**R,U**
		CO 2: Develop back-end website applications	**U,P**
		CO 3: Develop adaptive content for multiple devices (cell phone, tablets, etc.) Ensure cross-platform optimization for mobile phones	**P,A**
		CO 4: Application of java beans, Servlets, JSP for designing Web based applications	**A,E**
		CO 5: Usage of JDBC connectivity and implementation of the concept to get desired results from database	**E,C**
Soft Skill – Life and Managerial Skills	PSSEC	**CO 1:** The student will be able to understand, analyse develop and exhibit accurate sense of self.	**R,U**
		CO 2: Think critically.	**U,P**
		CO 3: Demonstrate knowledge of personal beliefs and values and a commitment to continuing personal reflection and reassessment.	**P,A**
		CO 4: Learn to balance confidence with humility and overcome problems associated with personality	**A,E**
		CO 1: Students will analyze and evaluate the fundamental postulates of the discipline of Philosophy of Education and its relevance for Education.	**R,U**

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Soft Skill – Contemporary Awareness	PSSEN	**CO 2:** Students will understand and evaluate the problem of Education (aims, curriculum instructional technique, discipline and human relationship) in terms of the knowledge and insight provided by Educational Philosophy.	**U,P**
		CO 3: Students will develop insight into the nature of psychology and psychological processes.	**P,A**
		CO 4: Students will know of individual differences, motivation and good mental health in learning.	**A,E**
		CO 5: Students will develop understanding of significant trends in contemporary education.	**E,C**
II Year: IV Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Project & Viva-Voce	PSB4Q	**CO 1:** Construct a project from initial ideas;	**R,U**
		CO 2: Plan, schedule, monitor and control their own work;	**U,P**
		CO 3: Defend their ideas in discussions and presentations;	**A,E**
		CO 4: Use libraries and other information resources;	**E**
		CO 5: Apply tools and techniques from taught courses	**E,C**
		CO 6: Communicate their findings through a written report.	**C**

MBA

Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
II Year: III Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Strategic Management	MB23A	CO 1: Be able to frame vision and mission statements.	**U**
		CO 2: Be social and ethically responsible.	**P**
		CO 3: Possess insights on making environmental analysis.	**A**
		CO4: Possess knowledge on learning strategic formulation & strategy choice.	**E**
		CO5: Understand on strategic implementation and control.	**P**
Systems for Business	MB23B	CO 1: Learn the importance of data and information in managerial decision making.	**U**
		CO 2: Possess knowledge on the various IS and its relevance to Organizational environment	**U**
		CO 3: Understand the application of IS on the various Functions like Accounting, Finance, Marketing, Operations and HR	**P**
		CO4: To study the various models and new technologies	**E**
		CO5: Be exposed on the importance of selecting the appropriate ERP and its implementation	**E**
Organizational Development	MB4RC	CO 1: Comprehend and justify basic concepts on OD.	**U**
		CO 2: Assimilate and design OD process.	**P**
		CO 3: Summarize Organizational culture and use reinforcing techniques.	**A**
		CO4: Illustrate effectiveness of working in teams	**P**
		CO5 Interpret constructs of wellbeing and approaches to achieving a balance.	**P**
Industrial and Labour Relations	MB4RD	CO 1: Generalize with the basic concepts of Industrial Relations.	**U**
		CO 2: Enumerate insights on Industrial Harmony and conflicts.	**U**
		CO 3: Have insights on Labor Relations, Joint Consultation	**U**
		CO4: Summarize best practices of Trade Union, Problems and role of Indian Trade Unions	**P**
		CO5: Demonstrate policies for Collective Bargaining, Tripartite Machinery.	**A**
Supply Chain Management	MB4LA	CO 1: Be able to familiarize the students to the basic concepts of Supply Chain management.	**U**
		CO 2: Possess insights on Supply chain synergies.	**U**
		CO 3: Have insights on Sales & Operation Planning	**U**
		CO4: Learn about Customer value and supply chain management.	**P**

		CO5: Have better understanding on supply chain analytics.	**E**
Principles and Practice of Logistics Management	MB4LB	CO 1: Have familiar about concepts, evolution and functions of logistics management.	**U**
		CO 2: Be able to understand the elements of logistics, warehousing and material handling	**U**
		CO 3: Have better understanding about transportation, distribution, packaging etc	**U**
		CO4: Possess better understanding and knowledge about integrated logistics and linguistic information system.	**P**
		CO5: To understand logistics cost and need for integration in logistics facilities.	**A**
Advertising and Sales promotion	MB4MB	CO 1: Possess knowledge and good understanding on the fundamentals of advertising	**U**
		CO 2: Have good understanding and knowledge on advertising media and budget	**P**
		CO 3: Have good orientation on advertising agencies and its operations.	**A**
		CO4: Understand sales promotion campaigns	**U**
		CO5: Understand the relevance of sales promotion	**E**
Brand Management	MB4MD	CO 1: Understand brand equity & assess the equity of a brand by applying brand equity models	**U**
		CO 2: Examine brand identity and positioning strategy by applying brand identity & positioning guidelines / templates / model	**A**
		CO 3: Possess the ability to develop a comprehensive go to market strategy for a brand	**E**
		CO4: Evaluate various architecture types & examine brand extension strategies for success	**E**
		CO5: Ability to conduct brand audit & demonstrate knowledge of brand valuation and methods	**A**
Banking and Insurance	MB4FF	CO 1: Understand, analyze and communicate on the Indian Financial System	**U**
		CO 2: Understand the basics of Banking and the emergence of Banking in India and its lending practices	**R**
		CO 3: Possess knowledge on Digital Banking and the Current trend in banking and new banking products and services	**A**
		CO4: Possess the ability to understand and communicate the basics of the insurance mechanism and principle Of insurance and acquire knowledge on Indian insurance industry.	**A**
		CO5: Have knowledge and understanding on Marine, fire, home and medical insurances	**E**

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Merchant Banking and Financial Services	MB4FD	CO 1: Possess better understanding of the financial structure in India and various regulations in the Merchant Banking Domain. Understand the rules and regulations governing the Indian securities market.	**U**
		CO 2: Possess knowledge on public issue management mechanism, various forms of issues, role of issue manager, SEBI guidelines and marketing of securities.	**R**
		CO 3: Possess insights on recent trends in financial services, merger and acquisition, portfolio management services and credit rating	**A**
		CO4: Have exposure on fund based financial services such as leasing and hire purchasing, financial evaluation	**E**
		CO5: Have better understanding on other fund based financial services such as consumer credit, real estate financing, bill discounting, factoring and venture capital.	**A**
Soft Skills III - Leadership & Team Building Skills	MSSEL	CO 1: Critical understanding of theories and concepts of leadership and teamwork in organizations	**U**
		CO 2: Critical awareness of the importance of teamwork and development of the skills for building effective teams.	**U**
		CO 3: Understanding of the techniques and practical understanding of how to apply theories and concepts to improve leadership skills.	**P**
		CO4: Development of skills in effective leadership and professional communication	**A**
		CO5: Demonstrate effective written communication skills for plans, strategies and outcomes.	**C**
II Year: IV Semester			
Strategic HRM	MB4RJ	**CO 1:** Comprehend application of Strategic Management	**U**
		CO 2: Evaluate Corporate Strategy & aid in Environment Forecasting	**E**
		CO 3: Develop strategies, approaches for higher Organisational Performance	**P**
		CO 4: Elucidate on Strategic Human Resource Processes and resource utilization	**A**
		CO 5: Analyse and formulate New Economic Policy and HRM Strategy	**A**
Strategic Logistics Management	MB4LH	**CO 1:** To understand the concept of strategy	**U**
		CO 2: To understand the process of environmental analysis	**U**
		CO 3: To understand the concept of business level strategy	**U**
		CO 4: To understand the strategy analysis and choice	**A**
		CO 5: To understand the strategy analysis and control	**A**
		CO 1: Ability to understand the role of Risk Return propositions in securities analysis such as fixed income securities, preference shares and ordinary shares.	**U**

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Security Analysis and Portfolio Management	MB4FB	**CO 2:** Knowledge on apprehend role, functions and key players in the securities market and understand the trading system of the stock market	**P**
		CO 3: Knowledge to execute better investment decisions by analyzing Economic, Industry and Company factors with the help of fundamental analysis techniques.	**E**
		CO 4: Clarity to identify the stock price movements and its behavior with the help of technical analysis techniques.	**A**
		CO 5: Understanding on the benefit of diversification of holding a portfolio of assets, and the importance played by the market portfolio.	**A**
Services Marketing	MB4MF	**CO 1:** Possess knowledge and understanding on the basic concepts of managing Services marketing and Service Sector	**U**
		CO 2: Possess knowledge on Marketing Mix in Service Marketing	**P**
		CO 3: Have insights on Effective Management of Service Marketing	**P**
		CO 4: Learn Quality of Services, GAPS and factors influencing Services Marketing.	**A**
		CO 5: Have better understanding on various service sectors like Health, Hospitality, travel, hotels and Tourism,Professional Service, Public Utility Services & Educational Services	**U**
Soft Skills IV – Computing Skills	434S2A	**CO 1:** Have awareness and understanding on the basic functions of MS Excel	**U**
		CO 2: Know the advanced functions of MS Excel	**U**
		CO 3: Possess knowledge on MS Access and its application in database management	**P**
		CO 4: Understand and possess knowledge on the functions and usage of various cloud based apps like Google Drive, Google Sheets and Google Docs.	**P**
		CO 5: Understand and be aware of the functions and usage of Cloud based apps like Google Forms, Google Slides and Google Cloud Printing	**U**
Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: I Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Management Principles and Business Ethics	434C1A	**CO 1:** Possess the knowledge on the basic concepts of management and understand how an organization functions.	**U**
		CO 2: Possess knowledge on planning & decision making.	**R**
		CO 3: Have insights on organizing, managing change and Innovation	**A**
		CO4: Learn leadership, communication and controlling skills.	**A**
		CO5: Have better understanding on business ethics and social responsibility	**P**

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Quantitative Techniques and Research Methods in Business	434C1B	**CO 1:** Be able to develop problem-solving techniques needed to accurately calculate probabilities.	**E**
		CO 2: Be able to devise research methods, techniques and strategies in the appropriate manner for managerial decision making and conduct research for the industry.	**E**
		CO 3: Be able to apply and interpret the different types of quantitative and qualitative methods of data analysis.	**P**
		CO4: Be able to use multivariate techniques appropriately, undertake multivariate hypothesis tests, and draw appropriate conclusions.	**P**
		CO5: Be able to present orally their research or a summary of another's research in an organized, coherent, and compelling fashion.	**P**
Managing Organizational Behaviour	434C1C	**CO 1:** Possess the knowledge on the basic concepts of managing Organisational Behaviour in order to aid in understanding how an men behave in an organization	**U**
		CO 2: Possess knowledge on Individual Differences, perception, learning, Attitudes values and motivation	**A**
		CO 3: Have insights on Group Dynamics and Interpersonal Communication	**P**
		CO4: Learn Leadership, Politics, Conflicts and Negotiation.	**U**
		CO5: Have better understanding on work stress and Emotional Intelligence and its influence on employees in an organisation.	**P**
Accounting for Managers	434C1D	**CO 1:** Be able to understand the fundamentals of principles of financial, cost and management accounting	**U**
		CO 2: Be able to prepare, analyze and interpret financial statements.	**A**
		CO 3: Be able to use the tools and techniques of financial analysis.	**E**
		CO4: Be able to take decisions using management accounting tools.	**P**
		CO5: Be able to prepare the reports with the accounting tools and facilitate and take managerial decisions.	**E**
Managerial Economics	434C1E	**CO 1:** Be able to understand the basic concepts of managerial economics that helps the firm in decision making process.	**U**
		CO 2: Be familiar about the Basic concepts of Demand, Supply and Equilibrium and their determinants	**U**
		CO 3: Have better idea and understanding about production function and market structure	**A**
		CO4: Have better insights about macroeconomics concepts like National income, Savings and Investment, Indian Economic Policy and planning	**E**
		CO5: Possess better knowledge about Money market, Monetary and Fiscal policy, inflation and deflation, FDI and globalization and Cashless economy and digitalized cash transfers.	**E**

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Entrepreneurship Development	434D1A	**CO 1:** Be able to know about growth of entrepreneurship in India	**U**
		CO 2: Gain knowledge on innovation, its types, role of technology in innovation, patents and licensing.	**U**
		CO 3: Obtain knowledge on new venture creation	**A**
		CO4: Be able to prepare a business plan	**P**
		CO5: Gain knowledge on various types of financing available for new ventures.	**U**
Legal Systems in Business	434C1F	**CO 1:** Have knowledge on understandings on law of contract.	**U**
		CO 2: Know the sale of Goods & Negotiable instrument act.	**U**
		CO 3: Have understandings on partnership and company law	**A**
		CO4: Have familiarize with various labour laws.	**A**
		CO5: Possess insights & awareness about consumer protection Act Cyber Crimes, Intellectual Property Rights.	**E**
Soft Skills I – Executive Communication	434S1A	**CO 1:** Understanding of theories and concepts, types and various modes of communication in organizations	**U**
		CO 2: Development of skills on developing Business Correspondence	**A**
		CO 3: Development of skills on preparing Business Reports and Proposals	**P**
		CO4: To draft effective business correspondence with brevity, and clarity in designing and developing clean and lucid organizing skills.	**E**
		CO5: To demonstrate his/her verbal and non-verbal communication ability through presentations.	**P**
Cognitive level Remember- R, Understand -U, Apply – P, Analyze -A, Evaluate- E, Create- C			
I Year: II Semester			
Course Name and Course Code		**Course Outcome**	**Cognitive Level**
Strategic Management	434C2F	CO 1: Be able to frame vision and mission statements.	**E**
		CO 2: Be social and ethically responsible.	**P**
		CO 3: Possess insights on making environmental analysis.	**A**
		CO4: Possess knowledge on learning strategic formulation & strategy choice.	**U**
		CO5: Understand on strategic implementation and control.	**P**
Applied Operations Research	434C2A	**CO 1:** Obtain insight on the origin and nature of OR and also the application of various models of OR.	**U**
		CO 2: Learn about the graphical, Simplex, Big M and dual methods of Linear programming problem.	**P**
		CO 3: Be well versed with the concept of transportation and Assignments models	**P**

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		CO4: Have better understanding on inventory models, replacement models, job sequencing, networking model and Queuing model	**P**
		CO5: Be imparted knowledge on the various methods of game model	**A**
Human Resource Management	434C2B	**CO 1:** Gain an understanding of HRM policies and importance.	**U**
		CO 2: Implement appropriate HRP in workplace.	**P**
		CO 3: Apply feasible Training method and manage career progressions.	**P**
		CO 4: Demonstrate managing performance of human resources.	**A**
		CO5: Design and justify compensation framework.	**E**
Marketing Management	434C2C	**CO 1:** Understand the fundamental principles of marketing, marketing concepts and ideas.	**U**
		CO 2: Understand the organization's marketing strategy and marketing environment. Familiar with marketing research with forecasting techniques.	**A**
		CO 3: Understand the buyer behavior and market segmentation and competitive marketing strategies.	**U**
		CO 4: Think strategically about branding, pricing and marketing issues.	**E**
		CO 5: Familiar with Promotion decisions along with awareness on Consumer Rights in the Market Place.	**A**
Operations Management	434C2D	**CO 1:** Understand the concepts of production and its design, capacity planning and make or buy decisions.	**U**
		CO 2: Be cognizant of the complexity involved in plant location decisions and utilization of plant layout.	**E**
		CO 3: Understand the Inventory models and the importance of maintenance techniques.	**A**
		CO 4: Be aware of work-study procedures and the importance on quality control tools	**P**
		CO 5: Have insight on service operations, service delivery and waiting line analysis.	**P**
Financial Management	434C2E	**CO 1:** Be aware of the basic concepts of financial management and understand the various sources of finance.	**U**
		CO 2: Possess knowledge on investment decision making.	**U**
		CO 3: Have insights on the cost of capital and would have familiarized themselves with the technique of calculating the cost of capital.	**A**
		CO 4: Have learnt the concept of capital structure and dividend	**U**
		CO 5: Have good understanding on the concept of working capital, its need, importance, factors and the methods of forecasting it.	**U**
		CO 1: Be aware of the international situations and evaluate international collaborative arrangements and strategic alliances.	**A**

International Business	434D2A	**CO 2:** Possessed knowledge of political, legal, economic and cultural country differences to develop competitive strategies in foreign, regional and global markets.	**A**
		CO 3: Know the various international trade theories and the management of business functional operations in an international context.	**A**
		CO 4: Be able to evaluate barriers, opportunities, market entry modes and the process of internationalization.	**E**
		CO 5: Have better understanding on regional economic integration and contemporary issues in international business.	**U**
Soft Skills II – Business Etiquette	434S2A	**CO 1:** Learn using business etiquette at work place.	**P**
		CO 2: Be able to acquire knowledge about the Principles of exceptional work behaviour.	**A**
		CO 3: Be able to enhance their knowledge of latest Tech etiquette in using various telecommunication devices and channels.	**P**
		CO 4: Get familiarized with the Successful handling of Multi-cultural challenge	**A**
		CO 5: Become sensitive to new and emerging issues in etiquette	**A**
Soft Skills IV – Computing Skills	434S2A	**CO 1:** Have awareness and understanding on the basic functions of MS Excel	**U**
		CO 2: Know the advanced functions of MS Excel	**U**
		CO 3: Possess knowledge on MS Access and its application in database management	**P**
		CO 4: Understand and possess knowledge on the functions and usage of various cloud based apps like Google Drive, Google Sheets and Google Docs.	**P**
		CO 5: Understand and be aware of the functions and usage of Cloud based apps like Google Forms, Google Slides and Google Cloud Printing	**U**