VIKRAMASIMHAPURIUNIVERSITY::NELLORE

DEPARTMENTOF ENGLISH

SEMESTER-I		
COURSE OUTCOMES		
20RENG101:POETRY-I	CO1	Identify and record the socio, historic, economic, cultural and political contexts for centuries.
	CO2	Apply them objectively in debates, seminars, panel and group discussions and general and in life in particular.
	CO3	Examine the various literary forms, techniques and theories in the literary works and sketch its evolution over the ages.
	CO4	Evaluate and distinguish characterization in the literary works based on socio, historic, economic, religious, cultural and political contexts.
	CO5	Express themselves creatively and justify the literary movements and its role in chiseling humanity.
20RENG102:DRAMA-I	CO1	Demonstrate and understanding of various Genres and Literary moments in Drama.
	CO2	Apply the historical, social and cultural aspects of British Literature to understand the texts.
	CO3	Analyse the literary style and aesthetic values found in the prescribed texts.
	CO4	Evaluate the human values reflected in the texts and different types of spoken texts.
	CO5	Apply the literary styles in texts and creatively write a Genre of their own.
20RENG103:FICTION-I	CO1	Gain knowledge genre of the novel as an art form and its successive development throughout the 18th and19th centuries.
	CO2	Cultivate habit of reading novels produced in the specific period and apply socio, cultural backgrounds to analyse the texts.
	CO3	Analyse the texts based on various narrative techniques and writing styles.
	CO4	Evaluate characters, situations and human values encountered in the texts.
	CO5	Acquire creative skills and produce creative works.

20RENG104:PROSE–I	CO1	Develop the ability to understand and appreciate prose as a literary form.
	CO2	Apply socio, cultural and philosophical thoughts to the texts to grasp the essence.
	CO3	Analyze various forms of prose works and be able to explore inherent thoughts in various prose texts.
	CO4	Evaluate various factors, philosophical insights reflected in the famous prose works.
	CO5	Enhance the ability of creative and critical thinking and produce works to express their views on various social, political, cultural and philosophical ideas.
20RENG105 :ENGLISH LANGUAGE&ELT–I	CO1	Understand the learning process, the nature and structure of language.
	CO2	Apply various theories, methods and techniques involved in language teaching and in preparing materials, tools to teach language.
	CO3	Analyse problems involved in language teaching and designs programmes to impart language skills among students.
	CO4	Evaluate and assess the language skills among students and take necessary remedial actions to enhance the language skills.
	CO5	Recognises importance of language skills and uses the same innovatively to excel professionally in their lives.
20RENG106: HUMAN VALUES AND PROFESSIONAL ETHICS–I	CO1	Recognizes the importance of human values and professional ethics and become worthy citizens of the society.
	CO2	Practice human values and professional ethics in their personal and professional activities and become role models for others.
	CO3	Analyze various socio, cultural and political circumstances under the light of human values and professional ethics and strive to reform the society.
	CO4	Evaluate different behavioral patterns of various individuals and develop specific outlook towards such a category of people.
	CO5	Adapt creative means to enlighten and educate the society and promote values and ethics in the society.

SEMESTER-II		
COURSE OUTCOMES		
20RENG201:POETRY–II	CO1	Identify and demonstrate a knowledge of the evolution of the literatures of the Victorian and modern periods.
	CO2	Apply the knowledge acquired to analyze and appreciate the poetry.
	CO3	Analyze the various themes, techniques and ideologies involved in the composition of the poetry produced in the specific period.
	CO4	Evaluate critically the literary techniques and aesthetic dimensions that are inherent in the poetry.
	CO5	Enhances creative ability and produce creative works to reform the society.
20RENG202:DRAMA–II	CO1	Learners appreciate, interpret and analyze Drama's from socio political, economic, historical and contemporary context and perspectives.
	CO2	Learners demonstrate an outstanding knowledge in the theatrical techniques and create works of their own.
	CO3	Learners apply their knowledge acquired from various dramatically works and engage in meaningful issue-based analysis and discussions.
	CO4	Learners analyse and evaluate the recurring themes, values and virtues presented in various plays in academics and personal life.
	CO5	Learners become creative technicians, writers and directors in performative theoretical arts based on the knowledge acquired during this course.
20RENG203:FICTION–II	CO1	Demonstrate the knowledge about the origin and development of 20th century English Fiction.
	CO2	Apply various techniques and literary styles to analyse the novels of 20th century British writers.
	CO3	To analyze the social, political, cultural history of England and various political, philosophical and literary movements that provided the contextual background for the writers.
	CO4	Evaluates and appreciate critically the fictional works based on the themes and techniques employed by the 20th century British writers.
	CO5	Develop creative ability to produce fictional works and develop aptitude for research through extensive and intensive reading and critiquing.

20RENG204:PROSE– II	CO1	Understand the basic ideas and trends in English prose during Victorian and modern period.
	CO2	Applies various socio, philosophical ideas to illustrate works of eminent prose writers.
	CO3	Analyse the themes and language styles of various prose works.
	CO4	Evaluate socio, cultural and political circumstances motivated the writers to reflect upon various issues.
	CO5	Develop creative ability to write and to reflect upon various issues which have social, cultural and political importance.
20RENG205:ENGLISH LANGUAGE TEACHING–II	CO1	Learn the definition, various elements of syllabus and designing the syllabus.
	CO2	Apply acquired theoretical knowledge and design the syllabus.
	CO3	Analyse the utility of various techniques and apply the same to assess different skills of language.
	CO4	Evaluate and analyse the difficulties involved in language teaching in ESL and EFL classrooms andadapt required techniques and methods.
	CO5	Develop innovative techniques in language teaching and use ICT tools to enhance language skills.
20RENG206 - HUMAN VALUES&PROFESSIONAL ETHICS – II	CO1	Acquire knowledge regarding definitions and basic concepts of personality.
	CO2	Demonstrate the positive trades in their personality and practice the best principles become effective leaders.
	CO3	Analyse various reasons for socio, political circumstances and take necessary steps to resolve such issues.
	CO4	Evaluate socio, cultural and political developments and create opportunities to emerge as great leaders.
	CO5	Adapt creative means to demonstrate effective leadership qualities and establish as dynamic leaders in the society.
SEMESTER-III		
COURSE OUTCOMES		
20RENG301: INDIAN ENGLISH LITERATURE– I	CO1	Understand and recall the history and development in Indian English Literature.

	CO2	Apply the acquire knowledge to analyse various dimensions of literary texts in Indian English Literature.
	CO3	Analyze the themes and values ingrained in literary texts to be receptive to moral and social issues.
	CO4	Evaluate critically the literary movements and process information to provide solutions to universal problems.
	CO5	Design and construct well researched critical essays.
20RENG 302: AMERICAN LITERATURE–I	CO1	Identify and record the socio, historic, economic, religious, cultural and political contexts for centuries.
	CO2	Apply them objectively in debates, seminars, panel and group discussions.
	CO3	Analyze the various techniques and narrative styles in the literary works and sketch the conditions prevailed through ages.
	CO4	Evaluate and distinguish characterization in the literary works based on socio, historic, economic, religious, cultural and political contexts.
	CO5	Express creatively and justify the movements that paved the way for the betterment of humanity.
20RENG 303 A: NEW LITERATURES IN ENGLISH- I	CO1	Identify and describe the postcolonial concepts and themes.
	CO2	Discover the socio-cultural, political, gender, historical, economic, and religious perspectives in the postcolonial texts.
	CO3	Examine and analyze the various techniques and narrative styles in postcolonial works.
	CO4	Evaluate and distinguish colonial and post-colonial discourses.
	CO5	Express their views on postcolonial texts critically through presentations, debates and discussions.
20RENG: 303B: DALIT LITERATURE	CO1	Understand the bitter realities of Dalit‘s and marginalised lives.
	CO2	Apply unconventional and realistic parameters to analyze the texts.
	CO3	Analyze the distinction between the conventional and Dalit Literature and reinterprets the history to the concealed social realities.

	CO4	Evaluates reasons for the socio, cultural and psychological conditions of marginalised and contributes for the upliftment of deprived sections.
	CO5	Creates awareness among Dalit's through social activities, creative writings and represents the cause of deprived sections in their works and activities.
20RENG: 303C: THE SHORT STORY (IN ENGLISH TRANSLATION)	CO1	Understand basic concepts and techniques involved in short story writing.
	CO2	Apply acquired knowledge to analyze a short story such as plot, setting and figures of speech.
	CO3	Analyze the benefits of Short story writing and reading, for example, help students to learn the four skills—listening, speaking, reading and writing-- more effectively because of the motivational benefit embedded in the stories.
	CO4	Evaluate literary, cultural, and higher-order thinking aspects.
	CO5	Express creatively their feelings and ideas through short story writing.
20RENG 304 : LITERARY THEORY & LITERARY CRITICISM–I	CO1	Remember and recall the leading theories of classical to 19th century.
	CO2	Learn the basic tenants of theories and learn how to apply the theory to the literary texts.
	CO3	Apply the critical theories and analyse the literary text.
	CO4	Evaluate the impact of literature on other domains.
	CO5	Write essays on critical theories based on their understanding and knowledge.
20RENG305: INDIAN LITERATURE IN ENGLISH TRANSLATION	CO1	Understand meaning, basic concepts and types of translations.
	CO2	Understand and apply various theories and methodologies of translations to appreciate the texts.
	CO3	Analyze the translated texts based on the age, culture and other factors.
	CO4	Evaluate the cultural and linguistic implications and understand the difficulties involved in translations.

	CO5	Take active role in researches related in the field of translations and develop creative skills to translate the famous works from regional language intointernational language.
SEMESTER-IV		
COURSE OUTCOMES		
20RENG 401: INDIAN ENGLISH LITERATURE–II	CO1	Understand the evolution of postcolonial Indian English Literature.
	CO2	Apply the postcolonial techniques to understand different forms of literary texts produced during post independent era.
	CO3	Analyze the themes, techniques and experiences of the authors in postcolonial Indian English Literature.
	CO4	Evaluate the political, philosophical and cultural developments which shaped postcolonial writings.
	CO5	Develop creative and critical outlook and produce creative research in the area.
20RENG 402: AMERICAN LITERATURE–II	CO1	Learn 20th century the literary trends in American Literature.
	CO2	Apply various theories such as existentialism, Black consciousness and theatrical techniques to understand literary texts produced in 20th century in America.
	CO3	Analyze 20th century American Literature based on socio, cultural, political and economic circumstances prevailed during that particular period.
	CO4	Evaluate the importance of various literary moments, techniques and themes which have bearing upon 20th century American Literature.
	CO5	Involve in creative research works on 20th century American Literature and contribute to the research in the area of 20th century American Literature.
20RENG 403 A: NEW LITERATURES IN ENGLISH –II	CO1	Understand diverse cultures and modes of expression.
	CO2	Apply feminist, diasporic and postcolonial perspectives to understand the texts.
	CO3	Analyze the texts using the techniques such as revisiting the myth and postcolonial theories.

	CO4	Evaluate various historical, social and post war conditions and their influence on literature.
	CO5	Develop creative and analytical outlook to discover the imperialistic and patriotically influences on literature.
20RENG 403B: SUBALTERN LITERATURES – II	CO1	Identify and record the statistical data of violation of human rights in the socio, historic, economic, cultural and political contexts for centuries.
	CO2	Apply them objectively in debates, seminars, panel and group discussions.
	CO3	Examine the various discriminatory practices in the literary works and sketch solutions for the empowerment of the downtrodden.
	CO4	Evaluate and distinguish characterization in the literary works based on socio, historic, economic, cultural and political contexts.
	CO5	Express themselves creatively and justify the _Rights based approach‘ for the betterment of humanity.
20RENG403C: THE SHORT STORY IN ENGLISH – II	CO1	Identify narrative and artistic techniques and various forms of short stories.
	CO2	Apply various literary techniques to analyze various elements of short story such as plot, setting and themes of speech.
	CO3	Analyze the short stories and understand the four skills—listening, speaking, reading and writing-- more effectively because of the motivational benefit embedded in the stories.
	CO4	Evaluate literary, cultural, and higher-order thinking aspects articulated in the short stories.
	CO5	Develop creative writing ability and produce short stories to reflect their views on various contemporary issues.
20RENG 404: LITERARY THEORY &LITERARY CRITICISM–II	CO1	Learn the development of 20^{th} century literary theory and various critical approaches..
	CO2	Practice major critical and interpretive methods.
	CO3	Analyze the literary texts from social, psychological, linguistic, gender and aesthetic perspectives.
	CO4	Evaluate social, psychological, linguistic, gender and aesthetic impact on the creative works.

	CO5	Develop creative and analytical ability to examine the literary texts from different perspectives.
20RENG405:COMMUNICATIVE ENGLISH	CO1	Remember and recall the basic principles of communication.
	CO2	Apply dynamic and advanced communicative techniques in the professional sphere.
	CO3	Analyse various factors involved in printing, electronic media and advertisements
	CO4	Evaluate the impact of presentation skills in job interview and group discussion
	CO5	Students perform confidently in job interviews, group discussions and report writing

DEPARTMENT OF POLITICAL SCIENCE & PUBLIC ADMINISTRATION

SEMESTER-I		
COURSE OUTCOMES		
20RMAPSPA101: WESTERN POLITICAL THOUGHT	CO1	Understand ancient Indian thinkers and their writings.
	CO2	Apply them objectively in debates, seminars, panel and group discussions and general and in life in particular.
	CO3	Examine the various literary forms, techniques and theories in the literary works and sketch its evolution over the ages.
	CO4	Evaluate and distinguish characterization in the literary works based on socio, historic, economic, religious, cultural and political contexts.
	CO5	Express themselves creatively and justify the literary movements and its role in chiseling humanity.
20RMAPSPA102: ADVANCED PUBLIC ADMINISTRATION	CO1	Understand ancient Indian thinkers and their writings.
	CO2	Make comparisons understand different political institutions, actors and processes that shaped the ancient Indian polity and the political processes.
	CO3	Undertake further research into the ancient texts
	CO4	Develop the ability to analyze political events and problems.
	CO5	Compare various Socialistic Political Thoughts

20RMAPSPA103: **COMPARATIVE GOVERNMENTS: U.K,USA,SWITZERLAND.**	CO1	Compare the international relations
	CO2	Make comparatives studies
	CO3	Undertake research in Comparative Politics and Governments
	CO4	Develop analytical skills to study
	CO5	To elucidate the Direct Democracy, the Plural Executive and Federal Judiciary
20RMAPSPA104:PUBLIC POLICY	CO1	These concepts will be presented using practical examples involving public policy issues.
	CO2	Apply social science methods and policy analysis to practical problems of government, communities, regions, and/or global issues.
	CO3	Demonstrate the ability to apply oral and written communication skills in public appearances, written reports and documents.
	CO4	Follow ethical principles for citing sources, using human subjects, serving the public, and working with colleagues.
	CO5	Develop critical thinking about public policy issues and the ability to conduct professional analyses of social, political, and economic structures and bureaucratic processes.
20RMAPSPA105A: CENTRE-STATE RELATIONS IN INDIA (Optional)	CO1	Understand the division of administrative powers between the centre and the states;
	CO2	Determine various types of procedures for securing centre-state cooperation;
	CO3	Compare the techniques of congress and NDA governments executive control over the states;
	CO4	Examine the importance f Article 356 and role of Governor in Centre-State Relations
	CO5	To assess various Commission‘s recommendations on Centre-State Relations
20RMAPSPA105B:INDIA’ S FOREIGN POLICY (Optional)	CO1	Understand the India‘s Foreign policy

	CO2	Determine India‘s relations with Neighbouring and other countries.
	CO3	Appraise the policies of various counties like India‘s Non-Alignment Policy and Commonwealth Nations
	CO4	To integrate the India‘s stand on Disarmament and with United Nations Organization (UNO)
	CO5	Discriminate India‘s foreign policy and Terrorism
SEMESTER-II		
COURSE OUTCOMES		
20RMAPSPA201:MODERN INDIAN POLITICAL THOUGHT	CO1	To Understand the Modern Indian Political Thought
	CO2	To Determine theories propounded by modern Indian thinkers
	CO3	To Appraise the Ideologies of Indian thinkers
	CO4	To distinguish the Comparative studies and research
	CO5	To omit the Caste System on the basis of social reformers ideology
20RMAPSPA202: ADMINISTRATIVE THEORIES	CO1	To Understand the important contributors of administrative management approach
	CO2	To Enumerate the general principles of administration;
	CO3	To Explain the relevance of administrative management.
	CO4	To calculate the several administrative thinker‘s concept and theories
	CO5	To compare the new public administration and development administration
20RMAPSPA203: RESEARCH METHODOLOGY	CO1	To Describe various research approaches and strategies that are applied to answer the research questions;
	CO2	To determine the various philosophical perspectives that guide research in social sciences;
	CO3	To Understand the various steps involved in the research process;
	CO4	To assess the various methods of Data Collection – Tools and Techniques
	CO5	To develop the Use of Computers in Social Science Research and Report Writing

20RMAPSPA204: GOOD GOVERNANCE AND INFORMATION TECHNOLOGY	CO1	To understated concept of state, civil society and governance
	CO2	To develop essential IT skills will help you stand out in the tech world
	CO3	To examine the Good Governance -Concept-Importance
	CO4	To create the E-Governance and Opportunities in India
	CO5	To estimate the Impact of COVID-19 on Governance
20RMAPSPA205(A): GANDHIAN POLITICAL THOUGHT(Optional)	CO1	To understand the students the ideological basis of Gandhian political philosophy.
	CO2	To articulate different dimensions of Gandhian Thought.
	CO3	To speculate the relevance of Gandhian philosophy in the contemporary society and politics.
	CO4	To focuses the Concept, Organs and Relevance of Gandhian Ideals and Indian Constitution
	CO5	to evaluate the Gandhi ideas on Parliamentary System and World Government
20RMAPSPA205(B): Dr.B.R.AMBEDKAR'S POLITICAL THOUGHT(Optional)	CO1	To understand the political thoughts of Dr. Ambedkar
	CO2	To develop the concept of law and various schools of law
	CO3	To compare the governments, form of governments and powers and functions.
	CO4	To illustrate the construction of political party and democratic manner.
	CO5	To adopt the human rights and their protection of human right.
SEMESTER-III		
COURSE OUTCOMES		
20RMAPS301: MODERN POLITICAL ANALYSIS	CO1	Students will be able to analyse politics with the help of concepts.
	CO2	Students will be able to use different approaches in analyzing politics.

	CO3	It helps a great deal in applying conceptual knowledge to analyzing Indian politics
	CO4	It explore the Decision –Making Theory and Communication Theory
	CO5	Understand the Political Culture and Political Development
20RMAPS302: INTERNATIONAL RELATIONS	CO1	Students get familiarized with what is the essential meaning of the International institutions and its objectives
	CO2	Key concepts and theories of International studies further sharpens students outlook over international issues and bodies
	CO3	After successful completion of the course, the students acquire the basic skills to understand functions of various international organizations.
	CO4	To understand Detente-Its Features, New Cold War-Its Features
	CO5	Explain the International Relations with reference to Post-9/11 events
20RMAPS303: COMPARATIVE POLITICS	CO1	Identify the concepts used in comparative methods;
	CO2	Understand the sources of these concepts and their historical development;
	CO3	Use these concepts in order to critically research, analyse, and evaluate selected contemporary political theorists;
	CO4	Develop skills for research, argument,
	CO5	Analysis in order to effectively communicate their own perspectives on key concepts and issues in comparative politics.
20RMAPS304: INDIAN POLITICAL SYSTEM	CO1	Students should be able to comprehend and critically analyse major themes and aspects of Indian Political System.
	CO2	Understand the concept of Constitutionalism
	CO3	Gets acquainted with various Indian Political System
	CO4	Becomes familiar with various Union Executive
	CO5	Gets conversant with Legislatures, Legislative Bills and Achieves skills in various writings.

20RMAPS305 (A):HUMAN RIGHTS (Optional)	CO1	The main purpose of the course is to seek to sharpen the epistemological skills ofstudents in relation to the various theoretical and practical aspects of human rights.
	CO2	The course will help students to prepare themselves for social and political discourses in the society.
	CO3	To prepare them for leadership.
	CO4	Knowledge on this important subject will also help the students to prepare for publiccompetitive exams
	CO5	To understand the National Human Rights Commission, State Human Rights Commission.
20RMAPS305(B): SOCIAL MOVEMENTS IN INDIA (Optional)	CO1	List the definition, features and ideology of social movements and Explain social movement organizations and leadership
	CO2	Describe the types and phases of social movements and State the theories of social change
	CO3	List the factors of social change and Analyse the concept of social transformation
	CO4	Interpret the impact of social change and Discuss the history of industrialization in India
	CO5	Describe the caste system in modern India
PUBLIC ADMINISTRATION		
SEMESTER – III		
COURSE OUTCOMES		
20RMAPA301: COMPARATIVE PUBLIC ADMINISTRATION	CO1	Analyse and evaluate aspects of Comparative Public Administration &public management in a comparative context;
	CO2	Participate constructively in class discussion of issues relating to public management;
	CO3	Develop a detailed proposal for reform of a particular public institution or process.
	CO4	Recent Trends in Comparative Public Administration
	CO5	The Bureaucratic Model Perspective and Ecology of Administration
20RMAPA302 : PUBLIC ADMINISTRATION IN INDIA	CO1	The course would enable the students to better analyse dimensions of Indian administration.
	CO2	Role of bureaucracy & politicians in the administrative process in India
	CO3	The student understand the Political Executives at State Government Administration
	CO4	Evaluation of Administration of Law and Order at Centre State and District Levels
	CO5	The student very much understanding the District Administration in India

20RMAPA 303: HUMAN RESOURCE MANAGEMENT	CO1	Integrated perspective on role of HRM in modern business.
	CO2	Ability to plan human resources and implement techniques of job design.
	CO3	Competency to recruit, train, and appraise the performance of employees
	CO4	Rational design of compensation and salary administration
	CO5	Ability to handle employee issues and evaluate the new trends in HRM
20RMAPA 304: LOCAL SELF GOVERNMENTS IN INDIA WITH SPECIAL REFERENCE TO A.P.	CO1	Explain the perspectives of different Indian leaders on local government.
	CO2	Understand the contributions of various committees on local government.
	CO3	Describe the features and provisions of Constitutional Amendment Acts.
	CO4	Analyses the significance of Grama Sabha& Ward Sabha in Local Government system.
	CO5	Analyses State Control over Local Self Governments in Andhra Pradesh
20RMAPA 305 (A): RURAL DEVELOPMENT ADMINISTRATION	CO1	To understand the concept of democratic decentralization.
	CO2	To trace the evolution of local government in India.
	CO3	To comprehend the institutional arrangements and processes of rural governance.
	CO4	To trace the evolution of Village Secretariat and its role in Rural Development Programmes
	CO5	To understand the Need for Administrative Reforms in Rural Development
20RMAPA 305 (B): PERSONNEL ADMINISTRATION (Optional)	CO1	Understand the concept of personnel administration;
	CO2	Understand the highlight its evolution and development
	CO3	Understand the Recruitment, Training, and Promotion.
	CO4	Understand Administrative Procedure
	CO5	Know about Types of Career Planning
POLITICAL SCIENCE		
SEMESTER-IV		
COURSE OUTCOMES		
20RMAPS401:RECENT TRENDS IN INDIA'S FOREIGN POLICY	CO1	Studying India's Foreign policy gives a thorough understanding of the process of evolution of India's foreign Policy
	CO2	It also provides a theoretical insight to understand the behaviour of a state in general and of India in particular.

	CO3	A student of India‘s Foreign policy has a precise understanding of geography, economics and politicsand how these together regulate interactions between states.
	CO4	This opens up new vistas of opportunity for students to pursue research, opt for Foreign Service, job in various international and nongovernmental organizations.
	CO5	Precision developed about India‘s foreign policy helps to understand world politics critically.
20RMAPS402: GOVERNMENT AND POLITICS IN A.P	CO1	Students will be able to know the historical background of Andhra Pradesh and Role of State Assembly in it.
	CO2	They will understand the governmental structure and processes in detail in Andhra Pradesh.
	CO3	They will come to know about the nature of state and issues of conflicts and cooperation between Centre and States in India.
	CO4	They will be able to answer questions pertaining to the functioning of constitutional and non constitutional bodies in AP.
	CO5	To understand Bifurcation of Andhra Pradesh and its Consequences
20RMAPS403: LOCAL SELF GOVERNMENTS IN INDIA	CO1	After studying this paper, students should be able to comprehend and critically analyse major themes and aspects ofLocal Governance in India.
	CO2	To understand the 73rd and 74th Constitutional Amendments.
	CO3	Student aware of the Local Self Government and Bureaucracy
	CO4	Evaluate the Centre-State and Local Relations
	CO5	Emerging Issues of Local Governing Institutions
20RMAPS404: PROJECT WORK	CO1	Student should know formulation and execution of a research problem
	CO2	Student should have skills of data interpretation and analysis.
	CO3	Student should be able to draw right conclusions from data if it is an empirical study.
	CO4	to help student gain an insight and pragmatic understanding of the theme

	CO5	It should also help in enhancing the life skill of the student.
20RMAPS 405 (A): GLOBALIZATION AND POLITICAL ECONOMY IN INDIA (Optional)	CO1	The students are acquainted with the trends in the Economic Reforms in India.
	CO2	The course exposes the students to the complexities and dynamics of current global transitions in theworld economy,
	CO3	geo-politics and international relations.
	CO4	The course aims at providing a theoretical exposition
	CO5	Meaningful insights relating to India'sinterface with Global and regional players.
20RMAPS 405 (B): ENVIRONMENTAL POLITICS (Optional)	CO1	Key dynamics studied will be: Power, justice, mobilization, capitalism and collective action.
	CO2	The knowledge of national environmental politics will be the base from which to study the broader dynamics.
	CO3	Challenges of regional and global environmental politics.
	CO4	Throughout our course we will focus on a range of environmental issues with particular emphasis on climate change.
	CO5	Biodiversity and sustainable development.
PUBLIC ADMINISTRATION		
SEMESTER - IV		
COURSE OUTCOMES		
20RMAPA401: DEVELOPMENT ADMINISTRATION IN INDIA	CO1	Understand the emergence of Development Public Administration
	CO2	learn about the Ecological approach and the concept of Prismatic Society
	CO3	Analyze the main ideas of Riggs and Weidner and their contribution to development administration.
	CO4	Understand the origin, and purpose, of the development administration.
	CO5	Interpret the linkage between development administration and sustainable development

20RMAPA402: FINANCIAL ADMINISTRATION	CO1	Importance of financial administration
	CO2	Highlight the enlarging scope of financial administration
	CO3	To understand the Control of Ministry of Finance, Principles of Taxation, Tax Administration
	CO4	Student understands the Reserve Bank of India and also Comptroller and Auditor-General of India.
	CO5	It evaluate the Centre-State Financial Relations
20RMAPA 403: SOCIAL WELFARE ADMINISTRATION	CO1	Understand the concepts of administration, social administration and social welfare administration
	CO2	Studies the nature and scope of social welfare administration and social welfare administration as a profession.
	CO3	Features and history of social welfare administration.
	CO4	It says that the Social Welfare Administration-Central Social Welfare Board and State Social Welfare Board-Structure and Functions
	CO5	Student understand the People‘s Participatory Approach (PPA)-Critical Evaluation
20RMAPA 404: Project Work	CO1	Student should know formulation and execution of a research problem.
	CO2	Student should have skills of data interpretation and analysis.
	CO3	Student should be able to draw right conclusions from data if it is an empirical study.
	CO4	to help student gain an insight and pragmatic understanding of the theme
	CO5	It should also help in enhancing the life skill of the student.
20RMAPA405(A): URBAN DEVELOPMENT ADMINISTRATION (Optional)	CO1	Describe the role played by various policies and programmes in urban development and management
	CO2	Define urban area in India.
	CO3	Analyse the level and trend of urbanization in India.
	CO4	Analyze the impact and outcome of these policies and programmes
	CO5	People_s Participation in Urban Development Administration

20RMAPA405(B): MANAGEMENT OF PUBLIC ENTERPRISES (Optional)	CO1	Recognise key concepts, theories, and principles about new public management & Public Sector reforms
	CO2	Identify and critically analyse issues and debates in public management & Public Sector reforms
	CO3	Apply key concepts and theories in public management & Public Sector reforms in local issues and also issues across the world.
	CO4	Compare public management practices across different countries.
	CO5	Critically present a public management issue efficiently to any audience.

DEPARTMENT OF TELUGU

COURSE OUTCOMES Semester-I		
COURSE	OUTCOMES After completion of these courses students will be able to	
పేపర్ - 101 - క్లాసికల్ పొయెట్రీ అండ్ డ్రామా **(Classical Poetry and Drama)**	CO1	ఫొనెటిక్స్, ఫోనాలజీ మరియు సింటాక్స్ గురించిన జ్ఞానాన్ని అభివృద్ధి చేసుకుంటారు
	CO2	భారతీయ మరియు పాశ్చాత్య భాషావేత్తల సేవలను గుర్తు చేసుకుంటారు.
	CO3	భాషాశాస్త్రం యొక్క వివిధ శాఖలను అర్థం చేసుకుంటారు
	CO4	సాధారణ భాషా శాస్త్రాన్ని వివరించ గలుగుతారు.
	CO5	వాక్య రకాలను తెలుసుకొని కావాల్సిన వాక్యాలని నిర్మించ గలుగుతారు

EL - 102 - భాషా శాస్త్ర పరిచయం (INTRODUCTION TO GENERALINGUISTICS)	CO2	భారతీయ మరియు పాశ్చాత్య భాషావేత్తల సేవలను గుర్తు చేసుకుంటారు.
	CO3	భాషాశాస్త్రం యొక్క వివిధ శాఖలను అర్థం చేసుకుంటారు
	CO4	సాధారణ భాషా శాస్త్రాన్ని వివరించ గలుగుతారు.
	CO5	వాక్య రకాలను తెలుసుకొని కావాల్సిన వాక్యాలని నిర్మించ గలుగుతారు
	CO2	భారతీయ మరియు పాశ్చాత్య భాషావేత్తల సేవలను గుర్తు చేసుకుంటారు.
103 - తెలుగు సాహిత్య చరిత్ర - I (నన్నయ నుండి శ్రీనాథ కాలం వరకు)	CO1	సాహిత్యచరిత్ర అధ్యయన పద్ధతులను ఎలాఅధ్యయనంచేయాలో తెలుసుకుంటారు .
	CO2	ప్రాచీన సాహిత్యంలో రాజకీయ జీవన విధానాలను మత, సాంస్కృతిక జీవనవిధానాలను అర్థం చేసుకుంటారు.
	CO3	ప్రాచీన సాహిత్యంలోని వివిధ కవుల శైలులను ఆధునిక కవుల శైలులకు అనువర్తింప జేస్తారు.
	CO4	ప్రాచీన సాహిత్యంలో వివిధకవుల వివిధరచనలను విశ్లేషిస్తారు
	CO5	ప్రాచీన వ్యాకరణ, ఛందస్సు శాస్త్రాల ద్వారా కొత్త శాస్త్ర కావ్యాలను రచిస్తారు.
104 - తెలుగు వ్యాకరణం మరియు ఛందస్సు	CO1	ప్రాచీన తెలుగు వ్యాకరణం గురించిన ఆలోచనలను అర్థం చేసుకోవడం.
	CO2	శాస్త్రీయ కవిత్వం మరియు వ్యాకరణ పదజాలం యొక్క లక్ష్యాలు మరియు లక్షణాలను విశ్లేసిస్తారు.
	CO3	శాస్త్రీయ కవిత్వంలో ఛందస్సు యొక్క లక్ష్యాలు మరియు లక్షణాలను ఉదహరిస్తారు
	CO4	బాలవ్యాకరణంలోని కొన్ని పరిచ్ఛేదాల యొక్క భావాలను మూల్యాంకనం జేస్తారు
	CO5	ప్రాచీన వ్యాకరణ, ఛందస్సు శాస్త్రాల ద్వారా కొత్త శాస్త్ర కావ్యాలను రచిస్తారు.

105 (ఎ) -జానపద సాహిత్యం(Folk Literature)	CO1	జానపద సాహిత్యం మరియు జానపద కళలను పరిచయం చేసుకుంటారు
	CO2	స్థానిక గ్రామీణ జీవితంలోని సంప్రదాయ ప్రదర్శన కళారూపాలను, వివిధ దేశీయ కళారూపాలతో అనువర్తిస్తారు
	CO3	జానపద కళలు మరియు సాంస్కృతిక కళాఖండాలలోసాహిత్యం యొక్క గొప్ప తనాన్ని విశ్లేషిస్తారు.
	CO4	జానపద సాహిత్యం మరియు జానపద కళలను మూల్యాంకనం జేస్తారు
	CO5	జానపద కళలను కళారూపాలను ప్రదర్శిస్తారు.
పేపర్ - 105 (బి) – అనువాదం(Translation)	CO1	అనువాదంలో సాంకేతిక అనువాద పద్ధతులను నేర్చుకొంటారు.
	CO2	వివిధ సాధనాలు , సాంకేతికతలు మరియు అనువాద పద్ధతులను అర్థం చేసుకుంటారు
	CO3	రెండు భాషల మధ్య, రెండు సంస్కృతుల మధ్య వారధిగా అనువాదాలను నేర్చుకొని వాటిని విశ్లేషిస్తారు.
	CO4	అనువాదంలో సమస్యలు మరియు సవాళ్లను మూల్యాంకనం జేస్తారు
	CO5	అనువాదము అధ్యనం చేసి అనువాదకులుగా సృజనాత్మకతను కలిగి ఉంటారు.
Semester-II		
COURSE	OUTCOMES	
201 ఆధునిక కవిత్వం (Prescribed Texts & Drama)	CO1	ఆధునిక కాలంలోని సామాజిక - రాజకీయ, సాంస్కృతిక మరియు ఆర్థిక పరిస్థితులను విద్యార్థులు గుర్తుకు తెచ్చుకుంటారు.
	CO2	తెలుగు కవిత్వంలో ఆధునిక మరియు సమకాలీన పోకడలను విద్యార్థులు వర్తమాన సామాజిక దృష్టాంతం యొక్క జ్ఞానాన్ని పొందుతారు.
	CO3	తెలుగు కవిత్వంలోని ఆధునిక మరియు సమకాలీన పోకడలను ఇతర కావ్య విషయాలకు అనువర్తింప జేస్తారు.
	CO4	తెలుగు కవిత్వంలో ఆధునిక మరియు సమకాలీన పోకడలను విశ్లేషిస్తారు.

	CO5	ద్రావిడ, ఆర్య భాషల మధ్య తులనత్మకతను చేయగలరు.
202: . చారిత్రక భాషాశాస్త్రం (Historical Linguistics)	CO1	మాండలికాలు, ప్రమాణ భాష గూర్చి జ్ఞానాన్ని పెంపొందుతారు.
	CO2	భారత దేశంలోని భాషా కుటుంబాలు సంబంధాలను గూర్చి తెలుసుకుంటారు
	CO3	చారిత్రక భాషా శాస్త్రాన్ని , ధ్వని సూత్రాలు, అపవాదాలు, ధ్వని మార్పు గూర్చి అర్థం చేసుకుంటారు.
	CO4	అర్థ పరిణామ తులనాత్మక పద్ధతి, మూలభాష పునర్నిర్మాణం గూర్చి చెప్పగలరు.
	CO5	ద్రావిడ, ఆర్య భాషల మధ్య తులనత్మకతను చేయగలరు.
202 - చారిత్రక భాషాశాస్త్రం (HISTORICAL LINGUISTICS)	CO1	మాండలికాలు, ప్రమాణ భాష గూర్చి జ్ఞానాన్ని పెంపొందుతారు.
	CO2	భారత దేశంలోని భాషా కుటుంబాలు సంబంధాలను గూర్చి తెలుసుకుంటారు
	CO3	చారిత్రక భాషా శాస్త్రాన్ని , ధ్వని సూత్రాలు, అపవాదాలు, ధ్వని మార్పు గూర్చి అర్థం చేసుకుంటారు.
	CO4	అర్థ పరిణామ తులనాత్మక పద్ధతి, మూలభాష పునర్నిర్మాణం గూర్చి చెప్పగలరు.
	CO5	ద్రావిడ, ఆర్య భాషల మధ్య తులనత్మకతను చేయగలరు.
203 - తెలుగు సాహిత్య చరిత్ర - 2 (ప్రబంధ కాలం నుండి ఆధునిక కాలం వరకు)	CO1	సంప్రదాయ సాహిత్యం యొక్క వివిధ యుగాల రాజకీయ, మత మరియు సాంస్కృతిక జీవన విధానాలను అర్థం చేసుకోవడం.
	CO2	ఆధునిక సాహిత్యంలోని ఆధునిక పోకడలను, వివిధ భాషా సాహిత్యాలకు అనువర్తింప జేస్తారు.
	CO3	తెలుగుసాహిత్యంలోఆధునికయుగాన్నిస్థాపించడానికి గలకారణాలను విశ్లేషిస్తారు.
	CO4	సంప్రదాయ సాహిత్య ఆధునిక సాహిత్య శైలులను మూల్యాంకనం జేస్తారు.

	CO5	సంప్రదాయ సాహిత్యం, ఆధునిక సాహిత్యాన్ని చదివి కవులుగా రచయితలుగా మరే సృజనాత్మకతను కలిగి ఉంటారు.
204 - తెలుగు వ్యాకరణం - II &పోయెటిక్స్ (Telugu Grammar-II & Poetics)	CO1	తెలుగు వ్యాకరణం యొక్క జ్ఞానాన్ని అర్థం చేసుకుంటారు
	CO2	ముఖ్యంగా బాల వ్యాకరణంలోని వ్యాకరణ నిబంధనలను తెలుసుకుంటారు
	CO3	బాల వ్యాకరణ విశేషాలను, వివిధ వ్యాకరణాలకు అనువర్తింప జేస్తారు.
	CO4	తెలుగు సాహిత్యంలోని వివిధ అలంకారాలను విశ్లేషిస్తారు.
	CO5	బాల వ్యాకరణంలోని పరిచ్ఛేదాల మూల్యాంకనాలను, వివిధ అలంకారాల మూల్యాంకనాల మాపనం చేయగలరు.
205 (ఎ) -జానపద కళలు (Folk Arts)	CO1	స్థానిక గ్రామీణ జీవితం ను సాంప్రదాయక ప్రదర్శన కళారూపాలతో పోల్చుకొని వాటి మధ్య తేడాలను తెలుసుకుంటారు .
	CO2	వివిధ భాషల్లోని జానపద సాహిత్యం మరియు జానపద కళలను అర్థం చేసుకోగలరు
	CO3	జానపద కళల ప్రదర్శనను జీవితానికి అన్వయించుకుంటారు .
	CO4	జానపద కళలు మరియు సాంస్కృతిక కళాఖండాలలో జానపద జీవన తత్వాన్ని విశ్లేసిస్తారు .
	CO5	జానపద కళారూప ప్రదర్శనలను ప్రదర్శిస్తారు
పేపర్ - 205 (బి) - కంపారిటివ్ లిటరేచర్	CO1	దక్షిణభారతభాషలతులనాత్మకఅంశాలతోవి ద్యార్థులు పరిచయంచేసుకుంటారు
	CO2	తులనాత్మక అధ్యయనంయొక్క మూలం మరియు అభివృద్ధిని అర్థంచేసుకుంటారు
	CO3	నవల మరియు చిన్నకథను దక్షిణభారత భాషల తులనాత్మక అంశాలకు అనువర్తింప జేస్తారు

	CO4	వివిధ శైలులలో తులనాత్మక అధ్యయనం యొక్క వివిధ అంశాలను విశ్లేసిస్తారు
	CO5	వివిధ భాషల్లోని నవలా సాహిత్యం ,కధా సాహిత్యంలోని రచయితల సృజనాత్మకతను మూల్యాంకనం చేయగలరు .
Semester-III		
COURSE	OUTCOMES	
పేపర్ - 301 - తెలుగు సాహిత్య విమర్శ	CO1	భారతీయ అలంకార శాస్త్రాల నుండిరస, ధ్వని వంటి వివిధ సిద్ధాంతాల మూలం మరియు అభివృద్ధిని గుర్తుతెచ్చుకుంటారు.
	CO2	సాహిత్య విమర్శను అర్థం చేసుకుంటారు
	CO3	తెలుగు సాహిత్యంలో మునుపటి విమర్శ పద్ధతులను విశ్లేసిస్తారు.
	CO4	భారతీయ మరియు పాశ్చాత్య విమర్శకులచే కావ్యాల యొక్క నిర్వచనాలు మరియు ఉపయోగాలను మూల్యాంకనం చేయగలుగుతారు.
	CO5	భారతీయ మరియు పాశ్చాత్య విమర్శకులను ఆదర్శం చేసుకొని శాస్త్రాలను రచిస్తారు.
పేపర్ - 302 - తెలుగు సంస్కృతి(Telugu Culture)	CO1	సంస్కృతి ,నాగరికత శాతవాహనుల గురించి చెప్పగలుగుతారు .
	CO2	శాతవాహన అనంతర రాజ్యాలను చాళుక్య ,చోళుల గురించి అర్థం చేసుకుంటారు .
	CO3	కాకతీయ ,రెడ్డి రాజుల పద్మ నాయకుల రాజ్యాలను పోల్చి చూడగలరు
	CO4	వలస పాలన ,సాంస్కృతిక పునరుజ్జీవనం ,క్రైస్తవ మిషనరీలు రాష్ట్రావతరణ గురించి అర్థం చేసుకుంటారు .
	CO5	విజయనగర ,గోల్కొండ రాజ్యాల గురించి వివరించ గలుగుతారు .
పేపర్ 303: తెలుగు జర్నలిజం	CO1	రిపోర్టరు,సబ్-ఎడిటర్ ,ఎడిటర్ బాధ్యతలను గూర్చి జ్ఞానాన్ని పెంపొందుతారు .
	CO2	పత్రికలకు,రేడియో లకు,టివి లకు వార్తలు ప్రకటనలు ద్వారా జ్ఞానాన్ని పెంపొందుతారు

	CO3	తెలుగు పత్రికల వర్గీకరణ ,వివిధ ఉద్యమాలలో పత్రికల పాత్ర గురించి అర్థం చేసుకుంటారు.
	CO4	ప్రముఖ తెలుగు పత్రికా సంపాదుకుల గూర్చి ,వివిధ రకాల పత్రికల గూర్చి చెప్పగలుగుతారు
	CO5	దిన పత్రికల భాషా పరిణామం ,ప్రయోగాలు గూర్చి విశ్లేసిస్తారు
పేపర్ - 304 - ప్రాంతీయ సాహిత్యం	CO1	నెల్లూరు యొక్క చారిత్రక మరియు భౌగోళిక నేపథ్యాన్ని తెలుసుకుంటారు
	CO2	నెల్లూరు యొక్క ప్రత్యేక సంస్కృతి మరియు మాండలికాన్ని అర్థం చేసుకోవడం
	CO3	నెల్లూరు కవుల ,రచయితలను కలుసుకొని వారి పరిచయాలను నెమరు వేసుకుంటారు
	CO4	నెల్లూరు యొక్క ప్రాచీన మరియు ఆధునిక సాహిత్యాన్ని వివిధ శైలులను విశ్లేసిస్తారు
	CO5	నెల్లూరు ప్రత్యేక సంస్కృతిని ,కవుల రచయితల దృష్టితో మూల్యాంకనం చేస్తారు
పేపర్ - 305 (ఎ) - కల్పిత నవల , చిన్న కథ(Fiction, Novel Short Story)	CO1	నవల మరియు కథ మరియు దాని లక్షణాలను తెలుసుకోగలరు .
	CO2	నవల మరియు కథల పరిణామంలో దశలను మరియు ఈ శైలులపై సామాజిక ఉద్యమాల ప్రభావాన్ని అర్థం చేసుకోగలరు .
	CO3	నవల-కథా ప్రక్రియల సామాజిక ఉద్యమ ప్రభావాలను విశ్లేసిస్తారు
	CO4	నవల-కథా రచయితల రచనల్లోని శైలులను మూల్యాంకనం చేయగలరు .
	CO5	నవల-కథా రచయితల ఆలోచన విధానాల పై సృజనాత్మక వ్యాసాలు రాయగలరు .
పేపర్ - 305 (బి) ఆధునిక తెలుగు నిర్మాణం (Structure of Modern Telugu)	CO1	తెలుగు మరియు అనువాదం యొక్క సింటాక్స్ ను విద్యార్థులు తెలుసుకుంటారు
	CO2	విద్యార్థులకు తెలుగులో వివిధరకాల రచనలను చదివి అర్థం చేసుకుంటారు

	CO3	తెలుగు భాష యొక్క ప్రాథమిక లక్షణాలు నామవాచకం, సర్వనామం మొదలగు వాటి రూపాలను విశ్లేసిస్తారు.
	CO4	తెలుగు భాషలో. తెలుగు మరియు అనువాదం యొక్క వాక్యనిర్మాణాన్ని మూల్యాంకనం చేయగలరు.
	CO5	తెలుగులో వివిధ రకాల రచనలను చదివి తెలుగు భాషా నిర్మాణాల లోని వాక్య రచనలు చేయగలరు
Semester-IV		
COURSE	OUTCOMES	
పేపర్ - 401 - ఆధునిక తెలుగు సాహిత్య విమర్శ **(Modern Literary Criticism)**	CO1	వివిధ తెలుగు శైలులను విమర్శనాత్మకంగా అధ్యయనం చేయడంలో విద్యార్థులు జ్ఞానాన్ని కలిగి ఉంటారు.
	CO2	తెలుగులో ఆధునిక సాహిత్య విమర్శను అర్థం చేసుకుంటారు.
	CO3	పాశ్చాత్య సాహిత్య విమర్శలో వివిధ పద్ధతులను విశ్లేషిస్తారు.
	CO4	తెలుగు సాహిత్య విమర్శ ప్రభావాన్ని పాశ్చాత్య సాహిత్య విమర్శ ప్రభావాన్ని వివరిస్తారు.
	CO5	వివిధ తెలుగు విమర్శ శైలుల లక్షణాలను చదివి పాశ్చాత్య శైలులతో సమన్వయిస్తారు.
పేపర్ - 402 - నిర్దేశించిన సంస్కృత గ్రంథాలు&వ్యాకరణం**(Prescribed Sanskrit Texts &Grammar)**	CO1	ప్రపంచంలోని అత్యంత ప్రాచీన భాష సంస్కృత రచనలు గురించి తెలుసుకుంటారు.
	CO2	సంస్కృత సాహిత్యం మరియు వ్యాకరణం యొక్క ప్రాముఖ్యతను అర్థం చేసుకుంటారు.
	CO3	వేద సాహిత్యం మరియు సంస్కృతంలోని ఇతర ప్రాచీన శైలులను విశ్లేసిస్తారు.
	CO4	సంస్కృత కవుల రచనలను మూల్యాంకనం చేస్తారు.
	CO5	సంస్కృత సాహిత్యాన్ని చదివి సృజనాత్మకతను పెంపొందించుకుంటారు

పేపర్ - 403 . తెలుగు భాష పరిణామం(Evolution of Telugu Language)	CO1	భారత దేశంలోని భాషా కుటుంబాల గురించి ఆంధ్రము-తెనుగు –తెలుగు పదాల చరిత్రని గుర్తు చేసుకుంటారు.
	CO2	తెలుగు అన్యదేశ్యాలను అర్థం చేసుకుంటారు .
	CO3	తెలుగు భాషలోని శాసన ఆధునిక నామం,సమాస,లింగ ,వచన,విభక్తి,సర్వనామమ,సంఖ్యావాచక ,విశేషణాలను సరిపోల్చుకుంటారు .
	CO4	తెలుగు భాషా క్రియలు ,శాసన ఆధునిక భాషలను సరిపోల్చుకుంటారు
	CO5	తెలుగు భాష వాక్య నిర్మాణ భేదాలను వివరించ గలుగుతారు
TEL- 404 - తెలుగు కవయిత్రులు (WOMEN POETS IN TELUGU)	CO1	ప్రపంచవ్యాప్తంగాస్త్రీవాదంపుట్టుక వికాసాలను తెలుసుకుంటారు
	CO2	తెలుగు స్త్రీవాద రచనలను ఇతర భాషల్లోని స్త్రీవాద రచనలకు అనువర్తింప చేస్తారు .
	CO3	తెలుగుసాహిత్యంలోస్త్రీ వాద ఉద్యమాలమూలంమరియుఅభివృద్ధినివిశ్లేసిస్తా రు .
	CO4	స్త్రీవాదరచనలలోనిపితృస్వామ్యం, లింగవివక్ష, భాషా, సామాజిక – రాజకీయమరియుఆర్థికరంగాలలోఅణచివేతవం టిభావనలనుమూల్యాంకనం చేస్తారు .
	CO5	తెలుగు స్త్రీవాద రచనలను చదివి ఉత్తేజం పొంది సృజనకారులు కాగలరు .
పేపర్ - 405 (ఎ) - కందుకూరి వీరేశిలింగం (ప్రత్యేక రచయిత) (Kandukuri Veeresilingam (Special author))	CO1	ఆధునిక సమాజ నిర్మాణంలో బాధ్యతను అర్థం చేసుకునేందుకు విద్యార్థుల సామర్థ్యాన్ని పెంపొందించగలరు.
	CO2	కందుకూరి యొక్క ముఖ్యాంశాలు మరియు అతని రచనలలో దేశ భక్తి, మానవతావాదం గురించి అర్థం చేసుకొంటారు.
	CO3	కందుకూరి కాలంలోని ప్రత్యేక పరిస్థితులను, ఆధునిక సమాజ నిర్మాణంలో బాధ్యతలను విశ్లేషిస్తారు.

	CO4	కందుకూరి సంఘ సంస్కరణ ఆవశ్యకతను వివరిస్తారు.
	CO5	కందుకూరిని ఆదర్శంగా తీసుకొని రచనా నైపుణ్యాలను పెంపొందించు కుంటారు.
పేపర్ - 405 (బి) .పరిశోధన పద్ధతి (Research Methodology)	CO1	పరిశోధన పని యొక్క ప్రాముఖ్యతను అర్థం చేసుకుంటారు.
	CO2	పరిశోధన అంశాన్ని ఎలా తీసుకోవాలో సామర్థ్యాన్ని పెంపొందించుకుంటారు
	CO3	పరిశోధనా అంశం పై రచనా నైపుణ్యాలను పెంపొందించు కుంటారు.
	CO4	పరిశోధనా పనికి సంబంధించి సమాచారాన్ని పొందడానికి ఎన్ని పద్ధతుల్లో అధ్యయనం చేయవచ్చో విశ్లేసిస్తారు.
	CO5	పరిశోధనా అంశం ఏది ఎంచుకోవాలో సృజనాత్మకత కలిగి ఉంటారు.

DEPARTMENT OF ANALYTICAL CHEMISTRY

SEMESTER-I		
COURSE OUTCOMES		
20RMSCAC101: INORGANIC CHEMISTRY –I	CO1	Discuss the properties of Coordination complexes, Categorize types of Coordination complexes and splitting of —d‖ orbitals, summarize the applications of CFT.
	CO2	Explain the properties of Inert and labile complexes, Review to the reaction mechanisms of ,etal complexes, Discuss the theories of trans effect and Marcus theory
	CO3	Generalized characteristics features of non-transition elements, Prepare Boranes, Silicates and Carbides, Distinguish the Closo,Nido and Arachno Boranes.
	CO4	Classify types of Carbonyls and Nitrosyls, Synthesize metal carbonyls and Nitrosyls, Differentiate Effective Atomic Number(EAN) and 18 electron Rule
20RMSCAC102: ORGANIC CHEMISTRY–I	CO1	Explain the structural and electronic criteria of aromaticity and its applications in benzenoid & non-benzenoid, alternant and non-alternant hydrocarbons

	CO2	Discuss the basics of reaction mechanism of the S_N1, S_N2, SET, S_Ni and S_NAr reactions and their applications through the name reactions Distinguish the reaction mechanisms of aliphatic and aromatic nucleophilic substitution reactions and their applications via the name reactions.
	CO3	Outline detailed knowledge on reactive intermediates like carbocations carbanions etc. To learn the physical parameters and potential energy diagrams of transition states and intermediates of organic reactions.
	CO4	Explain the basic knowledge on Handszschwidmann nomenclature of different heterocycles.
20RMSCAC103: PHYSICAL CHEMISTRY–I	CO1	Acquire in depth knowledge in quantum mechanics,quantum chemistry, chemicalkinetics thermodynamicsandelectrochemistry.
	CO2	Describe the principles and applications of plank'sequation, bohr'smodel, Schrodinger wave equation-Eigen values and Eigen functions.
	CO3	Illustrate the classification and characterization of electrochemical cells.
	CO4	Apply the knowledge to calculate conductance measurements.
20RMSCAC104: GENERAL CHEMISTRY-I	CO1	Describe functions, differential equations, probability, vectors, matrices and determinants To learn about the introduction to the computer and computer languages.
	CO2	Enriching and appreciating the basic concepts and polymers and understand the significance of co-polymerization, coordination and conducting polymers and molecular weight concept of polymers and its determination.
	CO3	Application of batteries especially for primary and secondary batteries,dry cells, fuel cells and solar cells.
	CO4	Explain the structural aspects of materials in solid sate by XRD, XPS and SEM Describe the fundamental principles of molecular spectroscopy including IR, and Raman spectroscopies and various rules involved.
SEMESTER-II		
COURSE OUTCOMES		

20RMSCAC201: INORGANIC CHEMISTRY-II	CO1	Outline the properties of dia and para magnetism, Describe the Curie law and Curie-Wiess Law, Explain the Temperature Independent Paramagnetism (TIP)
	CO2	Write the principle of LS Coupling(Rusels Saunders),Compare the Leporte orbital selection rule and spin selection rule, Discuss the Charge Transfer of Metal Complexes
	CO3	State the principles of Mossbauer and NQR spectroscopy, Illustrate the applications of Mossbauer and NQR spectroscopy, Discuss the Factors influencing absorbtion of Gamma rays nucleus.
	CO4	Differentiate the stepwise and overall stability constants, state the HSAB principle, Demonstrate the stability constants of metal complexes by spectrophotometric and p^H metric methods.
20RMSCAC202: ORGANIC CHEMISTRY–II	CO1	Illustrate the mechanism and stereochemical aspects of addition reactions involving electrophiles, nucleophiles and free radicals. Explain the mechanism and stereochemical aspects of variety of elimination reactions like E1, E2 and E1cB etc.
	CO2	Describe the concept of axial chirality and planar chirality ansa compounds and helicity. Compare the different classification of stereo isomers Discuss conformation analysis of acyclic and alicyclic systems.
	CO3	State the occurrence, isolation and classification of alkaloids
	CO4	Define the isolation, isoprene rule and classification and synthesis of terpenoids
20RMSCAC203: PHYSICAL CHEMISTRY–II	CO1	Apply a vast knowledge in the interpretation of various physical quantities involved in Thermodynamics, enthalpy, work function, entropy and equilibrium constant etc.,
	CO2	Analyze the theories and applications of quantum mechanical treatment of Schrodinger wave equation to hydrogen atom and perturbation Theory
	CO3	Identify the concepts and applications of symmetries, group multiplication tables and mulliken character tables
	CO4	Define the applicative aspects of Debye- Huckel-limiting law and corrosion-factors
20RMSCAC204:GENERAL CHEMISTRY-II	CO1	Compare Precision and accuracy, relate the statistical evaluation of Data T-Test and F-Test, Write the importance of Significant figures.

	CO2	State the principles of fame emission spectroscopy and atomic absorption spectroscopy, write the difference between AAS and FES, Explain the advantages and disadvantages of AAS and FES.
	CO3	Define the principle of ESR spectroscopy, explain ESR spectrum of organic and inorganic radicals, discuss the applications of ESR spectroscopy.
	CO4	Outline the Homogeneous catalysis, Analyse the hydrogen bromide(HBr) and Hydrogen peroxide(H_2O_2) reactions, Discuss the factors affecting Redoxpotentials.
SEMESTER-III		
COURSE OUTCOMES		
20RMSCAC301: FUNDAMENTALS OF ANALYTICAL CHEMISTRY	CO1	Generalised units , apparatus and safety measures in laboratory
	CO2	Outline eperation techniques of homogeneous and heterogeneous liquids.
	CO3	Explain Seperation methods of solvents and by using organic precipitants.
	CO4	Describe the micro,macro,trace and ultra trace level concentrations and their determination methods.
20RMSCAC302: QUALITY ASSURANCE AND QUALITY	CO1	Recall the basics of analytical calculations and quality management system.
	CO2	Describe Errors and types of errors. Applying different statistical tools like F-test,T-Test and Q-Test.
	CO3	Examine Quality and their control and assessment.
	CO4	Develop different policy on method validation and development techniques.
20RMSCAC303: ANALYTICAL SPECTROSCOPY	CO1	Recall semiconductors ,Interpret the applications of computers in analytical data storage and retrieval.
	CO2	Demonstrate Atomic Emission spectroscopy, Atomic Flouresence spectroscopy and XFS , Principle and Applications.
	CO3	Describe the principle involved in AAS and its applications in analysis of Industrial samples.

	CO4	Discuss the light scattering effect in Nephelometry and turbidimetry ,demonstrate principle and applications of Flouremetry and phosphorimetry, Flow injection analysis.
20RMSCAC304: INSTRUMENTAL METHODS OF ANALYSIS	CO1	Memorize the Chromatographic techniques like HPLC, Electrophoresis and supercritical fluid chromatography.
	CO2	Relate the Mass spectrometry with Gas chromatography and liquid Chromatography.
	CO3	Explain various thermal analysis methods like TG,DTG,DSC and Radio analytical techniques like XRF,NAA.
	CO4	Describe DC Polorography, Cyclic Voltammetry, Anodicstripping voltammetry, Coulometric analysis and ion selective electrodes.
SEMESTER-IV		
COURSE OUTCOMES		
20RMSCAC401 : ANALYSIS OF NATURAL AND COMMERCIAL MATERIALS	CO1	Analyze different water bodies, quality parameters likeDO,BOD,COD and analytical methods for measuringcationsandAnions.
	CO2	Interpret the analysis of minerals, ores,fuels-Liquid and Gaseous.
	CO3	Describe the analysis of Plant pigments and cement and their compositions.
	CO4	Explain the constituents in food and their analysis method. Identify different dairy products and forensic analysis.
20RMSCAC402:BIOINORGANIC, BIOORGANIC, BIOPHYSICAL CHEMISTRY AND NANOMATERIALS	CO1	Demonstrate the structure and functional aspects of oxygen uptaking proteins.
	CO2	Indicate the functional importance of Carbohydrates,lipids and enzymes in human body.
	CO3	Outline the standard free energy and different biophysical processes in human body.
	CO4	Prepare Nanomaterials by different synthesis methods and their characterizations and their applications of Carbon nanomaterials.

20RMSCAC403: **APPLICATIONS OF ANALYTICAL CHEMISTRY IN ENVIRONMENTAL SCIENCE**	CO1	Discuss Biochemical cycles in environment and role of analytical chemistry in environmental studies.
	CO2	Examine historical approach of green chemistry in pharmaceutical industry and toxicology chemistry.
	CO3	Illustrate different air pollution monitoring methods and instrumental techniques in environmental chemical analysis.
	CO4	Describe the role of saturated, unsaturated and aromatic saturated hydrocarbons in petrochemical industry.
20RMSCAC404:APPLIED ANALYSIS	CO1	Practice the biodegradability and sewage disposal techniques.
	CO2	Infer the analysis of constituents of alloys ,oils and explosives.
	CO3	Analyze soils, fertilizers and pesticides.
	CO4	Evaluate the drugs, antibiotics and blood compositions.

DEPARTMENT OF BIOTECHNOLOGY

SEMESTER-I		
COURSE OUTCOMES		
20RMSCBTT101: MICROBIOLOGY& CELL BIOLOGY	CO1	Explain the historical discoveries made in the field of microbiology and the evolution of microbiology including virology
	CO2	Apply the knowledge of techniques for isolation and cultivation of microorganisms (algae, fungi, bacteria and virus), and explain the diversity of bacteria, classification and identification with knowledge of general characters of various bacterial phyla.
	CO3	Discuss the insights into the cellular composition of bacteria and viruses, and give the overview of virus replication strategies, sub-genomic RNAs, virusoids, viroids and prions.
	CO4	Understand the cellular organization and composition of prokaryotic and eukaryotic cells, remember the concepts of structure and functions of cellular organelles, and comprehend the role of different cell organelles and properties of the cell membrane.
	CO5	Explain the cell cycle and its regulation and learn signal transduction in cells, and introduction to cancer.

20RMSCBTT102: CHEMISTRY OFBIOMOLECULES	CO1	Explain the chemical basis of life, properties of biomolecules in water, the importance of pH, and biomolecular hierarchy.
	CO2	Be able to explain the importance and classification of carbohydrates in biological systems.
	CO3	Understand the structure and functions of amino acids, peptides and proteins, and their structuralfunctional relationships.
	CO4	Explain the physical and chemical properties of lipids and fatty acids.
	CO5	Distinguish between the structure and function of nucleic acids and discuss DNA as the genetic material.
20RMSCBTT103: MODERN GENETICS	CO1	Understand the basics of genetics and classical genetics of prokaryotic and eukaryotic organisms and describe fundamental molecular principles of genetics.
	CO2	Understand the relationship between phenotype and genotype in bacteria
	CO3	Explain the organization of genetic material and chromosomes in both prokaryotic and eukaryotic organisms.
	CO4	Understand the processes of recombination and gene transfer
	CO5	Describe the basics of genetic mapping and mutagenesis and understand how gene expression is regulated.
20RMSCBTT104: BIOCHEMICAL AND BIOPHYSICAL TECHNIQUES	CO1	Understand the theory and practice ofbio-analytical techniques and the instrumentation used in biotechnology
	CO2	Familiarity with working principles, tools and procedures of analytical techniques.
	CO3	Analyze the limitationsand creative use of techniques for solving of the research problem
	CO4	Describe separation and isolation techniques including centrifugation, chromatography and electrophoresis for biological materials.
	CO5	Understand the spectrophotometric, radioisotopic and crystallographic methodologies for analyzing biological samples.
20RMSCBTT105: INTELLECTUAL PROPERTY RIGHTS, BIOSAFETY &	CO1	Understand the rationale for and against IPR and especially patents

BIOETHICS OF BIOTECHNOLOGY		
	CO2	Understand why India has adopted an IPR Policy and be familiar with the broad outline of patent regulations.
	CO3	Understand different types of intellectual property rights in general and protection of products derived from biotechnology research and issues related to application and obtaining patents.
	CO4	Gain knowledge of biosafety and risk assessment of products derived from recombinant DNA research and environmental release of genetically modified organisms, national and international regulations.
	CO5	Understand ethical aspects related to biological, biomedical, health care and biotechnology research
20RMSCBTP101: MICROBIOLOGY & CELLBIOLOGY	CO1	Prepare bacterial cultures and preserve them, and demonstrate the bacterial growth curve
	CO2	Estimate the minimal inhibitory concentration of a given antibiotic and finding growth conditions for certain bacteria
	CO3	Identify stages of mitosis using root tips
	CO4	Examine cells isolated from chick epithelium
	CO5	Demonstrate chromosomal aberrations and study polytene chromosomes
20RMSCBTP102: CHEMISTRY OF BIOMOLECULES	CO1	To elaborate concepts of biochemistry with easy to run experiments,
	CO2	To familiarize with basic laboratory instruments and understand the principle of measurements using those instruments with experiments in biochemistry, and to prepare buffers and solutions along with measurement of pH.
	CO3	To identify sugars, amino acids based on qualitative tests.
	CO4	To estimate quantities of sugars, amino acids and nucleic acids by spectroscopic methods.
	CO5	To quantify lipids, fatty acids and cholesterol using different biochemical methods
20RMSCBTP103: MODERN GENETICS	CO1	Demonstrate Mendelian laws and construction of genetic maps. genetics.

	CO2	Perform experiments on antibiotic resistance.
	CO3	Demonstrate bacterial transformation and conjugation using suitable methods.
	CO4	Perform induction of mutations and isolation of mutants.
	CO5	Solve problems related to molecular genetics.
20RMSCBTP104: BIOCHEMICAL AND BIOPHYSICAL TECHNIQUES	CO1	Prepare stock solutions, working Solutions and buffers.
	CO2	Identify the sugars and lipids by paper chromatography.
	CO3	Analyze protein concentration in unknown samples using the standard graph, and to demonstrate titration of amino acids and their separation using thin-layer Chromatography
	CO4	Separate proteins by gel filtration and polyacrylamide gel electrophoresis (PAGE), and to separate nucleic acids by using agarose gel electrophoresis.
	CO5	Draw absorption spectra for amino acids, proteins and nucleic acids, and to isolate and characterize plant pigments by spectrophotometric methods
SEMESTER-II		
COURSE OUTCOMES		
20RMSCBTT201:ENZYMOLOGY& INTERMEDIARY METABOLISM	CO1	Discuss the enzymes and their classification and properties,
	CO2	Explain the bioenergetics and various biochemical steps in biological pathways,
	CO3	Explain the respiratory and photosynthetic metabolism, and to describe the Calvin cycle and TCA cycle and their regulation,
	CO4	Discuss fatty acid and amino acid metabolism, and to explain the metabolism of amino acids and proteins, and
	CO5	Discuss the biosynthesis and catabolism of nucleosides and nucleotides
20RMSCBTT202:IMMUNOLOGY& IMMUNOTECHNOLOGY	CO1	Evaluate usefulness of immunology in different pharmaceutical companies,
	CO2	Identify proper research lab working in area of their own interests

	CO3	Apply their knowledge and design immunological experiments to demonstrate innate, humoral or cytotoxic T lymphocyte responses,
	CO4	Figure out kind of immune responses in the setting of infection (viral or bacterial), and
	CO5	Explain the antigen or antibody interaction.
20RMSCBTT203: MOLECULAR BIOLOGY	CO1	Explain the physical properties of DNA and its organization in chromatin
	CO2	Explain the principles behind DNA replication, repair and recombination,
	CO3	Discuss the transcription process and RNA polymerases and their action,
	CO4	Explain the translation process in both prokaryotes and eukaryotes, and
	CO5	Discuss the regulation of gene expression and operon concept.
20RMSCBTT204: BIOINFORMATICS & BIOSTATISTICS	CO1	Develop an understanding of basic theory of these computational tools,
	CO2	Gain working knowledge of these computational tools and methods,
	CO3	Appreciate their relevance for investigating specific contemporary biological questions,
	CO4	Critically analyse and interpret results of their study,
	CO5	Gain broad understanding in mathematics and statistics, and
	CO6	Recognize importance and value of mathematical and statistical thinking, training, and approach to problem solving, on a diverse variety of disciplines.
20RMSCBTT205: ENTERPRENEURSHIP IN BIOTECHNOLOGY	CO1	Gain entrepreneurial skills, understand the various operations involved in venture creation,
	CO2	Identify scope for entrepreneurship in biosciences,
	CO3	Utilize the schemes promoted through knowledge centres and various agencies,
	CO4	Gain knowledge pertaining to management and leadership and
	CO5	Able to build up a strong network within the industry.

20RMSCBTP201: ENZYMOLOGY& INTERMEDIARY METABOLISM	CO1	Perform purification of various enzymes, their assays and immobilization of enzymes,
	CO2	Determine the effect of temperature and pH on the rate of enzyme-catalyzed reaction,
	CO3	Measure CO2/O2 evolution during respiration/photosynthesis of microorganisms,
	CO4	Do bioassay of microbial toxins and toxicity test and
	CO5	Estimate chitin in fungal cultures.
20RMSCBTP202: IMMUNOLOGY & IMMUNOTECHNOLOGY	CO1	Learn important immunological techniques such as ELISA, Western blotting, cell culture techniques,
	CO2	Gain knowledge in flow cytometry and assays to monitor the immune responses
	CO3	Perform techniques of immune technology routinely used by the diagnostic, vaccine and sera manufacturing companies,
	CO4	Gain practical exposure to several techniques and protocols to enhance entrepreneurship skills, and
	CO5	Access into biotechnology and pharmaceutical industries.
20RMSCBTP203: MOLECULAR BIOLOGY	CO1	Perform transformation, conjugation and transduction,
	CO2	Express heterologous protein in bacterial system, and to perform protein-protein interaction by yeast two hybrid assay,
	CO3	Isolate genomic DNA, plasmid DNA, RNA and protein from bacteria and yeast,
	CO4	Perform restriction mapping of a plasmid, and
	CO5	Correlate genotype with phenotype
20RMSCBTP204: BIOINFORMATICS &BIOSTATISTICS	CO1	Describe contents and properties of most important bioinformatics databases,
	CO2	Perform text- and sequence-based searches and analyze and discuss results in light of molecular biological knowledge,
	CO3	Explain major steps in pairwise and multiple sequence alignment, explain principle and execute pairwise sequence alignment by dynamic programming

	CO4	Predict secondary and tertiary structures of protein sequences, and
	CO5	Use various statistical tools including Chi square test, t-test, F-test, DMR test, ANOVA: one-way and two- way, CRD, RBD and LSD
SEMESTER-III		
COURSE OUTCOMES		
20RMSCBTT301: GENETIC ENGINEERING	CO1	Explainthebasicprinciplesbehind molecularcloning
	CO2	Applytheknowledgeofmolecularcloninganddesigncloningstrategy
	CO3	Apply most appropriate recombinant-DNA techniquesandothercontemporarymoleculartechniquestounderstandthefunctionofgene
	CO4	Explain various contemporary techniques towards gene knockout
	CO5	Analyse published journal articles in the field of recombinant DNA technology
20RMSCBTT302: 'OMICS'BIOTECHNOLOGY	CO1	Overview of genome variation in population including technologies to detect these variation
	CO2	Understand how High-throughput DNA sequencing (HTS) can be used to identify disease causing genetic variants in monogenic diseases
	CO3	Understand how Genome-wide association study (GWAS) can detect disease associated markers in multifactorial diseases
	CO4	Understand how HTS technologies can be used to explore changes in gene expression
	CO5	Apply various emerging and advanced technologies of OMICs
20RMSCBTT303A: ANIMAL BIOTECHNOLOGY	CO1	Requirements for the basic cell cultures are known to the students,

	CO2	Students will learn to check and screen cell for cell viability and cytotoxicity and cell death parameters,
	CO3	Basic biology of stem cells, properties, and applications,
	CO4	Tissue engineering and its applications, and production of transgenic animals and applications
	CO5	Students will be able to learn biopharmaceuticals, cell-based vaccines and toxicity
20RMSCBTT 303B: BIOPROCESSENGINEERING &TECHNOLOGY	CO1	Appreciate relevance of microorganisms from industrial context,
	CO2	Carry out stoichiometric calculations and specifymodels of their growth, and give an account of design and operations of various fermenters,
	CO3	Present unit operations together with the fundamental principles for basic methods in production technique for bio-based products
	CO4	Calculate yield and production rates in a biological production process, and also interpret data, and calculate the need for oxygen and oxygen transfer,
	CO5	Critically analyze any bioprocess from market point of view, and to give an account of important microbial/enzymatic industrial processes in food and fuel industry
20RMSCBTT 304A: PLANT BIOTECHNOLOGY	CO1	Summarize the components of plant genetic engineering, recombinant DNA technology and its application in trait improvement in plants, importance of dwarfing genes and their contribution in green revolution, molecular evolution of important agri-traits
	CO2	Assess the applications of different methods of gene expression and design experiments for function characterization of plant genes and to identify those suitable for creating beneficial traits, and to conceptualize a GM project, choose utility genes, design vector, promoters and procedures for generating GM plants,

	CO3	Explain the rationale of selecting different gene manipulation approaches such as Gene silencing approaches PTGS, RNA interference, antisense technology, CREST, gene knockout approaches such as ZFN, TALEN and CRISPR, overexpression approaches such as constitutive, stage-specific orinducible in plant biotechnology, and explain the basics, methodology and applications of plant tissue culture, including Agrobacterium-mediated and direct methods of T-DNA transfer
	CO4	Describe what GM plant and products are in the market and pipeline, and their contributions to food security, sustainable environment and medicine, and to interpret the Biosafety and Bioethics concerns, risk assessment of genetically engineered crops and evaluate critically and objectively safety issues of GM plants and products
	CO5	Understand how to identify, isolate and clone genes conferring resistance to phytopathogens through map-based cloning, chromosome landing and gene tagging; functional approaches involving trapping promoters and activation tagging
20RMSCBTT304B: FOOD BIOTECHNOLOGY	CO1	Obtain a good understanding of food biotechnology and become qualified for a food biotechnologistposition in industry or in government
	CO2	Determine microorganisms and their products in foods, understand causes of food spoilage and predict the microorganisms that can spoil a given food, when prepared, processed and stored under given conditions
	CO3	Understand the causes of food-borne microbial diseases and predict pathogens that can grow in a givenfood, when prepared, processed and stored under given conditions
	CO4	Predict the necessary measures to control the spoilage and pathogenic microorganisms in food
	CO5	Learn milk processing and preparation of fermented dairy products.
20RMSCBTT305: EMERGING TECHNOLOGIES IN BIOTECHNOLOGY	CO1	Explain the mechanism of function of different microscopes and their applications to biological sciences
	CO2	Explain the basis of 1D and 2D NMR and to interpret NMR spectra of small molecules
	CO3	Discuss different techniques in mass spectrometry and their applications to biological sciences, and to conceptualize mathematical modelling a cellular process from molecular to cellular level,

	CO4	Explain technologies employed from single cell to multicellular systems using various approaches used in a laboratory to industrial scale using automated and robotic system for high throughput molecular and cellular analysis for research and development of biotechnology products,
	CO5	Discuss the process of recombination and gene editing from a natural defense to development of new technologies for engineering a gene function in vitro and in vivo
20RMSCBTP301: GENETIC ENGINEERING	CO1	Prepare antibiotic selection media and competent cells,
	CO2	Perform lambda phage DNA isolation and restriction mapping of DNA
	CO3	Gain hands-on experience in gene cloning, protein expression and purification,
	CO4	Perform gene expression in E. coli and PCR, RFLP, RAPD and DNA sequencing
	CO5	Begin a career in industry that engages in genetic engineering as well as in research laboratories conducting fundamental research.
20RMSCBTP302: 'OMICS'BIOTEC HNOLOGY	CO1	Describe the contents and properties of the most important bioinformatics databases
	CO2	Perform text- and sequence-based searches and analyze and discuss the results in light of molecular biological knowledge,
	CO3	Explain the major steps in pairwise and multiple sequence alignment, explain the principle and execute pairwise sequence alignment by dynamic programming,
	CO4	Predict the secondary and tertiary structures of protein sequences, and
	CO5	Begin a career in bioinformatics by using emerging technologies of OMICs.
20RMSCBTP303A: ANIMAL BIOTECHNOLOGY	CO1	How cell culture can be made,
	CO2	Different type of cell culture,
	CO3	The requirement of cell cultures,
	CO4	The application of cell culture, and
	CO5	Screen various unknown drugs

20RMSCBTP303B: BIOPROCESS ENGINEERING &TECHNOLOGY	CO1	Investigate, design and conduct experiments, analyze and interpret data, and apply the laboratory skills to solve complex bioprocess engineering problems,
	CO2	Apply skills and knowledge gained will be useful in solving problems typical of bio industries and research,
	CO3	Handle bioreactor, Fast Protein Liquid Chromatography, microplate reader etc.,
	CO4	Learn to scale up the culture from frozen sample to flask/ bioreactor, and to purify biological molecules from cultured broth through downstream processing, and
	CO5	Characterize purified protein through enzymatic reaction and spectroscopy.
20RMSCBTP304A: PLANT BIOTECHNOLOGY	CO1	Formulate plant tissue culture medium for growth and differentiation of plants,
	CO2	Perform the expression of totipotency in cultured cells, regeneration processes and the molecular view of somatic embryogenesis and organogenesis, and to prepare callus and cell suspension cultures, and examine the occurrence of somaclonal variation and in vitro mutant isolation for agronomic traits
	CO3	Examine the secondary metabolite production from tissue cultures and approaches used for enhancing their production
	CO4	Use different techniques employed in tissue culture and storage of plant germplasm, and to prepare mesophyll protoplasts and analyze their fusing using PEG,
	CO5	Demonstrate plant genomic DNA isolation and its quantification, and to examine the amplification of specific gene of interest from different genotypes of a species
20RMSCBTP 304B:FOOD BIOTECHNOLOGY	CO1	Isolate food borne bacteria (Campylobacter, Salmonella, Yersinia, E. coli) from various food sources using differential media
	CO2	Identify food borne isolates by biotechnological tools
	CO3	Isolate and characterize food borne viruses (rotavirus, hepatitis virus, polio virus, enterovirus) using biotechnological tools
	CO4	Detect and enumerate indicator and index microorganisms for food borne pathogens (total enterobacteria, total coliform & aerobic spore former), and

	CO5	Examine the spoilage-causing bacteria and fungi in food samples – fruits, vegetables, bread. This expertise is useful for the students to gain the access into food industries
Semester-IV		
COURSE OUTCOMES		
20RMSCBTT401A: ENVIRONMENTAL BIOTECHNOLOGY	CO1	Understand use of basic microbiological, molecular and analytical methods, which are extensively used in environmental biotechnology.
	CO2	Explore the microorganisms present in different environments and their estimations,
	CO3	Identify various recalcitrant pollutants in the environment and molecular approaches to environmental management, and application of biotechnology to assess and control pollution,
	CO4	Understand the biodegradation and bioremediation processes used in the clean-up of the environments, and
	CO5	Explain various methods for treatment and disposal of industrial effluents
20RMSCBTT401B: AQUACULTURE BIOTECHNOLOGY	CO1	Explain the fundamental principles of aquaculture biotechnology, and to identify the role of aquaculture biotechnology in society
	CO2	Explain the biology of fish and finfish, and environmental factors influencing their reproduction,
	CO3	Explore the advances of fish breeding and application of cross-breeding in aquaculture
	CO4	Understand the importance of coastal aquaculture, and design and construction of aquafarms, and
	CO5	Explain fish cell culture and other advanced techniques used in aquaculture management
20RMSCBTT402A: PHARMACEUTICAL BIOTECHNOLOGY	CO1	Understand biotechnological methods for developing pharmaceutical products,
	CO2	Explore biotechnology and microbiology products as medicines for human use
	CO3	Explain fundamental principles for testing therapeutics and their clinical trials
	CO4	Aware of drug targeting, principles and its importance in therapeutics, and
	CO5	Understand methods for delivery of biopharmaceuticals

20RMSCBTT402B: MEDICAL BIOTECHNOLOGY	CO1	Compare and contrast different microbial diseases, including properties of different types of patho-gens, and mechanisms of pathogenesis,
	CO2	Summarize role of vaccines and stem cell technology in diagnosis
	CO3	Understand various disorders and their diagnosis using monoclonal antibodies and bioinformatic and molecular tools,
	CO4	Explore the various gene therapy techniques using viral vectors and mutation repair, and
	CO5	Understand various cancers and tumor cells and their therapies.
20RMSCBTT403: RESEARCH METHODOLOGY AND SCIENTIFIC COMMUNICATION SKILLS IN BIOTECHNOLOGY	CO1	Understand history and methodologies of scientific research, applying these to recent published papers,
	CO2	Understand and practice scientific reading, writing and presentations,
	CO3	Appreciate scientific ethics through case studies,
	CO4	Develop scientific literature reading skills, and
	CO5	Develop formal presentation skills using PPT and effective scientific writing skills.
20RMSCBTT404A: EMERGING INFECTIOUS DISEASES	CO1	Describe the environmental, ecological, societal, microbial and host factors associated with the emergence of infectious diseases in humans
	CO2	Analyse the ecological and biological factors that led to the emergence and spread of emerging and reemerging infectious diseases and critically evaluate the options available for control
	CO3	Review the strategies and challenges for pathogen eradication and the concept of biosecurity
	CO4	Identify the agents of emerging diseases and their control and prevention methods, and to explain the problems associated with antibiotic resistance, bioterrorism and biodefence, and
	CO5	Critically evaluate the concept of ―One Health‖ that unites human and veterinary medicine in control of zoonotic and emerging infections

20RMSCBT404B: HERBAL&TISSUE CULTURE TECHNOLOGY	CO1	Learn concepts and techniques in plant tissue culture
	CO2	Learn concepts of production of secondary metabolites and its enhancement,
	CO3	Explain in vitro culture methods and applications,
	CO4	Understand how DNA can be delivered into the plant cells, and
	CO5	Design gene construct and apply various methods to produce transgenic plants
20RMSCBTT404C: MOLECULAR DIAGNOSTICS	CO1	Have basic understanding of the biotechnology involved in probiotics, prebiotics and feed,
	CO2	Apply this knowledge for future research, and to explain various methods for analysis of intestinal microflora
	CO3	Identify physical, chemical and biological effects of feed processing,
	CO4	Apply probiotics for humans, farm animals and poultry, and
	CO5	Understand health hazards due to residual pesticides in feeds.
20RMSCBTT404D: PROBIOTICS, PREBIOTICS & FEEDTECHNOLOGY	CO1	Have basic understanding of the biotechnology involved in probiotics,prebiotics and feed,.
	CO2	Applythisknowledgeforfutureresearch,
	CO3	Explainvariousmethodsforanalysisofintestinalmicroflora ,
	CO4	Identifyphysical,chemicalandbiologicaleffectsoffeedprocessing,and
	CO5	Applyprobioticsforhumans,farmanimalsandpoultry,and tounderstandhealthhazardsduetoresidualpesticidesinfeeds
20RMSCBTT404E: MOLECULAR PHYLOGENY &NUTRACEUTICALS OF MARINESOURCES	CO1	Know about the marine ecosystem and understand the ocean management practices (national and international),
	CO2	Understand the applications of different biotechnological techniques and process in exploring the potential marine organism utilizations,

	CO3	Gain the knowledge in role of genetics in fisheries research and use of genetic tools in aquaculture industry
	CO4	Understand the basic knowledge on how to isolate the bioactive compounds from marine origin and use of those compounds in various fields (biomedical, chemical industry, food industry, cosmetics, etc.). One can apply his own ideas in future research to obtain noble outcome (for the benefit to mankind and to protect our environment), and
	CO5	Finally, the student may get an opportunity to do his/her research in marine sciences, join as a researcher in research institutes and fetch a job in aquaculture sector, oceanography information centers, pharmacy, etc
20RMSCBTT404F: **TRANSLATIONAL RESEARCH IN ANIMAL SCIENCES**	CO1	Knowledge: Students will be able to understand the potential of different model systems (in vivo and in vitro) in translational research
	CO2	Career opportunities: Successful completion of this course will give ample opportunity for students to enter different fields such as pharma companies, clinical labs, biomedical engineers and computational biologists and also research programs,
	CO3	Out-of box thinking abilities: Students will be encouraged to design research problem for their project work (in this area or area of their choice of interest). This stimulates out-of-box thinking abilities,
	CO4	Scientific temperament: Students will be able to understand three fundamental aspects of translational research: what to seek; how to seek; and why to seek?, and
	CO5	Innovative thinking: Promote innovative thinking among the students wherein they translate their ideas into commercially relevant and societal applicability.
20RMSCBTT404G: MOLECULAR DRUG DISCOVERY &DEVELOPMENT	CO1	Understand the concept of drug discovery in terms of target identification, target validation, assay development, drug screening and lead identification,
	CO2	Conceptualize the process of lead optimization and the role of efficacy and toxicity in-vitro and in-vivo,
	CO3	Understand the process of further development of a candidate drug for its stabilization, pharmacology and pre-clinical assessment
	CO4	Familiarize regulatory guidelines from IND application to clinical development.

	CO5	Orienting towards current practices of pharmaceutical industry for drug development.
20RMSCBTP401A: ENVIRONMENTAL BIOTECHNOLOGY	CO1	Estimatedifferentmicroorganismsfromvarioussources, and to study of different enzyme activities insoil,
	CO2	Observeroot nodulesinvariouslegumes,
	CO3	AnalysethepesticidaleffectsonmicrofloraObserveammonification and nitrification levels in soil samples,and
	CO4	Observeammonificationandnitrificationlevelsinsoilsamples,and
	CO5	Studyofcoliforms insewagesamples
20RMSCBTP401B: AQUA CULTURE BIOTECHNOLOGY	CO1	Study of testis and ovary in fish,
	CO2	Locate x and y organs in shrimp,
	CO3	Observe maturity stages of ovary in crustaceans and finfish,
	CO4	Identify planktons, and
	CO5	Induce breeding of carps.
20RMSCBTP402A: PHARMACEUTICALBIOTECHNOLOGY	CO1	Develop pharmaceutical products using biotechnological methods
	CO2	Identify biotechnology and microbiology products as medicines for human use
	CO3	Test efficacy of therapeutics and biological drugs
	CO4	Apply drug targeting methods for various pharmaceuticals, and
	CO5	Perform various experiments on the production Understand methods for delivery of biopharmaceuticals
20RMSCBTP402B: MEDICAL BIOTECHNOLOGY	CO1	Prepare selective media used for bacterial cultures and their preservation
	CO2	Estimate the normal microflora of throat, skin, and sputum using different media,
	CO3	Examine biological samples for microbial infections,
	CO4	Observe fungal and parasite species under microscope, and

	CO5	Use Widal and VDRL tests and detect virus using ELISA.
20RMSCBTPSEA1: EDUCATIONAL TOUR	CO1	Identify the inputs and outputs for different operations and processes performed at the workplace,
	CO2	Know the new technologies and instrumentation being used in the industry,
	CO3	Observe theoretical and practical differences in execution of experimental procedures
	CO4	Explain current trends in premier institutes and established industries, and to find the next path in choosing right option and building career in life, and
	CO5	Write a detailed report on the educational tour
20RMSCBTPSEA2: GRAND SEMINAR IN ADVANCES OF BIOTECHNOLOGY	CO1	Select a seminar topic of their interest in the advances of Biotechnology,
	CO2	Prepare PPT on the topic selected for presentation,
	CO3	Present the selected topic effectively and fearlessly,
	CO4	Develop skills in collecting useful information related to the topic and effective communication skills, and
	CO5	Answer the questions posed by the classmates and teachers.
20RMSCBTPSEA3: CRITICAL ANALYSIS OF LANDMARK DISCOVERIES	CO1	Select a classical paper on a milestone discovery and find how it was made,
	CO2	Able to analyse critically about thought and necessity behind the work done
	CO3	Understand classical materials and methods chosen for the discovery made,
	CO4	Explain the outcome of the work and its importance and place as a milestone discovery,
	CO5	Able to understand classical papers and discuss with classmates and mentor in the journal club, and write a mini-review on milestone discoveries.
20RMSCBTPSEA4: POSTER PRESENTATION	CO1	Formulate a scientific question.
	CO2	Present a scientific approach to solve the problem
	CO3	Interpret, discuss and communicate scientific results in written form

	CO4	Gain experience in writing a scientific proposal.
	CO5	Learn how to present and explain their research findings to the audience effectively.
20RMSCBTPSEA5: DISSERTATION	CO1	In-depth knowledge of the chosen area of research
	CO2	Capability to critically and systematically integrate knowledge to identify issues that must be addressed within the framework of a specific thesis.
	CO3	Competence in research design and planning
	CO4	Capability to create, analyse and critically evaluate different technical solutions
	CO5	Ability to conduct research independently.
	CO6	Ability to perform analytical techniques/experimental methods
	CO7	Project management skills
	CO8	Report writing skills
	CO9	Problem solving skills.
	CO10	Communication and interpersonal skills.

DEPARTMENT OF FOODTECHNOLOGY

SEMESTER-I		
COURSE OUTCOMES		
20RMSCFT101:FOOD CHEMISTRY	CO1	Able to relate the metabolic pathways of macro nutrients like carbohyadrates, proteins and lipids in the metabolic function in the body
	CO2	Will be understood in the macro and micro nutrient sources and functions.
	CO3	Can understand the water chemistry, known original structure and different types of emulsions and foams
	CO4	Can analyze the factors affecting the food enzymes during the food processing
20RMSCFT102:FUND AMENTALS OF FOOD SCIENCE	CO1	Knowledge on value of cereals come to understand the what are the types of cereals and millets and their nutritional value
	CO2	Students can summerized about pulses and legumes and oil seeds
	CO3	Student get the knowledge advanced processing techniques of milk, meat, fish and egg and poultry
	CO4	Student can determine the nutritional values and changes during cooking of fruits and vegetables
20RMSCFT103:FOOD MICROBIOLOGY	CO1	Students can recall the important genera of microorganisms associated with food and their characteristics.
	CO2	Explain the role of microbes in fermentation, spoilage and food borne diseases.

	CO3	Student analyze the basic microscopic techniques involved in food science and technology.
	CO4	Student come to know importance of food spoilage, prevention of food spoilage and intoxication of different foods.
20RMSCFT104:HUMAN NUTRITION	CO1	Understanding of the basic processes involved in the preparation, transformation and conservation of foods of both animal and vegetable origin.(understandingk2
	CO2	Make use of the microbiology, parasitology and toxicology of food in Examining and evaluating the relationship between food and nutrition in health and/or illness.(k3)
	CO3	Student applying acquired knowledge in assessment of Dietary allowances, BMR, SDA(applyingk3).
	CO4	Student can analyze the physiology, pathophysiology, nutrition and food to individual or group diet planning and counselling, both in healthy (dietetics) and ill (diet therapy) clients, at every stage of life.(K4)
20RMSCFT101P: FOOD CHEMISTRY (PRACTICAL)	CO1	Student can develop knowledge and skills for estimation of important compositions of food such as protein, carbohydrates, fats etc.
	CO2	Student can determine the moisture , proximate components in given food samples.
20RMSCFT102P: FOOD SCIENCE (PRACTICAL)	CO1	Student can formulate different types of plant based food preparations.
	CO2	Student can interpret theoretical knowledge by visiting the food industries with clean and good observations.
20RMSCFT103P:FOOD MICROBIOLOGY (PRACTICAL)	CO1	Students can examine the microorganisms by using the compound microscope.
	CO2	Student can analyze different types of staining techniques Like Gram Staining, Negative Staining).
	CO3	Students can estimate the microbial population in water samples and food samples
20RMSCFT104P:HUMAN NUTRITION (PRACTICAL)	CO1	Student can formulate the different types of balanced Diets for different aged and diseased people.
	CO2	Student can evaluate the nutritive value of different recipes and diets – Iron rich, Calcium rich and Protein rich recipe
	CO3	Student can interpret theoretical knowledge by visiting the food industries like ICDS and NRC (Nutritional Rehabilitation Centre) Programs, Visit to food industries /Research Institutes/Labs (CFTRI, DFRL, NIFPT, NIN etc.,), with clean and good observations.
SEMESTER-II		
COURSE OUTCOMES		
20RMSCFT201:TECHNIQUES IN FOODANALYSIS	CO1	Explain the the Basic Instrumentation working Principle and Instrumentation and applications in food industry
	CO2	Define the concepts of the Spectroscopy and Microscopy, particle size analysis, image analysis etc
	CO3	Make use of chromatographic techniques in food industries.

	CO4	Explain about the different separation techniques in food science
20RMSCFT202:FOOD BIOTECHNOLOGY	CO1	Students will be familiar with biotechnological tools used in food industries
	CO2	Students know the applications of ferementation techniques in different types of food industries.
	CO3	Students can distinguish between the GM and Normal food commoditives
	CO4	Student can develop the Mushroom cultivation and Spirulina and Healthy Foods on their hand on experience by getting knowledge
20RMSCFT203:FOODPROCESSING AND PRESERVATIO NTECHNOLOG Y	CO1	To can make use of basic Methods of food Processing tools
	CO2	Students came to know how to preserve the Food
	CO3	Understand the Preservation using high and low temperatures Drying and Dehydration and Food Irradiation
	CO4	Student can develop the new preservation methods for future food processing
20RMSCFT204:FOOD ENGINEERING	CO1	Students can recall the Unit dimensions and Conversions: Unit operations, design, and food processing equipment
	CO2	Student can illustrate thermal properties of food materials
	CO3	Student interpret refrigeration and freezing techniques in food preservation
	CO4	Can evaluate the skills for determination of viscosity of various fluids
20RMSCFT201P:TECH NIQUES IN FOOD ANALYSIS(PRACTICALS)	CO1	Analzed class 1 class 2 preservatives and heavy metals by using different analytical techniques
	CO2	Adapat new experimental techniques in plant tissue , microbial cultures.
20RMSCFT202P:FOOD BIOTECHNOLOGY (PRACTICALS)	CO1	Hands on experience in Methods of plant culture Preparation of starter culture.
	CO2	Designing and cultivation of mushroom and Spirulina and designing of enzyme production methods. Preparation of beer, wine, tempeh, youghurt, vinegar, Production of amylase, Immobilization of enzymes.
	CO3	Can be able to estimate proximate constituents
20RMSCFT203P:FOOD PROCESSING AND PRESERVATION TECHNOLOGY (PRACTICALS)	CO1	Apply the techniques for preserve the food by traditional methods
	CO2	Able to understand the basic unit operations

20RMSCFT204P: FOOD ENGINEERING (PRACTICALS)	CO1	Can improve the maintains of unit operations and cleaning of machineries
	CO2	Canimprovethemaintainsof unitoperationsandcleaningofmachineries
SEMESTER-III		
COURSE OUTCOMES		
20RMSCFT301:FOOD PROCESSING AND PRESERVATION TECHNOLOGY	CO1	Students can understand the different processing technics of grains and millets.
	CO2	Student interpret the knowledge to develop milling processing techniques of pulses
	CO3	Can develop the animal fat processing techniques with value addition
	CO4	The student can discuss the new post harvesting technology developing aspects
20RMSCFT302:BAKERY AND CONFECTIONARY TECHNOOGY	CO1	Students can understand and gain knowledge of different properties of the ingredients and processes of bakery products
	CO2	Students will have the ability to understand the working of various machineries used for the development of bakery products (K2)
	CO3	Students will have the fundamental knowledge of confectionary products
	CO4	Students will have the knowledge of different functional properties of the ingredients and processes
20RMSCFT303:CEREAL GRAINS, LEGUMES AND OIL SEED TECHNOLOGY	CO1	Understand the different processing techniques of grains and millets.
	CO2	Interpret the knowledge to develop milling processing techniques of pulses
	CO3	Develop the animal fat processing techniques with value addition
	CO4	Discuss the new post harvesting technology developing aspects
20RMSCFT304:MEAT, POULTRYAND SEAFOOD TECHNOLOGY	CO1	Understand about current scenario of meat and poultry industry in India
	CO2	Develop the skills involved in Meat poultry and Sea food
	CO3	Understand the various scientific changes that occurs after meat and poultry slaughtering
	CO4	Improve the byproduct utilization of meat, poultry and fish processing industry along with the restructured meat products.
20RMSCFT301P: DAIRY TECHNOLOGY (PRACTICAL)	CO1	Can analyze the raw milk and market milk (K5)
	CO2	Student can prepare dairy based and non dairy based milk biproducts (K5).
	CO3	Students can n visit the dairy industries to near and interpret previous practical and theoretical knowledge

20RMSCFT302P: BAKERY AND CONFECTIONAR Y TECHNOLOGY (PRACTICALS)	CO1	Student will be able to know the handling, operation of different types of bakery and confectionary equipment(
	CO2	Develop the different types of doughs
	CO3	Can visit the different bakery and confectionary industries to near and interpret previous practical and theoretical knowledge
20RMSCFT303P: CEREAL GRAINS, LEGUMES, OIL SEED TECHNOLOGY (PRACTICALS)	CO1	Student will conduct the different markets and collecting the samples for laboratory analysis (K4)
	CO2	Student can understand the flour milling, popping technologies
	CO3	visit the different dhal mills, flour mills, millet mills to know the milling techniques near and interpret previous practical and theoretical knowledge
20RMSCFT304P:MEAT, POULTRY AND SEA FOOD TECHNOLOGY (PRACTICALS)	CO1	Student will able to understand the grading of meat animals, poultry birds and their shelf lives.
	CO2	visit the different meat slaughtering houses toknow the milling slaughtering techniques near and interpret previous practical and theoretical knowledge
SEMESTER-IV		
COURSE OUTCOMES		
20RMSCFT401:FOOD PRODUCT DEVELOPMENT AND MARKETING	CO1	Will able to understand the product development and international trade for the food sector
	CO2	Will gain the ability to understand and the intellectual property rights and their value in
	CO3	Can develop the nutritional and healthy needs
	CO4	Economy Student can evaluate the results and analyzing the entrepreneurship, plant location, investment financing
20RMSCFT402:FOOD SAFETY STANDARDS AND QUALITY CONTROL	CO1	Interpret the basic concept of food safety
	CO2	Demonstrate the food safety regulations in India.
	CO3	Illustrate the various food additives and adulterants.
	CO4	Analysis of manifestation of food toxic effects.
20RMSCFT403: RESEARCH METHODOLOGY, BIOSTATISTICS AND BIOINFORMATICS	CO1	Understand the Principles of Scientific Research and different steps involved in doing researc
	CO2	Know how to design research and frame up different steps in design.
	CO3	Appraise the application of sampling through statistics.

	CO4	Build up the method for data collection and analyse the data.
20RMSCFT404:FOOD PACKAGING	CO1	Discuss the various food packaging processes
	CO2	Analyze the recent advancement in food packaging
	CO3	Student will able to get experience on testing food packaging material to assure quality of foods
	CO4	Understand different types of food packaging materials
20RMSCFT401P:FOOD PRODUCT DEVELOPMENT, MARKETING & FOOD SAFETY STANDARDS AND QUALITY CONTROL (PRACTICAL)	CO1	Students will know how to Present seminars
	CO2	Student will able to understand the database analysis
20RMSCFT402P: RESEARCH METHODOLOGY, BIOSTATISTICS, BIOINFORMATICS AND FOOD PACKAGING TECHNOLOGY (PRACTICAL)	CO1	Students will get an idea about research design and research proposal along with basic application oriented concepts in biostatistics and bioinformatics
	CO2	PG Students will be able to understand qualitative and quantitative measures of different packaging materials, techniques and their applications in modern food packaging and preservation system.
20RMSCFT403P:PROJECT CUM IMPALAT TRAINING	CO1	Able to plan and execute experiments or undertake literature surveys independently
	CO2	Develop the skills to design experiments for solving problems in food research

DEPARTMENTOFMARINEBIOLOGY

SEMESTER-I		
COURSE	**OUTCOMES**	
20RMAB101: INTRODUCTION TO MARINE BIOLOGY AND ECOLOGY	CO1	Understand the basics and structure of marine ecosystem and importance of marine environment.
	CO2	CO2: Identify and Classify the Phytoplankton and understand the Significance of the Primary Productivity in the marine environment.
	CO3	CO3: Identify and Classify the Zooplankton and understand the Relationship between Phyto and zooplankton.
	CO4	CO4: analyze the benthos and obtain the knowledge of deep-sea life and their adaptations, boring and fouling organisms.
20RMAB102: BIOLOGICAL OCEANOGRAPHY	CO1	Understand the mechanism, significance of upwelling and its role in Productivity of the oceans. (k2)

	CO2	Recognize the flora and Fauna of estuaries and their adaptations.(k1)
	CO3	Know environmentalconditionsonestuarineorganismsAdaptationsdevelopedby estuarine organisms to survive in adverse conditions.(K1)
	CO4	Understand morphologyanddistributionoforganismsinEstuarineecosystemsandtheir adaptive mechanisms (K2)
20RMAB103: MARINE INVERTEBRATES	CO1	Understand the general principles androle of classification in identifying the organisms.(K2)
	CO2	: Identify the development and evolution of Minor Phyla organisms.(K3)
	CO3	Identify the larval stages of penaeids and Brachyurans.(K3)
	CO4	Identify the Molluscs and echinoderms, larval forms of the Echinoderms and their evolutionary significance.(K3)
20RMAB104:MARINE VERTEBRATES	CO1	Obtain the Knowledge on Origin of chordates. Identify and classify the Chordates. (k3)
	CO2	Identify and classify the bony fishes and understand the evolutionand adaptive radiation of elasmobranchs and bony fishes.(K3&K2)
	CO3	Identifyand classify the marine reptiles, birds and mammalsUnderstand the adaptationsof Birds and significance of marine birds.(K3&K2)
	CO4	Identify and classify the marine mammals. obtain the knowledge onadaptations of mammals in the sea (K3&K2)
20RMAB105:MARINE BIOLOGY AND ECOLOGY	CO1	Identify and Classify different types of Phytoplankton and Zooplankton present in water samples (K2&K3)
	CO2	Assess the primary productivity of water samples (K5)
	CO3	Find sandy shore and estuarine flora and fauna(K1)
	CO4	Demonstrate the estimation of Dissolved oxygen and Explain significance of oxygen in water bodies (K2)
	CO5	Examine the sandy shore environment and understand the importance of sandy shore (K4)
20RMAB106: BIOLOGICAL OCEANOGRAPHY	CO1	Determine the salinity content of sea water samples and analyze salinity variations (K5)
	CO2	Identify and classify the seaweeds and mangrove plants (K2&K3)
	CO3	Estimate the Chlorophyll content of Different water samples to understand the availability of fishery resources(K5)
	CO4	Illustrate rocky shore flora nad fauna (K2)
	CO5	Understand the importance of mangroves to protect the Coastal zone (K2)
20RMAB107: MARINE INVERTEBRATES	CO1	Identify different types of marine Invertebrates (K3)
	CO2	Examinethe appendages of shrimp (K4)
	CO3	Dissect and demonstrate digestive system of Prawn (K2)

	CO4	Dissect and Explain nervous system of prawn (K2)
	CO5	Determine and Isolate x organ in shrimp and demonstrate Radula of Pila
20RMAB107: MARINE INVERTEBRATES	CO1	Identify and classify the different vertebrate species (K2&K3)
	CO2	Demonstrate the digestive, reproductive systems in the fish species(K2)
	CO3	Classify and identify the different scales in the fishes.(K2&K3)
	CO4	Understand about the different tails and fins in the fish species.(K2)
	CO5	Find out the moments and identification of migratory birds at Pulicot and Nelapattu.(K5)
SEMESTER-II		
COURSE OUTCOMES		
20RMAB201: PHYSICAL & CHEMICAL OCEANOGRAPHY	CO1	Understand larger picture of a coupled ocean-atmosphere(K2)
	CO2	Identifythe different processInvolved in the controlling the marine ecosystem. (K3)
	CO3	Provide a comprehensive understanding of the properties of sea water (K2)
	CO4	Understand the interactionsofthesubstances in the marine environment.(K2)
	CO5	Learn about the usage and operation techniques of oceanographic instruments.(K4)
20RMAB202: FISHERY SCIENCE	CO1	Explainthemorphology,Classificationandidentify the different stages in the Life history of fishes.(K2)
	CO2	Identify the different systems, isolate the organs and understand their functions in Fishes.(K3)
	CO3	Obtain the Knowledge on population dynamics and calculatethe length weight relationship in fishes.(K4)
	CO4	Identify the different types of boats and gears and their role in fish harvesting, maintenance of fishing boats and control of marine fouling.(K3)
20RMAB203:PHYSIOLOGY AND BIOCHEMISTRY	CO1	Know the Digestion and absorption mechanisms andtheirsignificance.structureandfunctionsofrespiratory organsandtransportofrespiratorygases.(K3)
	CO2	IdentifyandIsolatethedifferentendocrineglands.Function sofhormones

	CO3	Knowing the Osmoregulatory mechanism in fishes.(K2)
	CO4	Understanding the different types of bimolecular andtheirroleinmetabolismandclassificationandmechanismofenzymeaction.(K2)
	CO5	findthemetabolism of carbohydrates, aminoacids and fattyacids.(K4)
20RMAB204: MICROBIOLOGY AND IMMUNOLOGY	CO1	Learn aboutthe basic principlesof Microscopy andcomparativecharacteristicsofmicroorganismslikebacteria,viruses,fungi,algae.(K2)
	CO2	Understand some of the key fundamentals of Immunology and advances in Vaccine technology in coordinating with contemporary pandemic diseases like COVID-19 (K2)
	CO3	They will able to analyze and evaluate the efficacy ofsomeimportantmethodsinMicrobiologyandtheirapplications inidentification ofbacteria.(K4&K5)
	CO4	Students will get awareness on the fundamental aspectsof immune system, cell involved and also understandabouthowtheimmunesystemhasevolvedamongdifferentphyla.(K2)
20RMAB205: PHYSICAL& CHEMICAL OCEANOGRAPHY	CO1	Learn about the ocean topography and environment(K2)
	CO2	Understand the usage and identification of different oceanographic instruments.(K2)
	CO3	Analyze the different physico-chemical parameters of the sea water.(K4)
	CO4	Evaluating the different properties of sediment soils samples of marine Environment.(K5)
	CO5	Understand the local marine and coastal environments.(K2)
20RMAB206:FISHERY SCIENCE	CO1	Identify and classify the fishes and prawns (K2&K3)
	CO2	Determine the age , gonadosomatic index and fecundity of fishes(K5)
	CO3	Explain external morphology of finfishes, shellfishes and Analyze morphometric and meristic data(K20
	CO4	Illustrate types scales and fins in fishes(K2)
	CO5	Assess the gut content analyses of finfish and shell fishes (K4)

20RMAB207: PHYSIOLOGY AND BIOCHEMISTRY	CO1	Understand the relationship between oxygen consumption and metabolic rate in fishes.(K2)
	CO2	Explain about the effect of salinity on heamolyph chloride content.(K2)
	CO3	Analyse the effect of eyestalk ablation on oxygen consumption.(K4)
	CO4	Learn eye stalk ablation technique, estimate the activity of enzymes.(K5)
	CO5	Explain about the isolation of pituitary gland in fish.(K2&K4)
	CO6	Understand about the proximate composition of feeds.(K2&K4)
20RMAB208: MICROBIOLOGY AND IMMUNOLOGY	CO1	Know the preparation different media for microbiological analysis(K4)
	CO2	Learn about different microbiological procedures for analysis.(K4)
	CO3	Understand the morphology of different microbial species(K2)
	CO4	Explain about the different cell count in the blood samples of fish.(K2)
	CO5	Understand the various immunological tests using the detection of the diseases(K2)
SEMESTER-III		
COURSE OUTCOMES		
20RMAB301: COASTAL AQUACULTURE	CO1	Know the technology o f various culture practices andintensive management practices of shrimp *P.monodon*and*L.vannamei*.(K1)
	CO2	Understand the culture methods and seed productiontechniquesofimportantcultivableshrimpspecies.(K2)

	CO3	Understand the methods of construction of aqua farms and hatcheries.(K2)
	CO4	Learn about various diseases, diagnosis and preventive/treatment measures of diseases in coastal aquaculture.(K3)
20RMAB302: POLLUTION AND TOXICOLOGY	CO1	Assess the toxicity levels in various aquatic environments and can measure the lethal and sublethal concentrations of toxicants.(K5)
	CO2	Analyse the ecological significance of eutrophication and allied issues and also relate it to water pollution.(K4)
	CO3	Evaluate the analytical approaches and ecological impacts of pesticides and heavy metal pollutants and pollution.(K5)
	CO4	Find out the causes,composition and impacts of oil, thermal and radio active pollutions in correlation with marine biota.(K1)
20RMAB303: FISH NUTRITION AND FEED TECHNOLOGY	CO1	Find the nutritional requirement of shellfish ,finfish and learn live feed culture. (K1)
	CO2	Compare the feeding habits of prawns, shrimp, fish and crab.(K2)
	CO3	Learn to test the quality of feed and understand feed processing method.(K2)
	CO4	Demonstrate feeding schedule and checktray monitoring.(K2)
20RMAB304:FISH PROCESSING TECHNOLOGY	CO1	Describe the significance of major nutrients (Proteins, Fats, Carbohydrates, Moisture,) and Minor nutrients (Minerals, Vitamins, Fish oils, and Ash) and Nutritional value of preserved and processed fish.(K5)
	CO2	Identify and recognize the difference between fresh fish and spoiled fish and also learned causative agents of fish spoilage (intrinsic and extrinsic factors).(K4)
	CO3	Describe canning, curing, freezing, different types of fishpreservatives, and problems during fish preservation.(K5)
	CO4	Classify the fish byproducts with reference to liver oil fish manure, fish meal, etc and their uses for a human being (pharmacy, hormones, vitamins, and cosmetics, etc) (K4)
20RMAB305: COASTAL AND MARINE BIODIVERSITY	CO1	Understand the Marine Biodiversit Conservation and significance.(K2)

	CO2	Understand and Identify threats to Marine Biodiversity.(K2&K3)
	CO3	Know the Biodiversity conservation strategies, policesand Legislations involved in Biodiversity conservation.(K1)
	CO4	Explain the marine conservation strategies.(K2)
20RMAB306: AQUA CULTURE	CO1	Identify the cultivable and Ornamental fish/prawn/shrimp species.(K3)
	CO2	Design the shrimp/fishculturepondlayout,conductseedqualitytest.(K6)
	CO3	Understandthefeedmanagementandcalculate feedration.(K2)
	CO4	Identifyanddiagnosebacterial,Fungalandprotozoandiseasesoffish/shrimp.(K3)
20RMAB307: COASTAL AQUACULTURE	CO1	Explainabout the digestive andreproductive systemsfish/shrimp.(K2)
	CO2	Identifythecommerciallyimportantfish/shrimp/prawnspecies.(K3)
	CO3	Identify and classify the different live feedorganisms.(K3)
	CO4	Understandtheseedqualityratinginshrimp/fishseed.(K2)
	CO5	Identifythedifferent diseasesinfish/shrimp.(K3)
20RMAB308:POLLUTION AND TOXICOLOGY	CO1	Analyze the Lethal concentrations and dosage values (K4)
	CO2	Calculate the biological oxygen demand and chemical oxygen demand (K5)
	CO3	Acquire the Knowledge related to heavy metal/pesticides residues in marine biota (K3).
	CO4	Understand about the antibiotics residues in marine biota (K3)
	CO5	Know the evaluation process of process of pollution status in local EEZ areas (K1).
20RMAB309: FISH NUTRITION AND FEED TECHNOLOGY	CO1	Analyze proximate analyses of shrimp and fish feed (K4)

	CO2	Identify live feed organisms and understand their significance in aquaculture (K3)
	CO3	Know about the formulate artificial feeds for shrimp and fish.(K1)
	CO4	Assess feed quality and recognize different types of feeds. (K5)
	CO5	Understand the feed mill design and quality control protocol.(K2)
20RMAB310:FISH PROCESSING TECHNOLOGY	CO1	Assess the fish/ shrimp freshness in the processing plants/markets (K5)
	CO2	Acquire knowledge related to isolation of bacteria in seafoods.(K3)
	CO3	Understand the values of proteins, carbohydrates and lipid in fish/shrimp samples.(K2)
	CO4	Explain about the different sections in sea food processing plant(K2)
	CO5	Know the handling procedures of various equipment in the MPEDA/NASCA lab.(K1)
20RMAB311:COASTAL AND MARINE BIODIVERSITY	CO1	Identify and classify the different bioactive compounds (K3 & K3)
	CO2	Know the different marine floral faunal communities (K1)
	CO3	Understand about the different marine biodiversity hotspots.(K2)
	CO4	Identify and classify the different types of locally available mangroves.(K2 & K3)
SEMESTER-IV		
COURSE OUTCOMES		
20RMAB401: MARINE BIOTECHNOLOGY	CO1	Evaluate the efficacy of different tools and techniques and their effective implementation as genetic engineering tools.(K5)
	CO2	Analyze the effectiveness of different breeding techniques in improvement of disease resistance among fishes. (K4)
	CO3	Compare and contract the biophysical techniques useful in isolation purification and characterization studies of biomolecules.(K5)

	CO4	Get a conclusion on the importance of marine natural products in human health and pharmaceutical industry. (K5)
20RMAB402: RESEARCH METHODOLOGY, BIOINFORMATICS AND BIOSTATISTICS	CO1	Understand the research problem selection, design of the research work and its significance. (K2)
	CO2	Know the collection and analysis of biological data through statistical tools.(K1)
	CO3	Understand about the different bioinformatic tools for analysis of data.(K2&K4)
	CO4	Understand the fundamental concepts of biostatistics. (K2)
20RMAB403: OCEAN MANAGEMENT AND REMOTE SENSING	CO1	Understand the application of remote sensing in the assessment of marine flora and ocean colour monitoring.(K2 &K3)
	CO2	Know the remote sensing technology for identification of fishing grounds in marine environment.(K1)
	CO3	Define about the law of the sea and national and international organizations in ocean management.(K5)
	CO4	Understand the prevalent national and global management practices in disaster management.(k2)
20RMSCMAB404: COASTAL DISASTER MANAGEMENT	CO1	Understand the Disaster cycle and risk vulnerability (K2)
	CO2	Understand the different types of natural and hydrological hazards(K2)
	CO3	Know the principles of Disaster relief and recovery and participate in disaster relief Measures(K1)
	CO4	Understand early warnings system for disaster and disseminate the information to stack holders.(K2)

20RMSCMAB405: ORNAMENTAL FISH CULTURE (EXTERNAL ELECTIVE)	CO1	Understand the culture technology of the ornamental fishes(K2)
	CO2	Know the collection and transportation of live ornamental fishes.(K1)
	CO3	Handle and setting and maintenance of Aquarium.(K3)
	CO4	Understand the nutritional requirement and health management of different ornamental fishes.(K2)
20RMSCMAB406: MARINE BIOTECHNOLOGY	CO1	Quatitatively measure the amounts of DNA, RNA biomolecules in theunknow samples by interpolating with the standards. (K5)
	CO2	Identify partially purity the DNA& RNA and Protein samples using agarose gel electrophoresis and different types of blotting techniques.(K4)
	CO3	Observe the mitotic and meiotic chromosomes along with poidy variations in different tissues.(K5)
	CO4	Get real time exposure to various sophisticated instrumentation required and related to marine biotechnology after visiting the renowedlaboratories of institutions.(K5)
20RMSCMAB407: RESEARCH METHODOLOGY, BIOINFORMATICS AND BIOSTATISTICS	CO1	Analyze the methods of sampling and collection of data (K4)
	CO2	Understand the fundamental concepts of biostatistics (K2)
	CO3	Know the different bioinformatic tools for analysis (K1)
	CO4	Write and prepare the research proposal (K3)
20RMSCMAB408: OCEAN MANAGEMENT AND REMOTE SENSING	CO1	Identify and classify the locally available macroalgae, sea grasses andmangroves.(K2 &K3)

	CO2	Analyze and identify the sediment samples of marine environment (K3).
	CO3	Know the remote sensing mapping of marine resources.(K1)
	CO4	Explain about the GIS application in flood hazard.(K2)
	CO5	Understand the beach structure and profile of local coastal areas.(K2)
20RMSCMAB409: COASTAL DISASTER MANAGEMENT	CO1	Understand the risk assessment for hazards in coastal areas.(K2)
	CO2	Know the first aid and vulnerability assessment practices.(K1)
	CO3	Describe about the marine polluting agents and disaster cycle.(K5)
	CO4	Understand about the observation of meteorological data collection nearthe coast.(K2)
	CO5	Know the impact of the deforestation of mangroves in near coasts.(K1)
20RMSCMAB410: INTERNSHIP/PROJECT REPORT	CO1	The student will be able to plan and execute experiments or undertakeliterature surveys independently, (K5)
	CO2	The student will develop the skills to design experiments for solvingproblems in food research. (K6)
	CO3	The student will be exposed to the diverse setting in aquaculture relatedindustries.(K5)

	CO4	Acquire the knowledge related to aquaculture industry (K3).

DEPARTMENT OF MICROBIOLOGY

SEMESTER - I		
COURSE OUTCOMES		
20RMSCMBT101: GENERAL MICROBIOLOGY	CO1	Explain the historical discoveries made in the field of microbiology and the evolution of microbiology including virology,
	CO2	Apply the knowledge of techniques for isolation and cultivation of microorganisms (algae, fungi, bacteria and virus)
	CO3	Explain the diversity of bacteria, classification and identification with knowledge of general characters of various bacterial phyla,
	CO4	Discuss the insights into the cellular composition of bacteria and viruses, and
	CO5	Give the overview of virus replication strategies, sub-genomic RNAs, Virusoids, Viroids and Prions
20RMSCMBT102: MICROBIAL GENETICS	CO1	Understand the basics of genetics and classical genetics of prokaryotic and eukaryotic organisms, and to describe fundamental molecular principles of genetics,
	CO2	Understand. the relationship between phenotype and genotype in bacteria,
	CO3	Explain the organization of genetic material and chromosomes in both prokaryotic and eukaryotic organisms
	CO4	Understand the processes of recombination and gene transfer, and to describe the basics of genetic mapping and mutagenesis, and
	CO5	Understand how gene expression is regulated.
20RMSCMBT103: BIOLOGICAL CHEMISTRY	CO1	Explain the chemical basis of life, properties of biomolecules in water, the importance of pH, and biomolecular hierarchy,
	CO2	Be able to explain the importance and classification of carbohydrates in biological systems,
	CO3	Understand the structure and functions of amino acids, peptides and proteins, and to describe structural and functional relationships of model proteins
	CO4	Explain the physical and chemical properties of lipids and fatty acids, and

	CO5	Distinguish between the structure and function of nucleic acids and discuss DNA as the genetic material.
20RMSCMBT104: ANALYTICAL TECHNIQUES IN BIOLOGY	CO1	Understand the theory and practice of bio-analytical techniques, and to understanding the instrumentation used in microbiology,
	CO2	Familiarity with working principles, tools and procedures of analytical techniques
	CO3	Analyze the limitations and creative use of techniques for solving of the research problem.
	CO4	Describe separation and isolation techniques including centrifugation, chromatography and electrophoresis for biological materials
	CO5	Understand the spectrophotometric, radioisotopic and crystallographic methodologies for analyzing biological samples.
20RMSCMBT105: INTELLECTUAL PROPERTY RIGHTS, BIOSAFETY& BIOETHICS	CO1	Understand the rationale for and against IPR and especially patents,
	CO2	Understand why India has adopted an IPR Policy and be familiar with the broad outline of patent regulations
	CO3	Understand different types of intellectual property rights in general and protection of products derived from biotechnology research and issues related to application and obtaining patents,
	CO4	Gain knowledge of biosafety and risk assessment of products derived from recombinant DNA research and environmental release of genetically modified organisms, national and international regulations, and
	CO5	Understand ethical aspects related to biological, biomedical, health care and biotechnology research.
20RMSCMBTP101: GENERAL MICROBIOLOGY	CO1	Isolate microorganisms from different sources using different microbiological tools, and to identify different microorganisms using various identification methods. Demonstrate the bacterial growth curve,
	CO2	Estimate the minimal inhibitory concentration of a given antibiotic,
	CO3	Use different staining methods for the identification of microorganisms, and to preserve different microorganisms using various techniques,
	CO4	Isolate and quantify bacteriophages from sewage samples, and

	CO5	Observe symptomatic plant viral infection, and to estimate chlorophyll in virus-infected and non-infected leaves
20RMSCMBTP102: MICROBIAL GENETICS	CO1	Demonstrate Mendelian laws and construction of genetic maps. Genetics,
	CO2	Perform experiments on antibiotic resistance
	CO3	Demonstrate bacterial transformation and conjugation using suitable methods
	CO4	Perform induction of mutations and isolation of mutants, and
	CO5	Solve problems related to molecular genetics
20RMSCMBTP103: BIOLOGICAL CHEMISTRY	CO1	Elaborate concepts of biochemistry with easy to run experiments,
	CO2	Familiarize with basic laboratory instruments and understand the principle of measurements using those instruments with experiments in biochemistry,
	CO3	Prepare buffers and solutions along with the measurement of pH
	CO4	Identify sugars, amino acids based on qualitative tests, and to estimate quantities of sugars, amino acids and nucleic acids by spectroscopic methods, and
	CO5	Quantify lipids, fatty acids and cholesterol using different biochemical methods.
20RMSCMBTP104: ANALYTICAL TECHNIQUES IN BIOLOGY	CO1	Prepare stock solutions, working solutions and buffers, and to identify the sugars and lipids by paper chromatography,
	CO2	Analyze protein concentration in unknown samples using the standard graph, and to demonstrate titration of amino acids and their separation using thin-layer chromatography
	CO3	Separate proteins by gel filtration and polyacrylamide gel electrophoresis (PAGE), and to separate nucleic acids by using agarose gel electrophoresis
	CO4	Draw absorption spectra for amino acids, proteins and nucleic acids, and
	CO5	Isolate and characterize plant pigments by spectrophotometric methods.
SEMESTER-II		
COURSE OUTCOMES		

20RMSCMBT201: MICROBIAL PHYSIOLOGY & METABOLISM	CO1	Discuss the transport of nutrients required for microbial growth
	CO2	Explain the respiratory and photosynthetic metabolism in bacteria,
	CO3	Describe the carbohydrate metabolism in microorganisms
	CO4	Discuss fatty acid and amino acid metabolism, and
	CO5	Explain the metabolism of lipids.
20RMSCMBT202: MOLECULAR BIOLOGY	CO1	Explain the physical properties of DNA and its organization in chromatin
	CO2	Explain the principles behind DNA replication, repair and recombination
	CO3	Discuss the transcription process and RNA polymerases and their action
	CO4	Explain the translation process in both prokaryotes and eukaryotes, and
	CO5	Discuss the regulation of gene expression and operon concept
20RMSCMBT203: BIOSTATISTICS& BIOINFORMATICS	CO1	Develop an understanding of basic theory of these computational tools
	CO2	Gain working knowledge of these computational tools and methods,
	CO3	Appreciate their relevance for investigating specific contemporary biological questions
	CO4	Critically analyse and interpret results of their study
	CO5	Gain broad understanding in mathematics and statistics, and
	CO6	Recognize importance and value of mathematical and statistical thinking, training, and approach to problem solving, on a diverse variety of disciplines
20RMSCMBT204:IMMUNOLOGY	CO1	Evaluate usefulness of immunology in different pharmaceutical companies,
	CO2	Identify proper research lab working in area of their own interests
	CO3	Apply their knowledge and design immunological experiments to demonstrate innate, humoral or cytotoxic T lymphocyte responses,

	CO4	Figure out kind of immune responses in the setting of infection (viral or bacterial), and
	CO5	Explain the antigen or antibody interaction
20RMSCMBT205:BIOENTERPRENEURSHIP	CO1	Gain entrepreneurial skills, understand the various operations involved in venture creation
	CO2	Identify scope for entrepreneurship in microbiology
	CO3	Utilize the schemes promoted through knowledge centres and various agencies,
	CO4	Gain knowledge pertaining to management and leadership and
	CO5	Able to build up a strong network within the industry
20RMSCMBP201:MICROBIALPHYSIOLOGY &METABOLISM	CO1	Growth curve establishment in E. coli
	CO2	Determine the effect of temperature and pH on bacterial growth,
	CO3	Isolation and purification of enzymes in bacteria
	CO4	Bioassay of microbial toxins and their toxicity test, and
	CO5	Measure CO2/O2 evolution during respiration/photosynthesis of microorganisms
20RMSCMBP202:MOLECULARBIOLOGY	CO1	Perform transformation, conjugation and transduction
	CO2	Express heterologous protein in bacterial system
	CO3	Perform protein-protein interaction by yeast two hybrid assay
	CO4	Isolate genomic DNA, plasmid DNA, RNA and protein from bacteria and yeast,
	CO5	Perform restriction mapping of a plasmid, and
	CO6	Correlate genotype with phenotype.
20RMSCMBP203: BIOSTATISTICS&BIOINFORMATICS	CO1	Use various statistical tools including Chi square test, t-test, F-test, DMR test, ANOVA: one-way and two- way, CRD, RBD and LSD
	CO2	Describe contents and properties of most important bioinformatics databases
	CO3	Perform text- and sequence-based searches and analyze and discuss results in light of molecular biological knowledge,

	CO4	Explain major steps in pairwise and multiple sequencealignment,explainprincipleandexecutepairwisesequencealignmentbydynamicprogramming,and
	CO5	Predict secondary and tertiary structures of protein sequences.
20RMSCMBP204: IMMUNOLOGY	CO1	Learn important immunological techniques such as ELISA, Western blotting, cell culture techniques, Flow cytometry, assays to monitor the immune responses etc.,
	CO2	These techniques are routinely used by the diagnostic, vaccine and sera manufacturing companies hence this will open avenues for students in Biotech industries, and
	CO3	Hand on practical exposure to these techniques would enhance entrepreneurship Skills of the students.
SEMESTER-III		
COURSE OUTCOMES		
20RMSCMBT301: GENETIC ENGINEERING	CO1	Explain the basic principles behind molecular cloning
	CO2	Apply the knowledge of molecular cloning and design cloning strategy,
	CO3	Apply most appropriate recombinant-DNA techniques and other contemporary molecular techniques to understand the function of gene
	CO4	Explain various contemporary techniques towards gene knockout, and
	CO5	Analyse published journal articles in the field of recombinant DNA technology.
20RMSCMBT302: 'OMICS' MICROBIOLOGY	CO1	Overview of genome variation in population including technologies to detect these variation
	CO2	Understand how High-throughput DNA sequencing (HTS) can be used to identify disease causing genetic variants in monogenic diseases
	CO3	Understand how Genome-wide association study (GWAS) can detect disease associated markers in multifactorial diseases
	CO4	Understand how HTS technologies can be used to explore changes in gene expression, and
	CO5	Application of various OMICs technologies

20RMSCMBT303A: INDUSTRIAL MICROBIOLOGY &BIOPROCESSING	CO1	Appreciate relevance of microorganisms from industrial context, and to carry out stoichiometric calculations and specify models of their growth
	CO2	Give an account of design and operations of various fermenters, and to present unit operations together with the fundamental principles for basic methods in production technique for bio-based products,
	CO3	Calculate yield and production rates in a biological production process, and also interpret data,
	CO4	Calculate the need for oxygen and oxygen transfer, and
	CO5	Critically analyze any bioprocess from market point of view, and to give an account of important microbial/enzymatic industrial processes in food and fuel industry
20RMSCMBT 303B: DAIRY MICROBIOLOGY	CO1	Know the concepts related to popular milk products, milk examination and spoilage.
	CO2	Comprehend knowledge regarding fermented milk products,
	CO3	Understand the milk spoilage and infection,
	CO4	Gain the knowledge in the preparation of dairy products, and
	CO5	Understand diverse strategies for preservation of dairy products
20RMSCMBT304 A:AGRICULTU RAL MICROBIO LOGY	CO1	Understand the role of microbes in the different cycles and their role in agriculture,
	CO2	Understand biological nitrogen fixation in symbiotic and non-symbiotic associations with plants
	CO3	To know the value, production, application and crop response of biofertilizers and biopesticides,
	CO4	To have an in-depth knowledge on biopesticides and their role in pest control, and
	CO5	Understand the diseases and causing microorganisms in plants
20RMSCMBT304B: FOOD MICROBIOLOGY	CO1	Obtain a good understanding of food microbiology and become qualified for a food microbiologist position in industry or in government,

	CO2	Determine microorganisms and their products in foods, understand causes of food spoilage and predict the microorganisms that can spoil a given food, when prepared, processed and stored under given conditions
	CO3	Understand the causes of food-borne microbial diseases and predict pathogens that can grow in a given food, when prepared, processed and stored under given conditions
	CO4	Predict the necessary measures to control the spoilage and pathogenic microorganisms in food, and
	CO5	Gain he knowledge in food analysis
20RMSCMBT305: EMERGING TECHNOLOGIES IN BIOLOGY	CO1	Explain the mechanism of function of different microscopes and their applications to biological sciences
	CO2	Explain the basis of 1D and 2D NMR and to interpret NMR spectra of small molecules, and to discuss different techniques in mass spectrometry and their applications to biological sciences
	CO3	Conceptualize mathematical modelling a cellular process from molecular to cellular level
	CO4	Explain technologies employed from single cell to multicellular systems using various approaches used in a laboratory to industrial scale using automated and robotic system for high throughput molecular and cellular analysis for research and development of microbiological products
	CO5	Discuss the process of recombination and gene editing from a natural defense to development of new technologies for engineering a gene function in vitro and in vivo.
20RMSCMBP301: GENETIC ENGINEERING	CO1	Prepare antibiotic selection media and competent cells,
	CO2	Perform lambda phage DNA isolation and restriction mapping of DNA,
	CO3	Gain hands-on experience in gene cloning, protein expression and purification
	CO4	Perform gene expression in E. coli and PCR, RFLP, RAPD and DNA sequencing
	CO5	Begin a career in industry that engages in genetic engineering as well as in research laboratories conducting fundamental research.

20RMSCMBP302: 'OMICS'MICROB IOLOGY	CO1	Describe the contents and properties of the most important bioinformatics databases
	CO2	Perform text- and sequence-based searches and analyze and discuss the results in light of molecular biological knowledge
	CO3	Explain the major steps in pairwise and multiple sequence alignment, explain the principle and execute pairwise sequence alignment by dynamic programming
	CO4	Predict the secondary and tertiary structures of protein sequences, and
	CO5	Begin a career in bioinformatics by using emerging technologies of OMICs.
20RMSCMBP303A: INDUSTRIAL MICROBIOLOGY &BIOPROCESSING	CO1	Appreciate relevance of microorganisms from industrial context
	CO2	Carry out stoichiometric calculations and specifymodels of their growth, and to give an account of design and operations of various fermenters,
	CO3	Present unit operations together with the fundamental principles for basic methods in production technique for bio-based products
	CO4	Calculate yield and production rates in a biological production process, and also interpret data, and to calculate the need for oxygen and oxygen transfer, and
	CO5	Critically analyze any bioprocess from market point of view, and to give an account of important microbial/enzymatic industrial processes in food and fuel industry.
20RMSCMBP303B : DAIRY MICROBIOLOGY	CO1	Understand the concepts related to popular milk products, milk examination and spoilage,
	CO2	Perform the enumeration of bacteria in milk,
	CO3	Examination of dairy products for spoilage,
	CO4	Gain knowledge regarding fermented milk products, milk spoilage and infection, and
	CO5	Understand diverse strategies for preservation of dairy products.

20RMSCMBP 304A: AGRICULTURAL MICROBIOLOGY	CO1	The importance of physical, chemical and biological properties of soil.
	CO2	Role of microorganisms in biogeochemical cycling.
	CO3	Microbiology and physiology of degradation of native and organic matter and Nitrogen fixation
	CO4	The mechanism of plant growth promotion.
	CO5	Production, application and use of microbes as biofertilizers
20RMSCMBP304B: FOOD MICROBIOLOGY	CO1	Isolate food borne bacteria (Campylobacter, Salmonella, Yersinia, E. coli) from various food sources using differential media,
	CO2	Identify food borne isolates by biotechnological tools,
	CO3	Isolate and characterize food borne viruses (rotavirus, hepatitis virus, polio virus, enterovirus) using biotechnological tools
	CO4	Detect and enumerate indicator and index microorganisms for food borne pathogens (total enterobacteria, total coliform & aerobic spore former), and
	CO5	Examine the spoilage-causing bacteria and fungi in food samples – fruits, vegetables, bread. This expertise is useful for the students to gain the access into food industries.
SEMESTER-IV		
COURSE OUTCOMES		
20RMSCMBT401A: ENVIRONMENTAL MICROBIOLOGY	CO1	Understand use of basic microbiological, molecular and analytical methods, which are extensively used in environmental biotechnology.
	CO2	Explore the microorganisms present in different environments and their estimations,
	CO3	Identify various recalcitrant pollutants in the environment and molecular approaches to environmental management, and application of biotechnology to assess and control pollution,
	CO4	Understand the biodegradation and bioremediation processes used in the clean-up of the environments, and
	CO5	Explain various methods for treatment and disposal of industrial effluents

20RMSCMBT401B: MARINE MICROBIOLOGY	CO1	Understand marine environment and ecological features along with its composition and physico-chemical parameters,
	CO2	Explain principal features of microbial diversity in oceans, and to describe and discuss marine microbes in terms of physiological capability and biogeochemical role,
	CO3	Synthesize microbial ecosystem function in pelagic and benthic marine habitats, and to summarize advanced technologies for enumeration of marine microflora,
	CO4	Understand seafood and associated food-borne diseases and characterization of infectious agents of seafood animals, and
	CO5	Discuss HACCP in seafood product and manufacture and EU food hygiene Legislation
20RMSCMBT402A: PHARMACEUTICA LMICROBIOLOGY	CO1	Understand biotechnological methods for developing pharmaceutical products,
	CO2	Explore biotechnology and microbiology products as medicines for human use methods for delivery of biopharmaceuticals
	CO3	Explain fundamental principles for testing therapeutics and their clinical trials,
	CO4	Aware of drug targeting, principles and its importance in therapeutics, and
	CO5	Understand methods for delivery of biopharmaceuticals.
20RMSCMBT402B: MEDICAL MICROBIOLOGY	CO1	Compare and contrast different microbial diseases, including properties of different types of pathogens, and mechanisms of pathogenesis, and to summarize the role of host in infectious disease, including natural barriers to infection, innate and acquired immune responses to infection, and inflammation,
	CO2	Understand characteristic and pathogenic features and prophylaxis of important bacterial species and their causing infections and diagnosis, and to explain antimicrobial chemotherapy, mechanisms of action of clinically used antimicrobial drugs,
	CO3	Identify fungal and protozoan species and their causing allergies and diseases,
	CO4	Understand molecular diagnostic methods in the detection of cancers and viral infections, and

	CO5	Compare and contrast experimental approaches for identifying virulence genes and advantages and disadvantages of each approach for specific pathogens.
20RMSCMBT403:RESEARCH METHODOLOGY & SCIENTIFIC COMMUNICATION SKILLS IN BIOLOGY	CO1	Understand history and methodologies of scientific research, applying these to recent published papers,
	CO2	Understand and practice scientific reading, writing and presentations,
	CO3	Appreciate scientific ethics through case studies,
	CO4	Develop scientific literature reading skills, and
	CO5	Develop formal presentation skills using PPT and effective scientific writing skills
20RMSCMBT404A:EMERGINGINFECTIOUS DISEASES	CO1	Describe the environmental, ecological, societal, microbial and host factors associated with the emergence of infectious diseases in humans,
	CO2	Analyse the ecological and biological factors that led to the emergence and spread of emerging and reemerging infectious diseases and critically evaluate the options available for control,
	CO3	Review the strategies and challenges for pathogen eradication and the concept of biosecurity, 4
	CO4	Identify the agents of emerging diseases and their control and prevention methods, and to explain the problems associated with antibiotic resistance, bioterrorism and biodefence, and
	CO5	Critically evaluate the concept of ―One Health‖ that unites human and veterinary medicine in control of zoonotic and emerging infections.
20RMSCMBT404B: HERBAL&TISSUE CULTURE TECHNOLOGY	CO1	Learn concepts and techniques in plant tissue culture
	CO2	Learn concepts of production of secondary metabolites and its enhancement,
	CO3	Explain in vitro culture methods and applications,
	CO4	Understand how DNA can be delivered into the plant cells, and
	CO5	Design gene construct and apply various methods to produce transgenic plants

20RMSCMBT404C:MOLECULAR DIAGNOSTICS	CO1	Explain basic molecular and advanced approaches for diagnosis,
	CO2	Explore flow cytometry and its applications,
	CO3	Identify variations in DNA and its association with specific disease,
	CO4	Understand different immunogenetic techniques and their applications in diseases, and
	CO5	Explain the genetic counselling and its importance in identifying diseases and associated ethical issues.
20RMSCMBT404D: PROBIOTICS, PREBIOTICS & FEED TECHNOLOGY	CO1	Have basic understanding of the biotechnology involved in probiotics, prebiotics and feed,.
	CO2	Apply this knowledge for future research,
	CO3	Explain various methods for analysis of intestinal microflora,
	CO4	Identify physical, chemical and biological effects of feed processing, and
	CO5	Apply probiotics for humans, farm animals and poultry, and to understand health hazards due to residual pesticides in feeds
20RMSCMBT 404E:MOLECULAR PHYLOGENY & NUTRACEUTICALS OF MARINE SOURCES	CO1	Know about the marine ecosystem and understand the ocean management practices (national and international),
	CO2	Understand the applications of different biotechnological techniques and process in exploring the potential marine organism utilizations,
	CO3	Gain the knowledge in role of genetics in fisheries research and use of genetic tools in aquaculture industry,
	CO4	Understand the basic knowledge on how to isolate the bioactive compounds from marine origin and use of those compounds in various fields (biomedical, chemical industry, food industry, cosmetics, etc.). One can apply his own ideas in future research to obtain noble outcome (for the benefit to mankind and to protect our environment), and
	CO5	Finally, the student may get an opportunity to do his/her research in marine sciences, join as a researcher in research institutes and fetch a job in aquaculture sector, oceanography information centers, pharmacy, etc.

20RMSCMBT404F: TRANSLATIONAL RESEARCH IN ANIMAL SCIENCES	CO1	Knowledge: Students will be able to understand the potential of different model systems (in vivo and in vitro) in translational research,.
	CO2	Career opportunities: Successful completion of this course will give ample opportunity for students to enter different fields such as pharma companies, clinical labs, biomedical engineers and computational biologists and also research programs,
	CO3	Out-of box thinking abilities: Students will be encouraged to design research problem for their project work (in this area or area of their choice of interest). This stimulates out-of-box thinking abilities,
	CO4	Scientific temperament: Students will be able to understand three fundamental aspects of translational research: what to seek; how to seek; and why to seek?, and
	CO5	Innovative thinking: Promote innovative thinking among the students wherein they translate their ideas into commercially relevant and societal applicability
20RMSCMBT404G: MOLECULAR DRUG DISCOVERY &DEVELOPMENT	CO1	Understand the concept of drug discovery in terms of target identification, target validation, assay development, drug screening and lead identification,
	CO2	Conceptualize the process of lead optimization and the role of efficacy and toxicity in-vitro and in-vivo, 3
	CO3	Understand the process of further development of a candidate drug for its stabilization, pharmacology and pre-clinical assessment.
	CO4	Familiarize regulatory guidelines from IND application to clinical development.
	CO5	Orienting towards current practices of pharmaceutical industry for drug development.
20RMSCMBP401A :ENVIRONMENT AL MICROBIOLOGY	CO1	Estimate different microorganisms from various sources,
	CO2	Study of different enzyme activities in soil,
	CO3	Observe root nodules in various legumes,
	CO4	Analyse the pesticidal effects on microflora, and
	CO5	Observe ammonification and nitrification levels in soil samples, and to study of coliforms in sewage samples.

20RMSCMBP401B: MARINE MICROBIOLOGY	CO1	Prepare differential media for marine microorganisms,
	CO2	Isolate and purify bacteria from marine sources
	CO3	Demonstrate drug resistance and antibiotic sensitivity on marine organisms
	CO4	Study growth conditions for various marine microorganisms
	CO5	Screen for bioactive compound producing bacteria
20RMSCMBP402A: PHARMACEUTICA LMICROBIOLOGY	CO1	Develop pharmaceutical products using biotechnological methods,
	CO2	Identify biotechnology and microbiology products as medicines for human use,
	CO3	Test efficacy of therapeutics and biological drugs,
	CO4	Apply drug targeting methods for various pharmaceuticals, and
	CO5	Perform various experiments on the production Understand methods for delivery of biopharmaceuticals
20RMSCMBP402B:M EDICALMICROBIOL OGY	CO1	Prepare selective media used for bacterial cultures and their preservation,
	CO2	Estimate the normal microflora in blood, urine and pus,
	CO3	Determination of antibiotic sensitivity,
	CO4	Examine biological samples for microbial infections,
	CO5	Observe fungal and bacterial species under microscope.
20RMSCMBPSEA1: EDUCATIONAL TOUR	CO1	Identify the inputs and outputs for different operations and processes performed at the workplace,
	CO2	Know the new technologies and instrumentation being used in the industry,
	CO3	Observe theoretical and practical differences in execution of experimental procedures,
	CO4	Explain current trends in premier institutes and established industries, and
	CO5	Find the next path in choosing right option and building career in life, and to write a detailed report on the educational tour

20RMSCMBPSEA2: GRAND SEMINAR IN ADVANCES OF MICROBIOLOGY	CO1	Select a seminar topic of their interest in the advances of Microbiology,
	CO2	Prepare PPT on the topic selected for presentation,
	CO3	Present the selected topic effectively and fearlessly,
	CO4	Develop skills in collecting useful information related to the topic and effective communication skills, and.
	CO5	Answer the questions posed by the classmates and teachers
20RMSCMBPSEA3: CRITICALANALYSISOFL ANDMARKDISCOVERIES	CO1	Select a classical paper on a milestone discovery and find how it was made,
	CO2	Able to analyse critically about thought and necessity behind the work done,
	CO3	Understand classical materials and methods chosen for the discovery made,
	CO4	Explain the outcome of the work and its importance and place as a milestone discovery, and
	CO5	Able to understand classical papers and discuss with classmates and mentor in the journal club, and write a mini-review on milestone discoveries.
20RMSCMBPSEA4: POSTER PRESENTATION	CO1	Formulate a scientific question.
	CO2	Present a scientific approach to solve the problem.
	CO3	Interpret, discuss and communicate scientific results in written form.
	CO4	Gain experience in writing a scientific proposal.
	CO5	Learn how to present and explain their research findings to the audience effectively.
20RMSCMBPSEA 5: DISSERTATION	CO1	In-depth knowledge of the chosen area of research, and capability to critically and systematically integrate knowledge to identify issues that must be addressed within the framework of a specific thesis.
	CO2	Competence in research design and planning, and capability to create, analyse and critically evaluate different technical solutions.
	CO3	Ability to conduct research independently, and ability to perform analytical techniques/experimental methods.

	CO4	Project management skills, and report writing skills,
	CO5	Problem solving skills, and communication and interpersonal skills

DEPARTMENT OF ORGANIC CHEMISTRY

SEMESTER-I		
COURSE OUTCOMES		
20RMSCOC101:INORGANIC CHEMISTRY	CO1	Discuss the properties of Coordination complexes, Categorize types of Coordination complexes and splitting of ―d‖ orbitals, summarize the applications of CFT.
	CO2	Explain the properties of Inert and labile complexes, Review to the reaction mechanisms of ,etal complexes, Discuss the theories of trans effect and Marcus theory
	CO3	Generalized characteristics features of non-transition elements, Prepare Boranes, Silicates and Carbides, Distinguish the Closo,Nido and Arachno Boranes.
	CO4	Classify types of Carbonyls and Nitrosyls, Synthesize metal carbonyls and Nitrosyls, Differentiate Effective Atomic Number(EAN) and 18 electron Rule
20RMSCOC102: ORGANIC CHEMISTRY	CO1	Explain the structural and electronic criteria of aromaticity and its applications in benzenoid & non-benzenoid, alternant and non-alternant hydrocarbon.
	CO2	Discuss the basics of reaction mechanism of the S_N1, S_N2, SET, S_Ni and S_NAr reactions and their applications through the name reactions Distinguish the reaction mechanisms of aliphatic and aromatic nucleophilic substitution reactions and their applications via the name reactions.
	CO3	Outline detailed knowledge on reactive intermediates like carbocations carbanions etc. To learn the physical parameters and potential energy diagrams of transition states and intermediates of organic reactions.
	CO4	Explain the basic knowledge on Hantszschwidmann nomenclature of different heterocycles and synthesis & properties of three and four membered heterocycles
20RMSCOC103:PHYSICAL CHEMISTRY	CO1	Acquire in depth knowledge in quantum mechanics, quantum chemistry, chemicalkinetics thermodynamics and electrochemistry.
	CO2	Describe the principles and applications of plank‘s equation,bohr‘smodel,Schrodinger wave equation - Eigen values and Eigen functions.
	CO3	Illustrate the classification and characterization of electro chemical cells.
	CO4	Apply the knowledge to calculate conductance measurements.

20RMSCOC104: GENERALCHEMISTRY	CO1	Describe functions, differential equations, probability, vectors, matrices and determinants To learn about the introduction to the computer and computer languages
	CO2	Enriching and appreciating the basic concepts and polymers and understand the significance of co-polymerization, coordination and conducting polymers and molecular weight concept of polymers and its determination.
	CO3	Application of batteries especially for primary and secondary batteries,dry cells, fuel cells and solar cells.
	CO4	Explain the structural aspects of materials in solid sate by XRD, XPS and SEM Describe the fundamental principles of molecular spectroscopy including IR, and Raman spectroscopies and various rules involved.
20RMSCOC105: INORGANIC CHEMISTRY LAB–I	CO1	Train students to improve skills in preparation and processing of inorganic complexes.
	CO2	Gain knowledge in the quantitative analysis of inorganic complexes
20RMSCOC106: **ORGANIC CHEMISTRY LAB–I**	CO1	To attain hands on experience on the named reactions and simple organic synthetic methods like methylation, nitration, oxidation, reduction, condensation, addition etc.
	CO2	To attain hands on experience in the purification methods like recrystallisation
20RMSCOC107:PHYSICAL CHEMISTRY LAB–I	CO1	To prepare the chemicals with statistical analysis of molar solutions
	CO2	To develop knowledge in the determination of eutectic composition and distribution coefficient.
	CO3	To interpret the experimental results by adsorption isotherms.
	CO4	Impart training in operating calibration of volumetric apparatus and find statistical data of various chemical compositions..
SEMESTER-II		
COURSE OUTCOMES		

20RMSCOC201: INORGANIC CHEMISTRY-II	CO1	Outline the properties of dia and para magnetism, Describe the Curie law and Curie-Wiess Law, Explain the Temperature Independent Paramagnetism (TIP)
	CO2	Write the principle of LS Coupling(Rusels Saunders),Compare the Leporte orbital selection rule and spin selection rule, Discuss the Charge Transfer of Metal Complexes
	CO3	State the principles of Mossbauer and NQR spectroscopy, Illustrate the applications of Mossbauer and NQR spectroscopy, Discuss the Factors influencing absorbtion of Gamma rays nucleus.
	CO4	Differentiate the stepwise and overall stability constants, state the HSAB principle, Demonstrate the stability constants of metal complexes by spectrophotometric and p^H metric methods.
20RMSCOC202: ORGANIC CHEMISTRY-II	CO1	Illustrate the mechanism and stereochemical aspects of addition reactions involving electrophiles, nucleophiles and free radicals. Explain the mechanism and stereochemical aspects of variety of elimination reactions like E1, E2 and E1cB etc.
	CO2	Describe the concept of axial chirality and planer chirality ansa compounds and healicity. Compare the different classification of stereo isomers Discuss conformation analysis of acyclic and alicyclic systems.
	CO3	State the occurrence, isolation and classification of alkaloids
	CO4	Define the isolation, isoprene rule and classification and synthesis of terpenoids
20RMSCOC203: PHYSICAL CHEMISTRY–II	CO1	Apply a vast knowledge in the interpretation of various physical quantities involved in Thermodynamics, enthalpy, work function, entropy and equilibrium constant etc.,
	CO2	Analyze the theories and applications of quantum mechanical treatment of Schrodinger wave equation to hydrogen atom and perturbation Theory
	CO3	Identify the concepts and applications of symmetries, group multiplication tables and mulliken character tables
	CO4	Define the applicative aspects of Debye- Huckel-limiting law and corrosion-factors
20RMSCOC204:GENERAL CHEMISTRY-II	CO1	Compare Precision and accuracy, relate the statistical evaluation of Data T-Test and F-Test, Write the importance of Significant figures

	CO2	State the principles of fame emission spectroscopy andatomic absorption spectroscopy,write the differencebetween AAS and FES, Explain the advantages anddisadvantagesof AASandFES.
	CO3	Define the principle of ESR spectroscopy, explain ESRspectrum of organic and inorganic radicals, discuss theapplicationsofESRspectroscopy.
	CO4	Outline the Homogeneous catalysis, Analyse the hydrogen bromide (HBr) and Hydrogen peroxide(H_2O_2) reactions, Discuss the factors affecting Redox potentials.
20RMSCOC205: INORGANIC CHEMISTRY LAB-II	CO1	Gain hands on experience in the various ions determination by analysis
20RMSCOC206: ORGANIC CHEMISTRYLAB-II	CO1	Identification of various functional groups in organic compounds and their conformations
20RMSCOC207: PHYSICAL CHEMISTRY LAB-II	CO1	To conduct the experiments of critical solution temperature of phenol-water system .
	CO2	To develop knowledge in the determination of rate constant of acid hydrolysis of an ester and investigate the effect of catalyst concentration, reactant concentration and temperature.
	CO3	To interpret the experimental results obtained by conductometryand potentiometry
	CO4	Apply concepts of Physical Chemistry and Analytical Chemistry through experimentation
SEMESTER-III		
COURSE OUTCOMES		
20RMSCOC301: ORGANIC SYNTHESIS–I	CO1	Explain the applications of variety of oxidants with mechanism and oxidative cleavages of carbon-carbon double bonds.
	CO2	Illustrate the applications of different reducing agents in organic synthesis with mechanism.
	CO3	Describe the basic concepts in molecular rearrangementand learn the rearrangements involving electron deficient carbon, nitrogen and oxygen.
	CO4	Synthesize the multiconponent reactions, palladium catalysed reactions and click chemistry

20RMSCOC302:ORGANIC SYNTHESIS–II	CO1	Explain the C-C bond formation, functional group transformations of non metallic reagents in organic synthesis.
	CO2	Discuss and Design the mechanism and applications of reagents useful in industrial purpose.
	CO3	Describe the principles of photochemistry and mechanistic aspects of photochemical reactions through named reactions.
	CO4	Outline the frontier molecular orbital symmetry of different systems. Explain the pericylic reactions like electrocyclic, cycloaddition, and sigmatropic rearrangementreactions.
20RMSCOC303: BIOINORGANIC AND BIOPHYSICAL CHEMISTRY	CO1	Discuss the basic concepts of bioinorganic chemistry like importance of essential and trace elements in biology.
	CO2	Outline the role of organometallic reagents in various important reactions like hydroformylation, oxopalladation, Ziegler – Natta polymerization.
	CO3	Statethe Membrane equilibrium, ion transport through cell membrane, dialysis and its function.
	CO4	Determination of Character Coordinate of C_2V point group and normal modes of vibrations of different molecules . Prediction of spectroscopic properties
20RMSCOC304: ORGANIC SPECTROSCOPY AND ITS APPLICATIONS	CO1	Explain the various aspects involved in the Ultraviolet and Visible Spectroscopy and its applications.
	CO2	Evaluate the principle, instrumentation, aspects of Infrared Spectroscopy and its applications to identify functional groups in organic compounds.
	CO3	Solve the principle, various aspects and applications of 1H &13C NMRSpectroscopy in structural elucidation of organic compounds.
	CO4	Formulate detailed knowledge about principle; instrumentation, and methods of mass spectrometry and its applications with respect to structuredetermination of organic compounds.
20RMSCOC305: PRACTICAL–I (MULTISTEP SYNTHESIS)	CO1	Attain skill in planning, execution and monitoring of orgnic synthesis

	CO2	Experiment the purification methods and identification techniques of products
20RMSCOC306 :PRACTICAL – II (ESTIMATIONS)	CO1	Gain hands on experience in the various methods of estimation of functional groups in organic compounds
SEMESTER-IV		
COURSE OUTCOMES		
20RMSCOC401 : ORGANIC SYNTHESIS–III	CO1	Define the various synthetic strategies and basics of retro-synthetic analysis. Describe protective groups in organic synthesis; special emphasis on protection and deprotection of hydroxyl-, carbonyl-, carboxylic acid and amines.
	CO2	Explain the applications of variety of disconnection approaches like one group C-X disconnections, one group C-C disconnections, two group C–C disconnections etc.
	CO3	Choose the basic principles as well as modern strategies of asymmetric synthesis and its applications through named reactions.
	CO4	Categorize types of polymerization, mechanism of preparation, properties and utility of syntheticpolymers.
20RMSCOC402: HETERO CYCLIC COMPOUNDS AND NATURAL PRODUCTS	CO1	Explain the synthesis and applications of five membered heterocycles
	CO2	Discuss the synthesis and applications of Benzofused heterocyclic compounds
	CO3	Discover the biosynthesis of various steroids. Describe structures, synthesis and uses of various male and female sex hormones
	CO4	Outline familiarity on nomenclature, occurance and biological pathways of flavonoids and isoflavonoids.
20RMSCOC403: BIOMEDICINAL CHEMISTRY	CO1	Describe about carbohydrates, lipids and fattyacids and their biological functions
	CO2	Discuss the synthesis and properties of amino acids; classification and nomenclature of peptides and peptide synthesis. Explain the structure and biological importance of nucleic acids.
	CO3	Illustrate the structure and synthesis of different vitamins and prostagladins

	CO4	Explain the structure, synthesis and activity of different antimalarials and antibiotics
20RMSCOC404 : GENERAL ORGANIC CHEMISTRY	CO1	Categorize the concept and principles of green chemistry followed by variety of green synthetic methods. Gain detailed knowledge about concept and principles of green chemistry and advantages and applications of green synthetic methods
	CO2	Design new technology developed in the organic synthesis like ptc, microwave reactions
	CO3	Illustrate the basic principles of pharmacokinetics and pharmacodynamics and concepts of drug delivery systems Design the concept of drug design, lead modification strategies of drugs
	CO4	Develop fundamental knowledge regarding the synthesis, classification and properties of nano particles and also characterization of nanomaterials by using XRD, SEM and TEM
20RMSCOC405 :PRACTICAL-I	CO1	Justify the assignment of different spectral values to the relevant groups in organic molecules.
	CO2	Evaluate the structural elucidation of organic molecules with the aid of combination of UV, IR, ^{1}H &^{13}C NMR and Mass spectral data analysis.
	CO3	Iidentification of products in a sequence of reactions using spectral data.
20RMSCOC406 :PRACTICAL –II DISSERTATION	CO1	To get skill in the literature survey, designing of research work and its execution in the laboratory.
	CO2	Summarize the data analysis and compilation of data in the form of dissertation.

DEPARTMENT OF PHYSICS

SEMESTER-I		
COURSE OUTCOMES		
20RPHY101:CLASSICAL MECHANICS AND THEORY OF RELATIVITY	CO1	Understand the necessity of Action, Lagrangian, and Hamiltonian formalism.

	CO2	Used' D Alambert principle and calculus of variations to derive the Lagrange equations of motion.
	CO3	DescribethemotionofamechanicalsystemusingLagrange-Hamiltonformalism.
	CO4	Apply essential features of a relativity problem (like motion under central force, periodic motions) to set up and solve the appropriate physics problems.
20RPHY102:ATOMIC AND MOLECULAR PHYSICS	CO1	Have the basic knowledge of different atomic models, quantum nos and atomic spectra.
	CO2	Understand the classical/quantum description of effect of magnetic field and Electric field on spectral lines.
	CO3	Know the different types of rotation of the molecules and rotational constants and intern structure of the molecules.
	CO4	Study the vibrational spectra of molecules and applications of vibrational spectra of molecules and applications of vibrational spectra
20RPHY103:SOLID STATE PHYSICS	CO1	Gain in-depth knowledge about the formation of various crystal structure vaperforming calculations on their elemental parameters.
	CO2	Differentiate between various lattice types based on their lattice dynamics and then explain thermal properties of crystalline solids.
	CO3	Understand the electron motion in periodic solids and origin of energy bands in semiconductors.
	CO4	To explain the basic transport theory for understanding the transport phenomenon in solids
20RPHY104:ANALOG AND DIGITAL ELECTRONICS	CO1	Understand working of Different Semiconductor devices (Construction, Working Principles and V-I characteristics) and their applications.
	CO2	Explain the construction and working of Operational amplifiers and applications
	CO3	Design Digital circuits and their applications.
	CO4	Understand the working of various analog communication techniques
20RPHY105:HUMAN VALUES AND PROFESSIONAL ETHICS I	CO1	Acquiring the knowledge and to understand the significance of human values and family values
	CO2	Understand the moral responsibility of medical practitioners
	CO3	Demonstrate the characteristics of ethical problems in business

	CO4	To understand the consequences of environmental pollution and to practice the remediation
	CO5	Understand the Human rights violation and social disparities
SEMESTER-II		
COURSE OUTCOMES		
20RPHY201: STATISTICAL MECHANICS	CO1	Use ensemble theory to explain the behavior of Physical systems
	CO2	Understanding the Applications of Rotational partition function
	CO3	Explain the statistical behavior of Bose-Einstein and their applications.
	CO4	Fermi –Dirac Statistics & Fluctuations
20RPHY202:ELECTROMAGNETIC THEORY, LASERS AND MODERN OPTICS	CO1	Understand the electro statistics and magneto statistics and also the properties of propagation of electromagnetic radiation in different media
	CO2	Know about the properties of laser beam and the working of different lasers and applications
	CO3	Describe the fourier analysis in optics problems and to understand the concept of holography
	CO4	Analyze the propagation of light in optical fibers and to know the various applications of optical fibers
20RPHY203: MATHEMATICAL PHYSICS	CO1	Understand the basics and applications of special functions in all the branches of Physics.
	CO2	Use Fourier series and transformations as an aid for analyzing physical problems.
	CO3	Apply integral transform to solve mathematical problems of Physics interest.
	CO4	Formulate and express a physical law in terms of complex variables and simplify it by use of coordinate transforms.
20RPHY204: COMPUTATIONAL METHODS AND PROGRAMMING	CO1	Apply basics knowledge of computational physics in solving the physics problems.
	CO2	Programme with the C or any other high-level language.
	CO3	Use various numerical methods in solving physics problems.

	CO4	Analyze the outcome of the algorithm/program graphically.
20RPHY205:PERSONALITY ENHANCEMENT AND LEADERSHIP	CO1	Understand the significance of personality development in achieving success
	CO2	Understand the advantages of positive attitude and disadvantages of negative attitude
	CO3	Know the do's and don'ts to develop positive self-esteem
	CO4	Gain the Leadership and Management qualities
	CO5	Develop leadership characteristics
SEMESTER-III		
COURSE OUTCOMES		
20RPHY301:QUANTUM MECHANICS –I	CO1	Understand the need for quantum mechanical formalism and its basic principles.
	CO2	Appreciate the importance and implication of vectors paces, Dirac Ket Branotations, eigen value problem.
	CO3	Understand the need of approximate methods in solving problems
	CO4	Understanding scattering theory and its importance.
20RPHY302:NUCLEAR AND PARTICLE PHYSICS	CO1	Understand the basics of nuclear forces and their characteristics and also about various nuclear models
	CO2	Know the various types of nuclear reactions and nuclear decay system
	CO3	Understand the basic principles in nuclear accelerators and rectors and also their applications
	CO4	Describe the various elementary particles and their conservation layers.
20RPHY303:PHYSICS OF SEMICONDUCTOR DEVICES	CO1	Understand various experimental techniques for semiconductor junctions and interfaces
	CO2	Use I-V characteristics to understand the function of devices
	CO3	Apply the knowledge of Junction transistors for various applications
	CO4	To get familiarization with Power Devices and Semiconductor Technology

20RPHY304A:ELECTRONICS - EMBEDDEDSYSTEMS	CO1	understand about the basic functions and structure of embedded systems
	CO2	Get familiarized with Embedded system Design Tools and Hardware
	CO3	understand about the basic programming concepts of embedded systems
	CO4	know about the applications of PIC microcontrollers
20RPHY304B: CONDENSEDMATTER PHYSICS-I	CO1	They gain knowledge on elastic properties of solids
	CO2	Gain knowledge on specific heat and thermal importance
	CO3	Understand the importance of electrical properties of solifds
	CO4	Gain knowledge on photoconductivity
SEMESTER-IV		
COURSE OUTCOMES		
20RPHY401:QUANTUM MECHANICS -II	CO1	Understand the concept of identifiable particles
	CO2	Understand the Orbital Angular momentum spin angular momentum and general angular momentum and their importance in spectroscopy
	CO3	Give the significance of Klein Gordon and Dirac equation and explain the existence of antiparticles.
	CO4	Apply the symmetries principles in calculating the conserved currents and charges.
20RPHY402:ANALYTICAL TECHNIQUES	CO1	Determining crystal structure of specimen and estimate its crystallite size and stress.
	CO2	Use an appropriate resonance technique to elucidate the required properties of the materials like cooridnations and bonding of ligands around the metal ions.
	CO3	Use an appropriate spectroscopic technique to measure vibrational / electronic transitions to estimate parameters like energy band gap, elemental concentration, etc.
	CO4	Applying appropriate electron microscopy techniques to investigate the microstructure examination at different magnification level and use them to understand the microstructure of various materials.
20RPHY403:ADVANCES IN PHYSICS	CO1	Understand the concepts of nanotechnology

	CO2	Physical and chemical techniques of nanomaterial synthesis
	CO3	Concepts of Nano materials and Nano devices
	CO4	Basics of remote sensing and understanding the concepts of Geographical Information system
20RPHY404A: ELECTRONICS – WIRELESS COMMUNICATION SYSTEMS	CO1	Understand the basics of digital modulation techniques
	CO2	Understand various coding and error correction techniques
	CO3	KnowGSMmobilecommunicationstandards,itsarchitecture,logicalchannels,advantagesandlimitations.
	CO4	Familiarizewithopticalandsatellitecommunicationtechniques
20RPHY404B: CONDENSED MATTER PHYSICS – II	CO1	In Depth Of Knowledge On Elastic properties of solids
	CO2	Importance of lattice specific heat at low temperatures
	CO3	Significance of plane ware method and augmented plane wave b(APW) method
	CO4	Creatimg intrest towards research via theory liquid crystals and polymers

DEPARTMENT OF STATISTICS

SEMESTER-I		
COURSE OUTCOMES		
20RMSCST101: PROBABILITY THEORY–I	CO1	Students understand and learn how to apply algebra of sets
	CO2	Student able to understand the Decomposition of distribution functions Distribution function of random vectors.
	CO3	Student able to understand the Convergence in probability
	CO4	Student able to understand the Dominated Convergence theorem
20RMSCST102:LINEAR MODELS AND APPLIED REGRESSION ANALYSIS	CO1	Students learnt about different linear and non- linear regression models and their appropriatecomputational procedures

	CO2	Student understand R^2, Adjusted R^2 and C_p criteria for model selection
	CO3	Student able to understand the Non-Normal Disturbances and know how to test for Normality
	CO4	Student know about Non-Linear Regression, WaldTest, Lagrange Multiplier Test and Likelihood RatioTest
20RMSCST103:THEORY OF ESTIMATION	CO1	Students must familiar with Point Estimation, Unbiasedness, Consistency, efficiency and Sufficiency
	CO2	Cramer - Rao Inequality, Bhattacharya inequality
	CO3	Uniformly minimum variance unbiased estimators,Rao - Blackwell Theorem
	CO4	Methods of Estimation - Method of Moments, Method of Maximum Likelihood
20RMSCST104: DISTRIBUTION THEORY	CO1	Students know about discrete and Continuous Probability Distributions
	CO2	They identify the difference between Central and Non-Central Distributions
	CO3	Student Understand how to use non-central distributionsinreallifeproblems
	CO4	Student must familiar with Non-Linear Regression, Wald Test, Lagrange Multiplier Testand Likelihood RatioTest
20RMSCST105: STATISTICAL COMPUTING	CO1	Students understood about MS-word and how to export data to excel
	CO2	Student understand about MS-Excel for statistical distributions, charts and matrix operations
	CO3	Students know MS-Access for tables and forms and their SQL codes
	CO4	Students wrote programs in C
20RMSCST106:Practical –I	CO	Student can able to understand and analyse the Numerical problems related to Probability Theory, Distribution Theory, and Statistical Computing etc.,are solved by executing programs on computers

20RMSCST107: HUMAN VALUES AND PROFESSIONAL ETHICS	CO1	It ensures students sustained happiness through identifying the essentials of human values and skills
	CO2	It facilitates a correct understanding between profession and happiness
	CO3	It helps students understand practically the importance of trust, mutually satisfying human behavior and enriching interaction with nature
	CO4	Ability to develop appropriate technologies and management patterns to create harmony in professional and personal life
SEMESTER-II		
COURSE OUTCOMES		
20RMSCST201: STATISTICAL INFERENCE	CO1	Apply various estimation and testing procedures to deal with real life problems
	CO2	Understand Point Estimation, Consistency, Efficiency of an Estimator, Bhattacharya Bounds
	CO3	Minimum Variance Method, Interval Estimation
	CO4	Elements Of Decision Theory, Loss and Risk Functions
20RMSCST202: MULTIVARIATE ANALYSIS	CO1	To discuss about Characteristic functions and related theorems
	CO2	To discuss on weak law of large numbers and Strong law of large numbers
	CO3	To discuss about Central Limit Theorem
	CO4	To discuss about Martingales and Sub-martingales Martingale convergence theorem
20RMSCST203: PROBABILITY THEORY- II	CO1	Students understood stochastic processes, Markov chains, Poisson process, Renewal theory, Branching process, etc.
	CO2	Students understood discrete state space, poison process, Birth and Death process, and wiener process
	CO3	Students understood concept of renewal theory, weakly and strongly stationary process, and moving average and auto regressive process.
	CO4	Students understood the concepts of branching process, martingale in discrete time, convergence and smoothing properties, and Markov process.
20RMSCST 204: STOCHASTIC PROCESSES	CO1	Studentsunderstoodstochasticprocesses,Markovchains, Poisson process,Renewaltheory,Branchingprocess,etc.

	CO2	Studentsunderstooddiscretestatespace,poisonprocess, BirthandDeathprocess,andwienerprocess
	CO3	Students understood concept of renewal theory, weaklyand strongly stationary process, and moving averageandautoregressiveprocess.
	CO4	Students understood the concepts of branching process,martingaleindiscretetime,convergenceandsmoothingproperties,andMarkovprocess.
20RMSCST 205: SAMPLING TECHNIQUES	CO1	Students learnt different sampling techniques of with replacement/ without replacement and Different sampling models
	CO2	Students studied different sampling schemes and estimators
	CO3	Student able to familiar with Two stage sampling and Multi stage sampling
	CO4	Student learn about difference between sampling and non-sampling errors
20RMSCST 206: PRACTICAL–II	CO1	Students know about the solving of Numerical problems related to semester –II
	CO2	To exercise different practical problems manually through calculators
	CO3	To discuss problems relates to semester - II papers.
20RMSCST 207: PERSONALITY ENHANCEMENT AND LEADERSHIP	CO1	Develop comprehensive understanding of personality
	CO2	Know how to access and enhance one‘s own personality
	CO3	Comprehend leadership qualities and their importance
	CO4	Understand how to develop leadership qualities
SEMESTER-III		
COURSE OUTCOMES		
20RMSCST301:ECONOMETRICS	CO1	Students learnt heteroscedasticity and multicollinearity and their estimation procedures
	CO2	Students learnt autocorrelation and their estimation procedures

	CO3	Students able to understand and learn how to use different lag models
	CO4	Students understood about simultaneous linear equations model with their estimation methods
20RMSCST 302:DESIGN OF EXPERIMENTS	CO1	Student understand the importance of Design of Experiments
	CO2	Given a number of factors which affects the experiment, the student should be able to determine the most important factor
	CO3	Student learn the factorial design of experiments Design a learn regression model for an experiment and construct confidence intervals for each parameter
	CO4	Student asses the importance of curvature in regression and construct response surface
20RMSCST 303:RELIABILITY	CO1	Student attain the basic techniques of quality improvement, fundamental knowledge of statistics and probability
	CO2	Student able to determination of reliability through combinatorial methods
	CO3	Student acquire basic knowledge of System reliability with exponential components and model building
	CO4	Student understand the concepts of reliability and maintainability
20RMSCST304: OPERATIONS RESEARCH-I	CO1	Student understand the concept of Operations Research, Graphical Method and Simplex Method
	CO2	Student able to understand the concepts Non-Linear Programming and Integer Programming
	CO3	Student conceptualize optimum event management through Network scheduling
	CO4	Student familiar with Game Theory, Pure and Mixed Strategies, Two Person Zero Sum Game
20RMSCST305: DEMOGRAPHY AND OFFICIAL STATISTICS	CO1	Students know the growth rates, life tables, GRR, NRR and growth models
	CO2	Students understood about gene frequencies, genotypes, phenotypes etc

	CO3	Students learnt about population census methods, organizations in India and their functions
	CO4	Student able to collect data from CSO and NSSO, and learn how to use it
20RMSCST306:PRACTICAL-III	CO1	Students know about the solving of Numerical problems related to semester –I
	CO2	To exercise different practical problems manually through calculators
	CO3	To discuss problems relates to semester - III papers
SEMESTER-IV		
COURSE OUTCOMES		
20RMSCST401: TIME SERIES ANALYSIS AND FORECASTING METHODS	CO1	Acquire knowledge of various advanced Timeseries models, estimation methods and related Timeseries theories
	CO2	Conduct Forecasting analysis of data
	CO3	Understand Auto-covariance, auto-correlation function and Vector Autoregression
	CO4	Apply statistical techniques to model relationships between variables and make predictions
20RMSCST402: R PROGRAMMINGAND DATA ANALYSIS	CO1	Student familiar with Reading CSV files, EXCEL files, SPSS files and working with other data types
	CO2	Student ready to Creating faceted graphics with lattice packages
	CO3	Student working with probability distributions, ANOVA, Linear Regression
	CO4	Student working with stepwise regression analysis procedures and analysis of residuals.
20RMSCST403:BIO-STATISTICS	CO1	Student apply basic statistical concepts commonly used in Health and Medical Sciences
	CO2	Student use basic analytical techniques to generate results
	CO3	Student able to interpret results of commonly used statistical analyses in written summaries
	CO4	Student able to demonstrate statistical reasoning skills correctly and contextually

20RMSCST404: OPERATIONS RESEARCH- II	CO1	Students understood about Bellman Principle of Optimality, Dynamic Programming and Goal Programming
	CO2	Student understand Queuing Models, Steady State Solutions,Pollack-Khinchine Result
	CO3	Student able to know how to apply replacement problems,Group and individual replacement policies
	CO4	Student learnt about Sequencing and Scheduling Problems
20RMSCST405(A): STATISTICAL PROCESS AND QUALITY CONTROL	CO1	Student identify the causes of variation, principle of Shewhart‘s control chart
	CO2	Student understand about CUSUM charts and Multivariate control charts
	CO3	Student familiar with Acceptance sampling plans for attribute inspection, AOQ, AOQL
	CO4	Student know how to use Sampling plans for continuous inspection and Skip lot sampling plan
20RMSCST405(b): STATISTICS FOR RESEARCH, INDUSTRY AND COMMUNITY DEVELOPMENT	CO1	Students have done Simulation models, responsesurface models, demand analysis, social survey andtheir related measures.
	CO2	Student able to understand Non parametric approach to productive efficiency
	CO3	Student learnt about Production functions and their properties and estimation
	CO4	Student able to familiar with Social Surveys for Community Development
20RMSCST406:PRACTICAL–IV	CO1	Students know about the solving of Numerical problems related to semester –IV
	CO2	To exercise different practical problems manually through calculators
	CO3	To discuss problems relates to semester - IV papers.

DEPARTMENT OF BUSINESS ADMINISTRATION

SEMESTER-I		
COURSE OUTCOMES		
20RMBA101:MANAGEMENT THEORY &ORGANIZATIONAL BEHAVIOUR	CO1	Understand the managerial functions and have some basic knowledge on the principles of management.
	CO2	Define the planning and controlling tools to be followed in the organization.
	CO3	Demonstrate and analyze the applicability of the concept of OB to understand the behavior of people in the organization.
	CO4	Applying the psychological concepts like perception, personality, motivation, learning etc: at organizational level.
	CO5	Demonstrate the concepts of leadership and effective conflict resolution strategies in solving organizational problems.
20RMBA102: MANAGERIALECONOMICS	CO1	Recall the application of Economics to decision making
	CO2	Understand the concepts of managerial economics
	CO3	Analyze the importance of managerial economics andits contribution to decision making in different types ofbusinessorganizationsbythemanagerial economist
	CO4	Applythebasicprinciplesofmanagerialeconomics
	CO5	Evaluate&Applymanagerialeconomictoolstothereallifebusinesssituations.
20RMBA103:BUSINESSCOMMUNICATION	CO1	Remember the significance of communication in organisations
	CO2	Classify the different types of communication
	CO3	Develop effective communication skills among students
	CO4	Application of communication models
	CO5	Examine the various barriers of communication
20RMBA104:ACCOUNTING FOR MANAGERS	CO1	The content, assignments, and assessments for Accounting for Managers are aligned to the following learning outcomes.
	CO2	Understating the basic terminology of accounts and finance
	CO3	Identify the Major Principles of Accounting

	CO4	Describe the different types of business organizations and the financial statements they rely on and Analyze data from financial statements and finally Explore how other financial components area counted for and presented.
	CO5	Lastly but not the end Examine the various managerial accounting perspectives throughout an organization and analyze the factors associated with cost -volume- profit impacts
20RMBA105:BUSINESS RESEARCH METHODS	CO1	Demonstrate the ability to choose methods appropriate to research aims and objectives
	CO2	Understand the limitations of particular research methods
	CO3	Develop skills in qualitative and quantitative data analysis and presentation
	CO4	Develop advanced critical thinking skills
	CO5	Define and draw suggestions and conclusions for effective decision-making.
20RMBA106: INFORMATION TECHNOLOGY FOR MANAGERS	CO1	Understating the basics of the computers and its parts
	CO2	Defining the software and its classifications
	CO3	Analysis the MS-Word in the managerial functions
	CO4	Applying the MS-Word , MS-Excel MS-PPT in the managerial functions
	CO5	Create the MS-PPT in the managerial presentation
SEMESTER-II		
COURSE OUTCOMES		
20RMBA201:OPERATIONS RESEARCH	CO1	Identify and develop operational research models from the verbal description of the real system.
	CO2	Understand the mathematical tools that are needed to solve optimization problems
	CO3	Use mathematical software to solve the proposed models.
	CO4	Develop a report that describes the model and the solving technique, analyse the results and propose recommendations in language understandable to the decision-making processes in Management Engineering.
20RMBA202: MANAGEMENT INFORMATION SYSTEMS	CO1	Define the MIS and its usages in Decision-making in an enterprise

	CO2	Analysis and Design the structure of MIS in the enterprise
	CO3	Develop the information system in an enterprise and its methods
	CO4	Create the information system for various managerial functions
	CO5	Evaluation, implementation and controlling of MIS in an enterprise
20RMBA203:MARKETING MANAGEMENT	CO1	Recall & Comprehend the fundamentals of marketing.
	CO2	Demonstrate the concepts of market segmentation, Targeting, Packaging and positioning Strategies.
	CO3	Examine the nuances and complexities involved in product and pricing decisions, skills needed for better distribution and promotional strategies.
	CO4	Appraise the Indian and global marketing environments & trends
	CO5	Apply and develop marketing strategies and plans.
20RMBA204:FINANCIAL MANAGEMENT	CO1	Describe the financial environment within which organizations must operate
	CO2	Critically evaluate the financial objectives of various types of organisations and the respective requirements of stakeholders
	CO3	Explain alternative sources of finance and investment opportunities and their suitability in particular circumstances..
	CO4	Assess the factors affecting investment decisions and functions of capital market.
	CO5	Analyse company‘s performance and make appropriate recommendations.
20RMBA205:HUMAN RESOURCE MANAGEMENT	CO1	Outline the functions and challenges of Human Resource Management (HRM) in this ever changing world.
	CO2	Understand the concepts of HRM
	CO3	Apply different concepts of HR Planning, Recruitment, Selection, Training, Interviewing Techniques etc

	CO4	Analyse the uses of job analysis, job description, job specification, ergonomics in industry and the methods of job evaluation, compensation and training methods
	CO5	Evaluate the need for sustaining and retaining the human resources.
20RMBA206: PRODUCTION &OPERATIONS MANAGEMENT	CO1	Understating the basic concept s of production and operations management s of the computers and its part.
	CO2	Apply the various production and operations echnques like CAD/CAM and Scheduling / Assignments
	CO3	Analyzing the various production facilities and product forecasting
	CO4	Evaluating the work study and quality management processes.
	CO5	Create the productivity cycles and engineering processes
20RMBA208: COMPREHENSIVE VIVA-VOCE	CO	The outcome of comprehensive viva-voce is to givestudentsascopetoexpress/articulatetheskills/competencylearnedandtoenhancetheirintrapersonalandinterpersonalskills
SEMESTER-III		
COURSE OUTCOMES		
20RMBA301:BUSINESS ENVIRONMENT	CO1	Examine the Indian economic environment after NEP-91
	CO2	Create of the India‘s fiscal policy and its impact on industry
	CO3	Analysis of the India‘s trade policy and economic development
	CO4	Evaluate the WTO implications and its impact on Indian economy
	CO5	Legal environment and Indian industry
20RMBA302:BUSINESS LAW	CO1	Demonstrate and understanding of the Legal Environment of Nation
	CO2	Understanding the key provisions relevant to a valid contractual agreements
	CO3	Communicate the business issues effectively using standard business and legal terminology applicable to various forms of businesses.

	CO4	Equipping with thorough legal provisions of business operations in order to continue in a hassle free business environment
	CO5	Apply basic legal knowledge to business transactions.
20RMBA303: INTERNATIONAL BUSINESS MANAGEMENT	CO1	Explain business expansion abroad and key issues related to their operations in other countries.
	CO2	Compare and contrast cultures and societies globally using socioeconomic and cultural frameworks.
	CO3	Develop an entry strategy into other markets recognizing the nature of institutions and forces governing the process of globalization.
	CO4	Analyzing the risks associated with cross-border selection and entry strategies
	CO5	Develop logical thinking for carrying out SWOT analysis to be globally competitive
20RMBA304:PROJECT REPORT, EVALUATION &VIVA-VOCE	CO	Project report, evaluation & viva-voce helps to assess the extent of practical applications of theory to organizational problems. The outcome of this viva-voce is that students express/articulate the experience gained in the project work.
20RMBA305F:RISK MANAGEMENT ANDINSURANCE	CO1	Understand the concept of risk identification, risk evaluation and risk management techniques.
	CO2	Well-known to indentify different types of policies and contracts, commercial risk management applications, workers compensation and risk financing
	CO3	Recognised the property and liability Insurance Coverage for auto owners, home owners.
	CO4	Familiar with risk management applications, Loss of Life, Loss of Health, annuities.
	CO5	In-depth knowledge on risk management environment and government regulations with respect insurance sector.
20RMBA305M: CONSUMER BEHAVIOUR	CO1	Demonstrate how the knowledge of consumer behavior can be applied to marketing
	CO2	Apply consumer behavior models in consumer research.
	CO3	Understand the internal dynamics such as personality, perception, learning, motivation and attitude to the choices that consumer make.
	CO4	Demonstrate the group influences on consumer behaviour.
	CO5	Understand the consumerism and ethics in marketing.

20RMBA305H: HUMAN RESOURCE PLANNING	CO1	Formulation of a effective Human Resource Planning
	CO2	Determination of Staffing policy
	CO3	Classification of qualitative and quantitative techniques of forecasting
	CO4	Application of Techniques in supply and demand forecasting in HRP process
	CO5	Understand the concept of man power utilization
20RMBA305S:ENTERPRISE RESOURCEPLANNING	CO1	Define the evolution of ERP and its usages across the industry
	CO2	Develop the Business Intelligence system through available software
	CO3	Analyzing the ERP modules for business applications
	CO4	Implementation of ERP in business applications.
	CO5	Examine the various ERP products available in the market for enterprises.
20RMBA306F:FINANCIAL MARKETS AND SERVICES	CO1	Understandtheroleandfunctionofthefinancialsysteminre ferencetothemacroeconomy
	CO2	Demonstrate an awareness of the current structure and regulation of the Indian financial service sector
	CO3	Evaluateandcreatestrategiestopromotefinancialproducts andservices.
	CO4	Provide insight into various procedural and functional aspects of various intermediary financial institutes which facilitate channeling of savings into proper investment avenues.
20RMBA306M: ADVERTISING AND SALES PROMOTION MANAGEMENT	CO1	Demonstrate the role, evolution, trends & ethical aspects related to advertising.
	CO2	Develop an advertising campaign planning and process.
	CO3	Appraise the advertising agencies and advertising effectiveness.
	CO4	Demonstrate the sales promotion tools and assess the promotional strategy.
	CO5	Discuss the publicity & public relation strategies in marketing.

20RMBA306H:TRAINING AND DEVELOPMENT	CO1	Outline the functions and challenges of Training & Development
	CO2	Apply different concepts of Training and Executive Development Programs.
	CO3	Apply the knowledge to design training methods on need based tailored approach
	CO4	Evaluate various training methods in this ever competitive world
	CO5	Design training methods/executive development programs accordingy to the trends in industry
20RMBA306S:DATABASE MANAGEMENT SYSTEMS	CO1	Understanding the basic purpose of DBMS
	CO2	Develop the relational models of DBMS
	CO3	Design the file system and structure of DBMS for organizations
	CO4	Analysis of Index and Hashing methods of DBMS
	CO5	Create hierarchal model of database system for enterprises.
20RMBA307F: INVESTMENT AND PORTFOLIO MANAGEMENT	CO1	Skill fully understand various investment avenue favorable for investment
	CO2	Identify how to make a fruitful investment Decisions
	CO3	Understand the approaches to security analysis and its valuation thus gain the knowledge about the portfolio theory and measurement of Risk and Return
	CO4	Develop logical thinking for self-management of finance both in selection and evaluation of investments.
20RMBA307M:SALES AND DISTRIBUTION MANAGEMENT	CO1	Understand the concept & theories of sales & distribution functions.
	CO2	Apply and enhance the sales force productivity and performance.
	CO3	Plan and implement an effective sales strategy for the organizations.
	CO4	Develop and implement distribution channel strategy.
	CO5	Determine the channel efficiency and effectiveness; wholesaling and retailing.

20RMBA307H: PERFORMANCE MANAGEMENT	CO1	Outline the functions and challenges of performance management
	CO2	Understand the concepts of performance management
	CO3	Apply different concepts to coaching and counseling to retain them in the organisation.
	CO4	Utilize the various methods of fixing compensation for retaining employees
	CO5	Understand the concepts of learning organisations
20RMBA307S: MANAGEMENT OF SOFTWARE PROJECTS	CO1	Plan the software engineering projects for enterprises
	CO2	Analysis and designing of the software project methods
	CO3	Testing software projects and determine the quality assurances
	CO4	Designing the implementation procedures of software projects
	CO5	Develop the maintenance procedures of software projects.
20RMBA308:BUSINESS ORGANIZATION AND MANAGEMENT	CO1	Understand the managerial functions and have some basic knowledge on the principles of management.
	CO2	Define the planning and controlling tools to be followed in the organization.
	CO3	Demonstrate and analyze the applicability of the concept of OB to understand the behavior of people in the organization.
	CO4	Applying the psychological concepts like perception, personality, motivation, learning etc: at organizational level.
	CO5	Demonstrate the concepts of leadership and effective conflict resolution strategies in solving organizational problems.
SEMESTER IV		
COURSE OUTCOMES		
20RMBA401:STRATEGIC MANAGEMENT	CO1	Interpret the process of strategic management process
	CO2	Analyse external and internal environment

	CO3	Formulation of Strategies for effective organisational outcomes
	CO4	Design the concepts-BCG Matrix,GE matrix
	CO5	Define Vision ,Mission statements
20RMBA402:INDIAN ETHOS AND BUSINESS ETHICS	CO1	Outline the importance and challenges of ethical management
	CO2	Understand the concepts of Indian ethos and Values
	CO3	Apply different concepts of Indian ethos and values to management of organisation
	CO4	Analyse Business Ethics and Corporate Ethics to enable ethical decision making
	CO5	Utilizethevariousprinciplesinethicaldecisionmaking
20RMBA403: ENTREPRENEURSHIP DEVELOPMENT	CO1	Compare and contrast the concept of entrepreneur & entrepreneurship and the entrepreneurial scenario in India & abroad.
	CO2	Understand the components of a business plan. Ability to scan the environment and assess opportunities & threats.
	CO3	Examine the enterprise launching formalities, project planning and development.
	CO4	Understand the role of supporting institutions for MSMEs.
	CO5	Develop thoughts to start rural and women entrepreneurship.
20RMBA404:TOTAL QUALITY MANAGEMENT	CO1	Examine the TQM role in the enterprises
	CO2	Analysis of the principles and philosophies of the TQM in practically
	CO3	Design the statistical control and process controls systems of TQM in enterprises
	CO4	Create the tools and techniques of the TQM
	CO5	Evaluation of Quality management certification and procedures.
20RMBA405F:FINANCIAL DERIVATIVES	CO1	Students shall understand the purpose or utility of derivatives.

	CO2	It will enable the students to select right kind of derivatives amongst forward, futures, options, Greeks, swaps for risk hedging.
	CO3	Understand forward and the option pricing models.
	CO4	Able to distinguish among hedging, speculation and arbitrage.
	CO5	Develop logical thinking in strategy formulation in mitigating the anticipated risk arising out of a financial transaction.
20RMBA405M:SERVICES MARKETING	CO1	Understand the nature and scope of services marketing.
	CO2	Appraise the nature and development of a services marketing Strategy.
	CO3	Apply an investigation of service delivery systems, collecting, analyzing data and synthesizing information to provide valid conclusions.
	CO4	To adapt service quality and SERVQUAL to enhance service performance
	CO5	Examine the services marketing practices followed in various services industry
20RMBA405H: ORGANIZATION DEVELOPMENT	CO1	Understand the concept OD
	CO2	Application of OD Interventions
	CO3	Evaluate ethical issues in OD
	CO4	Assumptions of OD
	CO5	Understand the role of power politics in OD
20RMBA405S:DATA COMMUNICATION AND NETWORK ANALYSIS	CO1	Understanding the data communication and network security models
	CO2	Evaluate and designing the data links and layers
	CO3	Analysis of the transportation layers and security layers
	CO4	design the network security and privacy layers for enterprises
	CO5	Create the application layers of networking and internet devises for organizations

20RMBA406F:INTERNATIONALFINANCIALMANAGEMENT	CO1	Analyse, apply and evaluate information within the global financial environment of foreign exchange to solve problems and make informed decisions
	CO2	Review the problems of dealing in foreign currency and the advantages and disadvantages of overseas funding
	CO3	Identify market conventions on exchange rate quotation and correctly calculate those quotations
	CO4	Demonstrate an integrative understanding of the foreign exchange market and the relationships between interest rates, spot and forward rates and expected inflation rates
	CO5	Comprehend the range of hedging strategies includingforward rate hedging and contingent hedging, Analyse,evaluateandsynthesizebothquantitativeandqualitative financial information to influence problemsolvinganddecisionmaking.
20RMBA406M:BRAND MANAGEMENT	CO1	Apply the fundamental concepts of product mix and product strategies to brand management.
	CO2	Formulate and justify brand development decisions.
	CO3	Demonstrate knowledge of the nature and process of branding & brand management.
	CO4	Understand and conduct the measurement of brand equity and brand performance
	CO5	Examine insights into how to create profitable brand strategies by building, measuring and managing brand equity.
20RMBA406H:GLOBAL HUMAN RESOURCES MANAGEMENT	CO1	Recall HRM concepts and trends
	CO2	Understand the concepts of Global Human Resource Management
	CO3	Identify the challenges of global HRM& strategic role of GHRM.
	CO4	Analyse & Evaluate the cross-cultural management problems and build skill building methods in crossculture teams.
	CO5	Develop the global labour relations and international standards in organizations.

20RMBA406S: CORPORATE INFORMATION MANAGEMENT	CO1	Apply the information system goals and categories in the organization.
	CO2	Analysis and designing information system for enterprise
	CO3	Creating the database system for organization
	CO4	Designing of security, control and maintenance of the IS
	CO5	Initiating the new technology implementation in the process of IS in an enterprise.
20RMBA407F:TAX PLANNING AND MANAGEMENT	CO1	Basic knowledge and understanding about the fundamental concepts and computation of tax and Assessment procedure
	CO2	Will be able to develop analytical skills in application of provisions of Income Tax for Tax planning and Management in all capacities
	CO3	Develop tax planning for channelization of taxable income to various investment plans with understanding various provisions relevant to a particular concept of company law and tax law.
	CO4	Adapt to updated amendments in tax provisions and procedures recommended by the Government.
20RMBA407M:RETAIL MARKETING	CO1	Understand the fundamental retail marketing and strategic process in retailing system.
	CO2	Identify the common retail store services and CRM.
	CO3	Understand the merchandise management in retailing.
	CO4	Apply the latest trends in retail management and know about the latest era in Indian retail sector.
	CO5	Understand the retail store management & communication strategies.
20RMBA407H:CHANGE MANAGEMENT	CO1	To understand the concepts of change management
	CO2	To underscore the necessity for change and organisation development
	CO3	To analyse the forces that stimulate change
	CO4	To prioritize the reasons for the resistance to change in an organization so as to prepare organization for change.

	CO5	Understand systems & multidisciplinary approach to change.
20RMBA407S:DECISION SUPPORT SYSTEMS	CO1	Analyze the integration of MIS in the organization.
	CO2	Evaluate the data structure models of DSS
	CO3	Design the applications of DSS in an enterprise
	CO4	Evaluate the new optimizing models of DSS
	CO5	Identifying the AI related application into an organization.

DEPARTMENT OF MBA (TourismManagement)

SEMESTER-I		
COURSE OUTCOMES		
20RMBAD101: MANAGEMENT AND ORGANISATION BEHAVIOR	CO1	Remember the various schools of management thoughts
	CO2	Familiarize various functions of management
	CO3	Understand the process of Management
	CO4	Able to Distinguish between various functions of the management
	CO5	Gain the basic knowledge about Business Management.
20RMBAD102: MANAGERIAL ECONOMICS	CO1	Know the meaning of business and tourism economics.
	CO2	Associate various economical thoughts to present form of tourism
	CO3	Understand the role of tourism in economy
	CO4	Learn the travel related economics
	CO5	Learn the software used in determining various economic theories related to travel and hospitality industry
20RMBAD103: MANAGERIAL COMMUNICATION	CO1	Gain the fundamentals and meanings of communication skills
	CO2	Familiarize the basics for learning effective communication
	CO3	Understand the key tips and tricks of public speaking skills
	CO4	Forming report writing skills

	CO5	Know the importance of verbal and non verbal communication
20RMBAD104: ACCOUNTING FOR MANAGERS	CO1	Remember the various accounting practices.
	CO2	Familiarize various functions of accounting.
	CO3	Understand the value of accounting in management
	CO4	Able to Distinguish between various accounting information systems.
	CO5	Gain the basic knowledge on the role of computers in accounting.
20RMBAD105:BUSINES SSTATISTICS	CO1	Describe the importance of statistics in business.
	CO2	Classify different statistical methods.
	CO3	Choose the best method for tourism research
	CO4	Illustrate the data with suitable statistical tools
	CO5	Understand the significance of tourism statistics
20RMBAD106: BUSINESS ENVIRONMENT& LAW	CO1	Describe the importance of business environment
	CO2	Understand the balance between environment and tourism law
	CO3	Describe the concept of tourism contract and its benefits
	CO4	Examine the impacts of law on environment and stakeholders
	CO5	Analyze the necessity of tourism law in the present scenario
20RMBAD107: ICT FOR MANAGERS	CO1	List out various technologies and its uses in travel and tourism industry
	CO2	Describe a framework for virtual tourism
	CO3	Understand the scope of technological application in travel and tourism industry
	CO4	Analyze the effectiveness of various technologies in decision making process
	CO5	Ability to calculate the fair construction methods

20RMBAD108: HUMAN VALUES & PROFESSIONAL ETHICS-I	CO1	Know and describe the importance of values and ethics in human life
	CO2	Know the ethical guidelines effectively
	CO3	Formulate the ethical norms
	CO4	Understand the global code of ethics
	CO5	Assess the role of national and international organizations in framing ethical Guidelines
SEMESTER-II		
COURSE OUTCOMES		
20RMBAD201: OPERATIONS RESEARCH	CO1	Describe the importance of operations research
	CO2	Classify the different types of operations research
	CO3	Choose the best method for tourism research
	CO4	Illustrate the data with suitable statistical tools
	CO5	Understand the significance of hypothesis
20RMBAD202: BUSINESS RESEARCH METHODS	CO1	Describe the meaning of research
	CO2	Understand the need of tourism research
	CO3	Apply advanced techniques in tourism research
	CO4	Classify the qualitative and quantitative techniques
	CO5	Compile various resources for making report
20RMBAD203:MARKETING MANAGEMENT	CO1	Describe the importance of marketing for tourism and allied sectors
	CO2	Learn about market segments
	CO3	Design new tourism products
	CO4	Develop successful publicity campaigns
	CO5	Evaluate the success of marketing strategies
20RMBAD204: FINANCIAL MANAGEMENT	CO1	Remember various functions of finance.
	CO2	Familiarize capital structure and components.
	CO3	Understand the value of finance in tourism management
	CO4	Able to understand working capital management.
	CO5	Gain the basic knowledge on the role of Indian finance system.
20RMBAD205: HUMAN RESOURCES MANAGEMENT	CO1	Understand the functions of HRM
	CO2	Classify recruitment methods

	CO3	Know the importance of training
	CO4	Estimate the benefits of work force
	CO5	Formulate suitable strategies for managing human resources
20RMBAD206: PRODUCTION &OPERATIONS MANAGEMENT	CO1	Know evolution and historical view of production and operations
	CO2	Understand the difference between production and operations.
	CO3	Distinguish between different types of facility layouts.
	CO4	Familiarize with the concept of quality management.
	CO5	Know about ISO standards.
20RMBAD207: HUMAN VALUES AND PROFESSIONAL ETHICS – II	CO1	Know and describe the importance of values and ethics in human life
	CO2	Know the ethical guidelines effectively
	CO3	Formulate the ethical norms
	CO4	Understand the global code of ethics
	CO5	Assess the role of national and international organizations in framing ethical guidelines
20RMBAD208 :ICT LAB & COMPREHENSIVE VIVA	CO1	List out various technologies and its uses in travel and tourism industry
	CO2	Describe a frame work for virtual tourism
	CO3	Understand the scope of technological application in travel and tourism industry
	CO4	Analyse the effectiveness of various technologies in decision making process
	CO5	Ability to calculate the fair construction methods
SEMESTER-III		
COURSE OUTCOMES		
20RMBAD301: TOURISM PRINCIPLES, POLICIES AND PRACTICES	CO1	Understand the basic concepts of tourism
	CO2	Identifydifferent types of tourism
	CO3	Distinguish different types of tourismand their policies.
	CO4	Familiarizethe various impacts of tourism
	CO5	Understand various leadingtourismorganizations‘ role on thepromotion of tourism
20RMBAD302: TOURISM PLANNING AND DEVELOPMENT	CO1	Knowthe meaningof tourism policy
	CO2	Analysethe objectivesand strategies oftourismpolicy
	CO3	Understand the planning process of tourism
	CO4	Formulatesustainabletourism planningstrategies
	CO5	Understand budgetaryplanning

20RMBAD303: TOURISM MARKETING AND DESTINATION DEVELOPMENT	CO1	Knowtheimportanceof marketing a destination fortourismand allied sectors
	CO2	Learnabout competitive positioning of tourism destinations.
	CO3	Design new marketing strategies for destination development.
	CO4	Familiarize with the destination branding practices
	CO5	Introduce advanced analysis and research in the field of destination development
20RMBAD304:RESOURCE, ATTRACTION AND PRODUCTION TOURISM	CO1	Remember the origin ofIndia's uniquetourismimportance
	CO2	Obtain information on archeological, historical and cultural tourism attractions in India
	CO3	Familiarizewith natural tourism attractions ofIndia
	CO4	Learn various dynasties and their contributions to the cultural tourism ofIndia
	CO5	Distinguish between man-made and natural attractions inIndia
20RMBAD305(F): RISK MANAGEMENT AND INSURANCE	CO1	Know about various financial services.
	CO2	Understand credit rating and its methods.
	CO3	Able to analyze integrated risk management.
	CO4	Able to Distinguish various insurance contracts.
	CO5	Gain knowledge on employee financial benefits.
20RMBAD305(M): CONSUMER BEHAVIOUR	CO1	Understand concept and overview of consumer behaviour
	CO2	Explore models of consumer behaviour.
	CO3	Explain Individual determinants of consumer behaviour.
	CO4	Understand marketing research and its process.
	CO5	Explore applications of marketing research.
20RMBAD305(H): HUMAN RESOURCE PLANNING	CO1	learn about the importance of hr planning in the organization
	CO2	understand hr information system,audit and accounting system
	CO3	learn about how to retain talented pool of employees in the organization
	CO4	analyze the aspects of talent engagement, retention and career planning of employees.
	CO5	design performance standards for employees
20RMBAD306(F): FINANCIAL MARKETS AND SERVICES	CO1	Gain knowledge on various financial institutions of India
	CO2	Familiarize with the banking institutions
	CO3	Understand financial securities
	CO4	Able to distinguish various fund and fee based services
	CO5	Understand the role of RBI

20RMBAD306(M): ADVERTISING AND SALES PROMOTION	CO1	Remember the role of advertising in marketing
	CO2	Organize effective advertising of products and services.
	CO3	Test advertisement budgets.
	CO4	Understand and measure sales based on promotion.
	CO5	Maintain effective consumers relations through advertising.
20RMBAD306(H): TRAINING AND DEVELOPMENT	CO1	provide an experimental skill-based exposure to the process of planning, organizing, and implementing of training program in a globalised organization
	CO2	provide an in depth understanding of the role of training in the development process of an employee
	CO3	educate the employee about career objectives and career planning
	CO4	Understand the importance of training in effective management of organizations
	CO5	Evaluate various training methods
20RMBAD307(F): INVESTMENT AND PORTFOLIO MANAGEMENT	CO1	study the valuation of bonds and shares
	CO2	get acquainted with the fundamental analysis and technical analysis and their role in predicting share price movements
	CO3	know about the process of portfolio management and the process of selection of portfolios
	CO4	evaluation and revision to minimize risk and maximize return.
	CO5	distinguish various models of portfolio management.
20RMBAD307(M): SALES AND DISTRIBUTION MANAGEMENT	CO1	Evaluate the skills and methods required for sales force management.
	CO2	Understand the Management of Marketing Channels.
	CO3	Explore the concept and theories of rural distribution.
	CO4	Explore the concept of retailing.
	CO5	Understand the process of marketing logistics.
20RMBAD307(H) : PERFORMANCE MANAGEMENT	CO1	provide a methodology for measuring the efficiency of the employees and to discuss about the components of a good reward system
	CO2	create an idea about the various reward methods while rewarding the employee for his great efforts towards to the organizational objectives
	CO3	understand various incentives that can be used to motivate employees
	CO4	evaluate compensation that given to special groups and retirement benefits that can be offered to employees
	CO5	distinguish various performance appraisal methods and techniques
20RMBAD308: PROJECT WORK	CO	To give practical exposure to the management concepts learned.
SEMESTER-IV		
COURSE OUTCOMES		

20RMBAD401: TRAVEL AGENCY & TOUR OPERATIONS MANAGEMENT	CO1	Know evolution of travel agency business in the world
	CO2	Understand the difference between tour operator and travel agents
	CO3	Distinguish between different types of travel agents and tour operators
	CO4	Familiarize the Package for FIT, GIT andFAM tour
	CO5	Find various businessopportunities in travel and toursector
20RMBAD402: HOSPITALITY MANAGEMENT	CO1	Remember the origin and development of the hotel
	CO2	Understand the international hotel chains and types
	CO3	Familiarize the secondary and supplementary accommodation
	CO4	Familiarize the hotel operations and organizational structure in the hotel business
	CO5	Gain the new knowledge about Leading multinational hotel chains in India
20RMBAD403: TRAVEL MEDIA& JOURNALISM IN ELECTRONIC AGE	CO1	Know the importance of various sources of media in promoting tourism.
	CO2	Learn about developing ideas for travelogues.
	CO3	To understand emerging business models in tourism and travel industry.
	CO4	To study the impact of Information Technology on tourism and travel sector
	CO5	Portray travel experiences
20RMBAD404: MANAGEMENT OF TOURIST TRANSPORT	CO1	Understand the genesis of transport system origin and its development
	CO2	Able to distinguish between different types transport systems and its roles
	CO3	Familiarize the various luxuries tourist trains and its role and contribution to national tourism
	CO4	Find different types of Airline and terminologies
	CO5	Know the role of water transport system and its types
20RMBAD405(F): FINANCIAL DERIVATIVES	CO1	Understand various financial derivatives
	CO2	Classifyfinancial options
	CO3	Differentiate option pricing and swap pricing
	CO4	Estimatefuture markets.
	CO5	Formulatesuitablestrategies for selecting options.
20RMBAD405(M): SERVICES MARKETING	CO1	Know service quality measurements to build customer loyalty
	CO2	Understand service blueprinting, the integration of new technologies, and other key issues
	CO3	Identify the influences of the multicultural marketplace
	CO4	Conduct a services audit plan for a service firm
	CO5	Understand service quality management.

20RMBAD405(H): ORGANIZATION DEVELOPMENT	CO1	Learn about managing change in organizations
	CO2	Get acquainted with OD interventions, techniques and approaches
	CO3	Formulate change in organization
	CO4	Understand organizational behavior
	CO5	Evaluate Action Research
20RMBAD406(F): INTERNATIONAL FINANCIAL MANAGEMENT	CO1	Understand the mechanism of International Financial operations
	CO2	Analyse international portfolio management, and working capital management in different countries.
	CO3	Understand the scopeof financial management in international scenario.
	CO4	Learn International Working Capital Management
	CO5	Know financing of foreign projects.
20RMBAD406(M): BRAND MANAGEMENT	CO1	Understand the nuances of product and product concepts.
	CO2	Explain branding concepts and ideas in their own words.
	CO3	Formulate effective brand strategies for consumer and business goods and services.
	CO4	Learn how to build brand equity and establish brand identity.
	CO5	Demonstrate the ability to conduct a critical brand audit.
20RMBAD406(H): GLOBAL HUMAN RESOURCES MANAGEMENT	CO1	Understand Functional Aspects of GHRM.
	CO2	Know the concepts of training in international arena
	CO3	Analyze GHRM Practices in Selected Countries
	CO4	Learn the concepts of HR training in international arena.
	CO5	Familiarize IT and GHRM.
20RMBAD407(F): TAX PLANNING AND MANAGEMENT	CO1	Learn about Capital Gains, computation of Taxable income.
	CO2	Understand Corporate Tax Planning.
	CO3	Analyze various Tax provisions.
	CO4	Evaluate Tax Payment Sources.
	CO5	Know about Tax incentives.
20RMBAD407(M):RETAIL MARKETING	CO1	Have an insight into the working of Retailing Sector
	CO2	Acclimatize with the insights of retailing, key activities and relationships
	CO3	Learn about cross buying behaviour of customers.
	CO4	Evaluate Customer Life Time Value and Customer Equity.
	CO5	Understand the concepts of e- tailing, retail market strategy, retail merchandising, pricing policies
20RMBAD407(H) : CHANGE MANAGEMENT	CO1	Understand the process change management in organizations.
	CO2	Analyse various methods to resist change.

	CO3	Identify the relevance of Organizational Development with change management.
	CO4	Understand change dynamics.
	CO5	Evaluate change coping with organizational behavior.
20RMBAD408: FIELD VISIT REPORT	CO	Industry orientation, application of theory into practise, and industry exposure

DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS

SEMESTER-I		
COURSE OUTCOMES		
20RMCA101:DATA STRUCTURES USING C	CO1	Define data structure and list out their applications and understands array & linked list data structures
	CO2	Identify suitable data structures for different scenarios
	CO3	Evaluates the strength and weakness of different data structures
	CO4	Design programs for linear and non-linear data structures‘ operations
20RMCA102: DATA BASE MANAGEMENT SYSTEMS USING SQL SERVER	CO1	Define and understand the basic concepts of relational data model, entity-relationship model, relational database design, relational algebra and SQL
	CO2	Develop ER-models to represent simple database application scenarios
	CO3	Accessing Databases from different Applications
	CO4	Improve the database design by applying normalization.
20RMCA103: OBJECT ORIENTED PROGRAMMING USING JAVA	CO1	Understand various programming paradigms
	CO2	Implement the concepts of object-oriented programming
	CO3	Gain knowledge about basics of Java Language to write Java Programming.
	CO4	Ability to design and develop Object Oriented programs
20RMCA104: OPERATING SYSTEMS	CO1	Understand the concept of OS, resource management in operating systems ,implementation of file systems and directories along with the interfacing of IO devices with the operating system
	CO2	Evaluate various scheduling algorithms ,
	CO3	Identify the dead lock situation and provide appropriate solution so that protection and security of the operating system is also maintained.
	CO4	Ability to design and solve synchronization problems, Apply memory management techniques in the design of operating systems

20RMCA105: PROBABILITYANDSTATISTICS	CO1	Apply key concepts of probability, including discrete and continuous random variables, probability distributions, conditioning, independence, expectations, and variances.
	CO2	Define and explain the different statistical distributions (e.g., Normal, Binomial, Poisson) and the typical phenomena that each distribution often describes.
	CO3	Impart the concepts of statistical methods to solve engineering applications
	CO4	Understand the concepts of hypothesis testing and p-value.
20RMCA101P:DATA STRUCTURES USING CLAB	CO1	Understand various algorithms implantation process of different data structures
	CO2	Apply suitable data stature for a need
	CO3	Analyse space and time complexity of various different data structures‘ operations
	CO4	Develops applications for implantations of different data structures‘ operations
20RMCA102P: DATA BASE MANAGEMENT SYSTEMS LAB SQL SERVER	CO1	Understand the syntaxes for queries, procedures and functions
	CO2	Apply queries, procedures and functions for a need
	CO3	Analyze effectives of different normal forms implementation
	CO4	Design a commercial relational database system
20RMCA103P OBJECT ORIENTED PROGRAMMING USING JAVA LAB	CO1	Able to analyze Object oriented design principles and proper program structuring using Java
	CO2	Understand the concept of packages, polymorphism, interface, and inheritance.
	CO3	Implement error handling techniques using exception handling and develop programs using class and inputs from keyboard.
	CO4	Develop Multithreaded and event driven using AWT and Swing components.
SEMESTER-II		
COURSE OUTCOMES		
20RMCA201: COMPUTER NETWORKS	CO1	Knowledge on Network Architectures (TCP/IP and OSI) models, Protocol Suites
	CO2	Understand functionalities of layers in each Network Architecture
	CO3	Analyse different routing algorithms
	CO4	Apply suitable routing algorithms and protocols based on requirements
20RMCA202: DESIGN & ANALYSIS OF ALGORITHMS	CO1	Analyze the performance of a given algorithm by using Asymptotic Notations.
	CO2	Solve problems by using Divide-and-Conquer and Greedy Method.
	CO3	Remember dynamic programming and backtracking techniques for solving optimization problems.

	CO4	Design algorithms by using Branch and Bound Techniques. Also classify computational problems into P, NP, NP Hard and NP Complete
20RMCA203: DATA MINING AND DATA WAREHOUSING	CO1	Ability to understand the types of the data to be mined and present a general classification of tasks and primitives to integrate a data mining system
	CO2	Choose and employ suitable data mining algorithms to solve real world problems in business and scientific information using data mining
	CO3	Ability to apply the concepts, algorithm, techniques and tools for developing practical applications
	CO4	Ability to classify webpages, extracting knowledge from the web
20RMCA204: PYTHON PROGRAMMING	CO1	Examine Python syntax and semantics and be fluent in the use of Python flow control and functions.
	CO2	Demonstrate proficiency in handling Strings and File Systems.
	CO3	Create, run and manipulate Python Programs using core data structures like Lists, Dictionaries and use Regular Expressions.
	CO4	Understand the concepts of Object-Oriented Programming as used in Python.
20RMCA205: SOFTWARE ENGINEERING	CO1	To understand the concepts of software engineering, requirement models, design models, SCM, different kinds of risks, project estimations and software testing techniques
	CO2	Analyze software requirements and process models required to develop a software system
	CO3	Examine different Testing Strategies for conventional software and metrics to evaluate the product.
	CO4	Demonstrate skills in applying risk and quality management principles for effective management of software projects
20RMCA201P: COMPUTER NETWORKS LAB	CO1	Able to analyze Object oriented design principles and proper program structuring using Java
	CO2	Understand the concept of packages, polymorphism, interface, and inheritance.
	CO3	Implement error handling techniques using exception handling and develop programs using class and inputs from keyboard.
	CO4	Develop Multithreaded and event driven using AWT and Swing components.
20RMCA203P: DATAMINING AND DATA WAREHOUSING LAB	CO1	Choose and employ suitable data mining algorithms to solve real world problems in business and scientific information using data mining.
	CO2	To understand the types of the data to be mined and present a general classification of tasks and primitives to integrate a data mining system.
	CO3	To apply the concepts, algorithm, techniques and tools for developing practical applications.

	CO4	Ability to classify WebPages, extracting knowledge from the web.
20RMCA204P: PYTHON PROGRAMMING LAB	CO1	Able to understand control structures and use python data types
	CO2	Impart knowledge on object oriented skills in python.
	CO3	Implement error handling techniques using exception handling
	CO4	Explore the utility of strings and functions in modular programming using python
SEMESTER-III		
COURSE OUTCOMES		
20RMCA301: ADVANCED JAVA PROGRAMMING	CO1	Understanding on J2EE Architectures, Client & Server communication process, software components, Servlets, JSP and CORBA
	CO2	Handle Errors and Exceptions in Web Applications
	CO3	Analyse effectiveness of creating dynamic web pages using Servlet and JSP
	CO4	Develops Web Applications using Java Servlet and JSP
20RMCA302: ARTIFICIAL INTELLIGENCE	CO1	Ability to formulate an efficient problem space for a problem expressed in natural language.
	CO2	Select a search algorithm for a problem and estimate its time and space complexities.
	CO3	Possess the skill for representing knowledge using the appropriate technique for a given problem.
	CO4	Possess the ability to apply AI techniques to solve problems of Natural Language Processing, Expert System, Pattern Recognition etc.,
20RMCA303: R PROGRAMMING	CO1	Understands the features of R, Data Types in R, Data Structures in R, Control Structures, Simulation fundamentals
	CO2	Apply Data Types, Data Structures, Control Structures and other features to write programs
	CO3	Examine the different Data Structures, Data Sets that exist in R
	CO4	Develops programs for data analysis
20RMCA304: WEB PROGRAMMING	CO1	Analyze a web page and identify its elements and attributes.
	CO2	Outline XML fundamentals and usage of XML technology in electronic data interchange.
	CO3	Build dynamic web pages using JavaScript (client side programming).
	CO4	To design and develop web based enterprise systems for the enterprises using technologies like JSP, Servlet.
20RMCA305(Elective): INTRODUCTION TO BIG DATA ANALYTICS	CO1	Explain Big Data and its Applications in various Domains.
	CO2	Determine why existing technologies are inadequate to analyze the large data.
	CO3	Understand HDFS File Structure, Map Reduce Framework, the architectures related to them and to use them to solve complex problems.
	CO4	Integrate R with Hadoop and solve analytical problems

20RMCA305(Elective): PRINCIPLES OF CLOUD COMPUTING	CO1	Understand the fundamental principles of distributed computing, cloud computing and security
	CO2	Apply cloud computing and security principles
	CO3	Analyze the performance of Cloud Computing
	CO4	Choose among various cloud technologies for implementing applications
20RMCA305(Elective): INTRODUCTION TO INTERNET OF THINGS	CO1	Recollect different categories of Networks
	CO2	Understand Characteristics, Architectural design and of IoT
	CO3	List out various applications of IoT
	CO4	Design IoT solution for a need
20RMCA305 (Elective): CRYPTOGRAPHYAND NETWORK SECURITY	CO1	Understand, compare and apply different encryption and decryption techniques to solve problems related to confidentiality and authentication
	CO2	Apply the knowledge of cryptographic checksums and evaluate the performance of different message digest algorithms for verifying the integrity of varying message sizes
	CO3	Analyze different attacks on networks and evaluate the performance of firewall sand security protocols like SSL, IPSec, andPGP
	CO4	Apply the knowledge of cryptographic utilities and Authentication mechanisms to design secure applications
20RMCA305(Elective): DATA SCIENCE	CO1	Understands the programming principles in Python, Statistical techniques for dataanalysis
	CO2	Apply data pre-processing techniques,visualization in big-data analytics
	CO3	Analyze data using the different visualization techniques
	CO4	Evaluating different algorithms for analysis
20RMCA301P: ADVANCED JAVA PROGRAMMING LAB	CO1	Understands suitable methods for error handling, exception handling, JDBC, and DDL & DML Commands.
	CO2	Apply suitable packages ,classes and methods for Implementation of packages, polymorphism, interface, and inheritance.
	CO3	Analyze dynamic pages creation using Servlets, JSP
	CO4	Develop multithreaded, Event driven,Web applications using Servlets, JSP, JavaBeans, RMI
20RMCA303P: R PROGRAMMING LAB	CO1	Understands the installation process of R programming
	CO2	Utilizes and R data types, packages for developing R programming
	CO3	Analyze data techniques using
	CO4	Develops R programming capabilities for data analysis
20RMCA304P: WEB PROGRAMMING LAB	CO1	Analyze web pages and identify its elements and attributes

	CO2	Demonstrate the ability to retrieve data from a data base and present it in a web page
	CO3	Create dynamic web pages using Java Script
	CO4	Create XML documents and schemes

DEPARTMENT OF M.COM (BANKING&FINANCE)

SEMESTER-I		
COURSE OUTCOMES		
20RMBF102:BUSINESS ENVIRONMENT AND POLICY	CO1	Define business environment
	CO2	Explains how business environment on Indian economy
	CO3	Identify of political, legal business environment
	CO4	Analyzing of socio-cultural environment and its impact of business
	CO5	Adapting and emulating the global, technical environment and its impact
20RMBF103: MANAGERIAL ECONOMICS	CO1	Definition and principals of managerial Economics
	CO2	Explain of demand analysis and various methods of demand forecasting
	CO3	Identify cost concepts and methods of costs determination
	CO4	Examine the various production analysis and its methods
	CO5	Estimate various measurements of profit and tools
20RMBF104: MARKETING MANAGEMENT	CO1	Find the Marketing concepts and buying motives
	CO2	Extend the marketing mix practices and organizations
	CO3	Choose the place-mix and its advanced tools
	CO4	Analyze MIS and identifying various approaches of MIS
	CO5	Discuss the services marketing concepts and its applications
20RMBF105A: CORPORATE FINANCIAL ACCOUNTING	CO1	Define accounting information system useful to management and how computers supporting to accounting system

	CO2	Infer the valuation of Goodwill and its Methods
	CO3	Identify the need and approaches of inflation accounting
	CO4	Analysis of Holding company accounts and methods of acquisitions
	CO5	Choose of lease accounting and its methods
20RMBF105B: CUSTOMER RELATIONSHIP MANAGEMENT	CO1	Define the basic concept and importance of customer relationship management
	CO2	Explain the various approaches to the retain the customer
	CO3	Apply of models of customer data base system and data warehousing
	CO4	Select the relationship development process CRM and web-based system
	CO5	Building the CRM implementation models
SEMESTER-II		
COURSE OUTCOMES		
20RMBF201: QUANTITATIVE TECHNIQUES AND BUSINESS DECISIONS	CO1	Define QT, its methods useful to management
	CO2	Explain F-test used in the data analysis
	CO3	Identify of probability distribution used for decision making
	CO4	Analyzing the concept of sampling chi- square test, sampling techniques s of research
	CO5	Choose of linear programing in the business and research
20RMBF202: FINANCIAL MANAGEMENT	CO1	Tell the objectives of financial management using present value and future value concepts.
	CO2	Explain financing decisions using theories of capital structure and weighted average cost of capital and estimate the degree of risk through leverage concept.
	CO3	Identify the working capital requirements of an enterprise.
	CO4	Analyze opportunity of investment decision applying techniques of capital budgeting.
	CO5	Assess the dividend distribution of a firm through important theories of dividend.

20RMBF203: HUMAN RESOURCE MANAGEMENT	CO1	Find out the basic concepts, functions, objectives, of human resources management and process of job design, factors affecting human resource planning, importance of recruiting, placement.
	CO2	Summarize the approaches and induction and nature and importance of training and career planning.
	CO3	Build knowledge on compensation management; grievance handling
	CO4	Analyze the discipline and employee rights Employee counseling.
	CO5	Develop the collective bargaining discover the process of knowledge management and role of leader in organizations.
20RMBF204: COMPUTER APPLICATIONS IN ACCOUNTING	CO1	Choose the skills in preparing company financial statements on accounting bases through Tally accounting software.
	CO2	Compare skills in preparing company financial statements on inventory bases through Tally accounting software.
	CO3	Apply have a bird‘s eye view on GST system including methodology in evaluating time, place and value of supply of goods and services, and input tax credit mechanism.
	CO4	Importance of the skillful in recording interstate and intrastate supply and return of goods and in generating various GSTR reports.
	CO5	Adapting the practical knowledge on creating and printing of various payroll receipts.
20RMBF205A: WORKING CAPITAL MANAGEMENT	CO1	Define the basic concepts, need and significance, types of working capital and sources of working capital.
	CO2	Explain of determinants and techniques of working capital
	CO3	Choose of the Cash management as the word suggests is the optimum utilization of cash to ensure maximum liquidity and maximum profitability. It refers to the proper collection, disbursement, and investment of cash.
	CO4	Estimate the receivables management and its nature and goals.
	CO5	Adapt the inventory management techniques.
20RMBF205B:MARKETING RESEARCH	CO1	Fine the process of marketing research and its different processes.

	CO2	Explain the sources of information and understand different research methods.
	CO3	Apply to selected marketing mix research.
	CO4	Analyze and interpret both qualitative and quantitative data.
	CO5	Choose the different types of data analysis.
SEMESTER-III		
COURSE OUTCOMES		
20RMBF302: ELECTRONIC BANKING	CO1	Find the complete knowledge of traditional banking and E-banking.
	CO2	Explain the need of security in digital transaction.
	CO3	Build the complete knowledge in Indian banks technology regarding of different tools and electronic channels.
	CO4	Classify the electronic banking and commerce and what goes into electronic banking and commerce
	CO5	Choose the fundamental E-banking security and it‘s in cyber crimes
20RMBF303: FINANCIAL MARKETS AND INSTITUTIONS	CO1	Define the components of the Indian financial system and reforms in it with a detailed review on financial markets components.
	CO2	Explain the detailed review on money market.
	CO3	Develop knowledge an in-depth analysis of capital market including primary marketand powers of SEBI regulating this market.
	CO4	Analyze of capital market including secondary market and powers of SEBI regulating this market.
	CO5	Agree the understand of RBI‘s importance, functions and monetary policy and the framework of SEBI regulations
20RMBF304: INTERNATIONAL BANK MANAGEMENT	CO1	Find the current issues in international banking and analyze how risk, capital and returns are related in an international bank.
	CO2	Explain the structure of foreign exchange market in India.
	CO3	Develop the knowledge of futures and options contracts and credit derivatives
	CO4	Analyze the cross-border trade and countertrade and its financing sources
	CO5	Choose the investment banking and its major activities, scope of activities of commercial banks

20RMBF305A:RISK MANAGEMENT IN BANKS	CO1	Define the risk, different risks in banks and risks in banking services and understand risk management techniques.
	CO2	Explain the Asset Liability Management in Indian banks.
	CO3	Choose the alternative models of bank performance
	CO4	Discover of RBI Guide lines to reduce the NPA and Prudential norms referred by Narasimhan Committee.
	CO5	Importance of risk Management in corporate bodies and its risk management process.
20RMBF305B: MERGERS AND ACQUISITIONS	CO1	Define the concept of corporate restructuring and its forms and constraints
	CO2	To Understand an overall idea about the waves and procedures of mergers
	CO3	Choose the procedures involved in Acquisitions and know the constraints of acquisitions and the role of SEBI
	CO4	Explain the concept and types of demergers and reverse merger the splitting up of companies.
	CO5	Adapt the methods of accounting for M&A, and tax aspects.
20RMBF306:BASICS OF FINANCIAL ACCOUNTING(EE)	CO1	Define Financial Accounting and explain the principles, functions and nature of financial accounting.
	CO2	Explain the accounting process and double entry system of financial accounting.
	CO3	Identify the subsidiary books and how to prepare trial balance.
	CO4	Examine the prepare BRS and how to write entries of bills of exchange
	CO5	Appraise the financial result of firms and preparation of final accounts of firms
20RMBF307:BASICS OF ENTREPRENEURSHIP DEVELOPMENT(EE)	CO1	Define the concept of entrepreneurs and entrepreneurship and benefits and drawbacks of entrepreneurship.
	CO2	Explain an idea about the theories of entrepreneurship.
	CO3	Identify the Characteristics, types, Importance, Problems of entrepreneur and define Entrepreneurial traits and motivation.

	CO4	Analyze the Concept, characteristics and Problems of small – scale sector and impart knowledge about the role of MSMEs in economic development.
	CO5	Choose the Global business opportunities and setting up of MSMEs business.
SEMESTER-IV		
COURSE OUTCOMES		
20RMBF401:MARKETING OF FINANCIAL SERVICES	CO1	Find the differentiate the marketing for financial services and goods marketing.
	CO2	Explain the financial services marketing environment and market segmentation strategies.
	CO3	Identify the different marketing of merchant banking services.
	CO4	Analyze the different marketing of banking services marketing mix.
	CO5	Choose of Insurance services marketing and marketing strategies of insurance services.
20RMBF402:SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT	CO1	Define investment and explain the fundamental analysis, technical analysis and Random Walk theory for expected return on investment.
	CO2	Explain the value of equity shares and bonds through different valuation models to buy and sell decision.
	CO3	Apply the capital market theory and analyze the portfolio selection through significant models like capital asset pricing model (CAPM) and Arbitrage pricing theory (APT).
	CO4	Analyze of portfolio evaluation and explain the measures of the portfolio performance through Sharpe‘s, Treynor‘s and Jensen‘s performance index.
	CO5	Appraise of portfolio revision and explain the formula plans and its types.
20RMBF403: INTERNATIONAL FINANCIAL MANAGEMENT	CO1	Define international financial system and explain its firms of WTO, IMF, ADB and world bank.
	CO2	Explain the concept of foreign exchange market and explain the theories of determining foreign exchange rate.
	CO3	Identify risk relating to exchange rate fluctuations and its strategies for foreign exchange risk management.

	CO4	Analyze of international monetary system and explain its international monetary markets i.e., ACM, GDRs, ADRs etc.
	CO5	Discuss the foreign capital budgeting and know its cash flow management activities
20RMBF404: PROJECT REPORT&VIVA-VOCE	CO	Able to develop skills toward financial management.
20RMBF405A:CORPORATE GOVERNANCE	CO1	Define corporate governance and adopt the appropriate mechanism for effective governance.
	CO2	Explain the developments in USA and UK of corporate governance and role of world bank.
	CO3	Identify the history, need and importance of corporate governance in India.
	CO4	Examine the significance of board of directors and audit committee its composition and responsibilities.
	CO5	Adapt the corporate governance standards and practices in India.
20RMBF405B: INTERNATIONAL FINANCIAL REPORTING SYSTEM	CO1	Define of IFRS and understand the international accounting standards and Indian accounting standards.
	CO2	Explain the objectives, sources, regulatory frame and compliance of IFRS.
	CO3	Choose the preparation of IFRS and explain its characteristics of IFRS.
	CO4	Analyze the various types of IFRS reports
	CO5	Change the various barriers in IFRS and its motivations, problems prospectus of IFRS in India.
20RMBF406: CAPITAL MARKETS(EE)	CO1	Define capital market and its history of Indian capital market and reforms.
	CO2	Explain the concept of money market and its intermediaries and explain link between money market and monetary policy.
	CO3	Identify the primary market and its functions, players and resources mobilized from the primary market.
	CO4	Examine the secondary market and explain its listing of securities, trading and settlement and internet trade.
	CO5	Choose the debt market and explain the public sector undertakings bonds market and Govt securities market.

20RMBF407:TAX PLANNING FOR INDIVIDUAL ASSESSEES (EE)	CO1	Define the basic concepts and assessment of profits and gains of Individual Assessee.
	CO2	Explain the residential status and explain the receipt, accrual, deemed of incomes.
	CO3	Identify the essential norms of salary income and compute gross total income of an Individual Assessee after taking into account deduction u/s 80C.
	CO4	Assume the computation of income from let out and self-occupied property.
	CO5	Choose the tax planning in respect of employee‘s remuneration and its avoidance and evasion.

DEPARTMENT OF EDUCATION

SEMESTER-I		
COURSE OUTCOMES		
20RMED101: PERSPECTIVES OF EDUCATIONAL PSYCHOLOGY	CO1	Acquaint the concept of learning, process and theories of learning
	CO2	Explain the meaning of Educational Psychology and principles of growth and development
	CO3	Develop the concept of Personality, Adjustment and Mental Health and its educational implications
	CO4	Distinguish the types individual differences, Intelligence and creativity
20RMED102:EDUCATION STUDIES	CO1	Recall the History of Ethics and Moral Education
	CO2	Explain the Secondary education policies and Programmes
	CO3	Identify the issues in Higher education
	CO4	Determine the Educational need of Special and disadvantaged Section
20RMED103: FUNDAMENTALS OF EDUCATIONAL RESEARCH	CO1	Recognize the significance of educational research, type of research, Research Problem and use of Related Literature in research.
	CO2	Classify the Variables, Forms of hypothesis and sampling techniques.

	CO3	Apply the skills in data collection, preparation of the tool, and Calculate reliability and validity of a tool.
	CO4	Determine the Measures of central Tendency,Measures of Dispersion ,Measures of Relative Position and characteristics Normal Distribution
20RMED104: EDUCATIONAL PLANNING & MANAGEMENT	CO1	Define the concept, principals, and process of management skills required in the education.
	CO2	Illustrate Growth of educational management
	CO3	Examine sources of finance for education in India.
	CO4	Perceive Quality management in higher education
20RMED105: ADVANCED EDUCATIONAL TECHNOLOGY	CO1	Categorize the Information
	CO2	Select the future Priorities in educational Technology
	CO3	Demonstrate the Technology of Teaching
	CO4	Create the Interactive Learning Environments
SEMESTER-II		
COURSE OUTCOMES		
20RMED201: PERSPECTIVES OF EDUCATIONAL PHILOSOPHY	CO1	Explain some of the basic philosophical concepts and branches of philosophy
	CO2	Explain Philosophically important theories and concepts that have historically been used to organize.
	CO3	Apply relevant ethical theories to contemporary and historical ethical problems
	CO4	Formulate new ideas to control powerty and unemployment
20RMED202: PERSPECTIVES OF EDUCATIONAL SOCIOLOGY	CO1	Recall the Functions and Sociological aims of Education
	CO2	Summarize the need for Equality of Educational Opportunities

	CO3	Compare the relation between the Modernization and Education ,Culture and Education
	CO4	Identify the Individual level Sociological determinants
20RMED203:ADVANCED EDUCATIONAL RESEARCH	CO1	Recall the concepts of different Methods of Educational Research
	CO2	Understand the process of writing good research proposal, research report and the process of evaluate the quality of research report.
	CO3	Analyze the Fundamental Concepts of Inferential Statistics, Testing the Significance of Statistical measures, testing the Significance difference.
	CO4	Estimate the concepts of Relationship or Association in data analysis
20RMED204:TEACHER EDUCATION	CO1	Find the objectives, functions and role of various agenesis of teacher education program.
	CO2	Explain the service conditions of teacher educators.
	CO3	Examine the key terms related to teacher education pre independents in India.
	CO4	Appraise the need of teacher education.
20RMED205:HUMAN VALUES &PROFESSIONAL ETHICS	CO1	Explain the Method to Fulfill the Human aspiration
	CO2	Apply the Harmony in the family and Society
	CO3	Distinguish the holistic perception of harmony at different levels of existence
	CO4	Find the Natuaral acceptance of humanvalues.
SEMESTER-III		
COURSE OUTCOMES		
20RMED301: GUIDANCE AND COUNSELLING	CO1	Interpret the Fundamental Concepts of Guidance, guidance at different levels and Agencies of Guidance.
	CO2	Apply the Principles of Educational Guidance, Guidance for special learners, Strategies & theories of Vocational Guidance.

	C03	Acquaint the Concept, Scope and principles of different types of personal guidance & Group Guidance and techniques of Group Guidance.
	CO4	Analyze the Counseling Process and Testing in Guidance Service
20RMED302:INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN EDUCATION	CO1	Define multimedia and its components
	CO2	Relate the key components of ITC with respect to education
	CO3	Make use of data storage methods.
	CO4	Elaborate impact of ITC in education can be enhancing educational quality and improving teaching skills
20RMED303:ELEMENTARY EDUCATION(Compulsory)	CO1	Define the aims and Objectives of Elementary Education
	CO2	Prioritize the Universalization of Elementary Education
	CO3	Apply the Strategies and Programmes in Elementary Education
	CO4	Design Curriculam and Evaluation in Elementary Education
20RMED304:INCLUSIVE EDUCATION (Elective)	CO1	Find out the difficulties encountered by children
	CO2	Understand the role of parents, teachers and other community for special and diverse needs children
	CO3	Utilize the human and material resources to uplift the lives of children with diverse needs
	CO4	Analyze the educational approaches for special, integrated and inclusive education
20RMED305:LIFE SKILLS EDUCATION (Elective)	CO1	Understand the concept, human resources and significance of life skills in human life
	CO2	Apply various strategies or the development of cognitive skills.

	CO3	Discover the human and material resources to uplift the lives of children with diverse needs
	CO4	Developing psycho – social skills with the life skills
20RMED306:ADULT AND CONTINUING EDUCATION(Elective)	CO1	Explain the problems of adult education.
	CO2	Solve the problems in continuing education
	CO3	Distinguish administrative structure of adult education.
	CO4	Discuss current status of adult education in India.
20RMED307:SECONDARY EDUCATION (Compulsory)	CO1	ExplainanOverallviewofthehistoricaldevelopmentofSecondaryEducation
	CO2	Recall the Constitutional Provisions and theirrespectiveimplicationsofSecondaryEducation
	CO3	Develop Earn Productivity through Secondary Education
	CO4	Estimate the Problems and Challenges At Secondary Education level
20RMED308:SPECIAL EDUCATION (Elective)	CO1	Classify the Various impairments of special education
	CO2	Identify the causes of visual and Hearing impairment
	CO3	Choose The preventive measures and educational provisions of mental retarded and learning disability
	CO4	Compile educational programs for prevention and rehabilitation of various types of special children
20RMED309: COMPARATIVE EDUCATION (Elective)	CO1	Define about the Comparative Education
	CO2	Distinguish the Education at National and International level
	CO3	Summarize the National and International Elementary, Secondary Educational System
	CO4	Identify the causes and Solutions for Problems Prevailing in Developing Countries
20RMED310:PSYCHOLOGY AND LIFE	CO1	Recall the Meaning and types Emotions, Emotional expressions and Emotional disorders

	CO2	Summarize the Meaning and Nature of Psychology, Cognitive capacities, Affective capacities and interpret the process of Human development.
	CO3	Develop the process of Learning, Memory, Motivation, Nature and Creativity.
	CO4	Analyze the concept of Personality and Mental Health of an individual.
SEMESTER-IV		
COURSE OUTCOMES		
20RMED401:PERSPECTIVES, RESEARCH & ISSUES IN TEACHER EDUCATION (Compulsory)	CO1	Relate the Concept of Profession and Professionalism, Components of Teacher Effectiveness and Professional Ethics.
	CO2	Summarize the knowledge about the Objectives, Structure, National Curriculum Framework, and Role and Competencies Required of the Teacher at Pre Primary and Primary Levels as Recommended by the NCTE.
	CO3	Make use of the concept of Research in Teacher Education, trends in Research and its implications in Teacher Education.
	CO4	Explain the Objectives, Structure, National Curriculum Framework, and Role and Competencies Required of the Teacher Secondary and Higher Secondary Levels.
20RMED402: ENVIRONMENTAL EDUCATION(Elective)	CO1	Find the relationship between man and Environment.
	CO2	Utilize the ways of conservation of natural resources
	CO3	Examine various causes of Environmental pollution.
	CO4	Imagine population and its effect on environmental resources.
20RMED403: MEASUREMENT AND EVALUATION(Elective)	CO1	Distinguish the Measurement and Evaluation
	CO2	Decide the Essentials of Test Construction
	CO3	Utilize the measurement Devices
	CO4	Adapt new trends in Measurement and Evaluation

20RMED404:CURRICULUM STUDIES (Elective)	CO1	Identify various bases and foundations of curriculum, curriculum process, stages of curriculum and Curriculum Issues.
	CO2	Discus the curriculum planning, Curriculum Planningat Various Levels, Trends and approaches in Curriculum planning.
	CO3	Evaluate the Concept, need and importance andSources of Curriculum Evaluation testing and approaches of curriculum evaluation,
	CO4	Originate the curriculum development and transaction, the role of teachers and administrators in implementation of curriculum development and approaches of curriculum organization.
20RMED405:VALUE EDUCATION (Elective)	CO1	Relates the Values and Education
	CO2	Distinguish the Models of Value Education
	CO3	Choose the approaches and teaching strategies for inculcation of Values
	CO4	Define the Role of social agencies in value information
20RMED406:HUMAN RIGHTS EDUCATION (Elective)	CO1	Acquaint the knowledge of Indian and commissions on Human Rights
	CO2	Develop the concepts of human rights violation and emerging issues
	CO3	Classify the curriculum methods of teaching and agencies of human rights education
	CO4	Adopt the concept, meaning and significance of human rights.
20RMED407: ENVIRONMENTAL EDUCATION AT SECONDARY LEVEL (Elective)	CO1	Define the concept and objectives of Environmental education.
	CO2	Classify the natural and abiotic resources.
	CO3	Assume global environmental problems.
	CO4	Estimate the Environmental Hazards.

20RMED408: ECONOMICS OF EDUCATION	CO1	Illustrate cost-Benefit analysis in Education.
	CO2	Examine contemporary economic reforms in India and their impact on education.
	CO3	Estimate resent trends in Economics of education.
	CO4	Discuss the advantages and disadvantages Privatization of state education.

DEPARTMENT OF SOCIAL WORK

SEMESTER-I		
COURSE OUTCOMES		
20RMSW101:HISTORY, PHILOSOPHYAND FIELD WORK PRACTICE IN SOCIALWORK	CO1	To impart social and religious ideologies of India for change
	CO2	Understand the historical development of social work profession in USA and UK and understand concept, values, ethics and principles of professional social work and consciously apply those in practice
	CO3	To develop an insight into the historical context of the origin and development of the social work Profession in India and to create an understanding of the theoretical framework of the subject
	CO4	Develop a Report from expertise obtained through Field-visit/Interview/Observations or from Phenomenological exposure
	CO5	Become a Competent Social Work Professional/Practitioner/Promoter(Program/Institution)/StaffMemberinanyofthefieldsofSocialWork and emergeasachangeagent, analyst, architect (behaviour) and soon with exposuretoadditionalcoursesof theProgram.
20RMSW102:INDIVIDUAL AND SOCIETY	CO1	Understand the concept of society, social structure, social organization and welfare state and its application
	CO2	Understand the concept of marriage,family, religionand its relationship in social structure, and analyze the importance of economy and legislation to lead satisfactory life
	CO3	To impart knowledge about socialization process and have knowledge about application of social control agencies.

	CO4	Identify and define basic terms and concepts of social groups and group dynamics
	CO5	Identify the basic elements of social change and process.
20RMSW103:DYNAMICS OF HUMAN BEHAVIOUR	CO1	Develop an overall understanding of the principles of growth, their relevance and application to behavior at various phases in the lifespan
	CO2	Understand interactional nature of growth and behavior at various stages in the lifespan : infancy, childhood, adolescence, youth, adulthood, and old age, and impact of cultural aspects.
	CO3	Application of learning principles, behavior therapy, motivation and perception while dealing with individuals.
	CO4	Develop sensitivity towards different types of personalities and life skills and apply knowledge while handling the individuals with problems.
	CO5	Apply skills and the knowledge attitudes formation, adjustment and stress management in social work practice in general, and working with individuals, groups and communities in particular
20RMSW104:WORK WITH INDIVIDUALS	CO1	Understand values, processes and principles of Working with Individuals.
	CO2	Apply the knowledge of approaches to Case Work Practice to solve the problems of individuals
	CO3	Identify and proficiency in use of social case work method in various circumstances and settings.
	CO4	Improve appropriate skills and attitudes to work with individuals of differential needs.
	CO5	Create the ability to analyze the factors affecting the individuals and problems impact on individual.
20RMSW105:WORK WITH GROUPS	CO1	Understand Social Group Work as methods of Social Work
	CO2	To develop the ability to critically analyse problems of groups and factors affecting them.
	CO3	Advance the skills with the basic methods, one to one and one to group.
	CO4	Evolve an understanding of the applicability of these methods in different settings.
	CO5	To evaluate the groups and importance of group work as a method

SEMESTER-II		
COURSE OUTCOMES		
20RMSW201: **WORK WITH COMMUNITIES**	CO1	Understanding the concepts related to work with Communities and processes involved in it. To make students understand the use and practice of Community Organization in various fields of Social Work.
	CO2	To understand the students about the historical development of community organisation as a method
	CO3	To provide the knowledge about the role of Social Worker in Social Change and Social Development.
	CO4	To familiarize the emerging trends and experiments in Community Organization
	CO5	To introduce various aspects of participation methods of community organization as a method of Social Work.
20RMSW202:SOCIAL ACTION AND SOCIAL LEGISLATION	CO1	Define and describe the concept of social action and models of social action and role of social worker in social action
	CO2	Explain the Ideologies / Philosophies as bases for Social Action and various Social Movements and Social Action
	CO3	Define and describe the various social legislations and use of social legislations in Social Work practice
	CO4	Explain the various social legislations and Social problems
	CO5	Elucidate and the scope and role of social worker in social action Human Rights, Legal Aid and Social Work Practice
20RMSW203:SOCIAL POLICY, PLANNING AND WELFARE ADMINISTRATION	CO1	Understand the concept of social policy, planning and models of social policy
	CO2	Analyse the changing policies and understand and the procedure for social policies and have knowledge about various policies for different segments
	CO3	Understand the concept of Social welfare services, factors and principles of social welfare programmes and study the indicators of development
	CO4	Understand various sectors role and apply the knowledge of how to register, work and maintain documentation in Social Welfare Organizations.

	CO5	Understand and apply how to mobilize funds, develop networking and prepare proposals for funding
20RMSW204:WOMEN, CHILDREN AND YOUTH DEVELOPMENT	CO1	Understand the Women‘ status and impediments in the process of women's development.
	CO2	Appraise the significance of empowerment of women and the related programmes
	CO3	Recognize the need and situation of the child and sensitize the society on children problems
	CO4	Improve appropriate skills to evaluate the Child needs and Programmes in India
	CO5	Create the ability to analyze the factors affecting the youth development and develop Appropriate measures for empowerment of youth
20RMSW205:SOCIAL WORK RESEARCH AND SOCIAL STATISTICS	CO1	Understanding of scientific approach to human inquiry in major research strategies,meaning,scope and importance of social work Research
	CO2	Understand and apply the knowledge in developing research design and sampling techniques
	CO3	Knowledge about methods of data collection, participatory research and measurement scales while collecting data
	CO4	Meaning of social statistics, classification andtabulation and apply the measures of central tendency tests for specific applications to social work research
	CO5	Knowledge about correlation and tests of significance in report writing.
SEMESTER – II		
COURSE OUTCOMES		
20RMSW301: POPULATION AND ENVIRONMENTAL STUDIES	CO1	To understand characteristics, determinants of population growth and population Policy
	CO2	Understand inter-relatedness of human life, living organisms and environment
	CO3	Examine utilization and a management of resources.
	CO4	Knowledge about legislations relating to Environment Protection
	CO5	Knowledge about environmental issues and application of social work initiative at different levels

20RMSW302: SOCIAL WORK PRACTICE IN HEALTH AND MENTAL HEALTH CARE SETTINGS	CO1	Understand and acquire knowledge about the concept, dimensions, indicators, determinants of health, concept of mental health, health administration in India
	CO2	Understand and analyze the concept of epidemiology, including epidemiology of communicable and non-communicable disease as well as the health impact of different environmental, lifestyle and nutritional factors
	CO3	Understand the concept of medical social work and perceive the interconnections between medical social worker, other team members and environmental factors in rehabilitation of patient in various health care settings.
	CO4	Understand the concept of psychiatric social work and critically analyze the characteristics of various types of mental illness and develop psychiatric social work interventions in various health care settings.
	CO5	Critically evaluates different types of supporting systems for patients viz., legislations, and therapeutic interventions and involve in team work at hospitals.
20RMSW303: SOCIAL WORK INTERVENTION WITH FAMILIES AND CHILDREN	CO1	Understand the required knowledge on family system and family centered practice and identify
	CO2	Equip with the knowledge of Family Life Management and assessment
	CO3	Recognize the significance of the child development and child welfare and develop strategies to intervene on children problems
	CO4	Evaluate the welfare services for children and took part in design and formulate the programmes for the welfare of children
	CO5	Analyze the factors affecting the families and children and intervene to modify the situation infamilies and develop appropriate social work methods
20RMSW304:RURAL, URBAN AND TRIBAL COMMUNITY DEVELOPMENT	CO1	Define and describe the characteristics of different types of communities and Explain and analyze the early community development experiments andprojects in the context of social work practice in communities
	CO2	Explain the issues related to communities and Understanding the issues of the community development and scope for social work intervention

	CO3	Analyze and discuss the different approaches to community development from a social work perspective**.**
	CO4	Define the Livelihoods in a Communities and Overview of Governmental Agencies and Non- Governmental Organizations in Rural, Urban and Tribal Communities and existing administrativefunctioning in communities
	CO5	Analyze the Importance of Evaluation, Evaluation Procedures. Methods and Tools of Evaluation in Community Development Programmes
20RMSW305:SOCIAL WORK IN INDUSTRY	CO1	Gain requisite knowledge on various Management aspects
	CO2	Gain requisite knowledge on various HRM aspects. Understand the Training and developmental needs and device appropriate strategies
	CO3	Understand the Organisation Behaviour, organisation development and Apply the Methods
	CO4	Knowledge the about the Industrial Acts
	CO5	Familiarize the emerging trends in HRM
SEMESTER-IV		
COURSE OUTCOMES		
20RMSW401: COUNSELLING AND COMMUNICATION	CO1	Understand the concept and practice of basic counselling skills.
	CO2	Equip with the knowledge of Learn the different approaches and models to counselling
	CO3	Recognize the significance counselling Acquire knowledge on Counselling in different settings
	CO4	Evaluate and Integrate basic Communication Process and Types counseling skills
	CO5	Analyze the factors affecting counselling and communication and Enlighten about the Communication patterns and Barriers & social work practice
20RMSW402:DISASTER MANAGEMENT	CO1	Understand the key concepts of Disaster , typology ad phases of disasters and Evolution of Disaster management
	CO2	Knowledge about impacts of disasters on specific groups, analysis of Disasters Risk Frame work.
	CO3	Develop an understanding of the process of Disaster Management

	CO4	To understand institutions and instruments in disaster response.
	CO5	Develop an understanding of the social workers role in the team for disaster management
20RMSW403:GERONTOLOGICAL SOCIAL WORK	CO1	Elucidate the status of older persons and demographic dimensions of the elderly.
	CO2	Recognize the Biological and psychological health and functions of elderly
	CO3	Elucidate the Problems, needs and challenges of Elderly
	CO4	Identify and Describe the Policies and Programs for the elderly
	CO5	Recognize the relevance of social work intervention with elderly
20RMSW404:CRIMINOLOGY AND CORRECTIONAL SERVICES	CO1	To understand the concept, values and principles of Criminology as a Fields of social work
	CO2	Get an insight into the concept of correctional administration process
	CO3	Gain knowledge on the Correctional administration processors and services
	CO4	Understand the developmental needs and device appropriate strategies.
	CO5	Familiarize the emerging trends in Correctional administration trends in correctional social work
20RMSW405:DISSERTATION	CO1	Explain the need and importance of the topic chosen for the research study.
	CO2	Identify and discuss the relevant literature related to the topic under study by searching the relevant data bases.
	CO3	Explain the steps of research methodology (learned in the classroom) applied to conduct the study.
	CO4	Analyze and discuss the results in light of the research methodology adopted for the study.
	CO5	Analyze and interpret the findings of the study against the statistical analysis applied & summarize, present the conclusions and submit the entire research activity in the form of a dissertation.

DEPARTMENT OF ECONOMICS

SEMESTER-I		
COURSE OUTCOMES		
20RMAECO101:MICRO ECONOMICS-I	CO1	Explain the various approaches of demand analysis
	CO2	Analyse several functional analysis of production
	CO3	Outline the cost and revenue concepts for firm and industry equilibrium
	CO4	To understand the competitive structure of markets: Perfect, Monopoly and Monopolistic Competition
	CO5	To explain the price and output determination of markets: Duopoly and Oligopoly
20RMAECO102:MACRO ECONOMICS-I	CO1	Understand concepts of National Income
	CO2	Explain the classical theory of employment and Keynesian models of consumption function, Investment Multiplier and Accelerator
	CO3	Outline the theories of consumption function
	CO4	Interpret various concepts of Investment function
	CO5	Analyse the Goods market and money market equilibrium
20RMAECO103:MATHEMATICAL METHODS FOR ECONOMISTS	CO1	Understand various mathematical functions relating to functional areas of economics
	CO2	Application of derivatives in economic issues
	CO3	Application of maxima and minima functions and integration in economics
	CO4	Application of Matrices in the functional areas of economics for decision making
	CO5	Application of linear programming for optimal solution
20RMAECO104:ECONOMICS OF ENVIRONMENT	CO1	Understand the relationship between environment and Economic Development
	CO2	Understand the impact of natural resources on environmental degradation
	CO3	Identify the various sources of Environmental Pollution and its effect on health, economic and social aspects
	CO4	Outline the environmental policy and principles
	CO5	Understand the environmental policies and management strategies

20RMAECO105:COMPUTER APPLICATIONS IN ECONOMICS (LAB)	CO1	Outline the components and fundamentals of the computer
	CO2	Demonstrate various techniques of MS Word application.
	CO3	Apply the skill of presenting the statistical data in Excel application
	CO4	Demonstrate various techniques of MS PowerPoint and MS Access.
	CO5	Outline the use of data analysis soft wares:STATA and SPSS
SEMESTER-II		
COURSE OUTCOMES		
20RMAECO201:MICRO ECONOMICS –II	CO1	Explain various theories of the modern firms.
	CO2	Outline the theories of distribution.
	CO3	Interpret the concept of General Equilibrium.
	CO4	Discuss the reasons for market failure and explain pubic goods
	CO5	Interpret the concepts of welfare economics
20RMAECO202:MACRO ECONOMICS-II	CO1	Outline the various theories of demand for money
	CO2	Explain the components of money supply and changes in money supply
	CO3	Explain various concepts of business cycles
	CO4	Analyse the theories of inflation
	CO5	Explain the importance of Monetary and Fiscal Policy in economic development
20RMAECO203:STATISTICS FOR ECONOMISTS	CO1	Outline the basics of statistics
	CO2	Outline the importance of correlation and regression in decision making
	CO3	Understand various theories of probability and distribution
	CO4	Understand various methods of sampling and testing of hypothesis

	CO5	Outline the concept of index numbers and its application
20RMAECO204:INDIAN ECONOMY	CO1	Understand the structure of Indian Economy
	CO2	Outline the significance of Agriculture in Indian Economy
	CO3	Outline the importance of Industrial sector in Indian Economy
	CO4	Understand the role of service sector in Indian Economy
	CO5	Analyse the need of economic reforms in India Economic Development
SEMESTER-III		
COURSE OUTCOMES		
20RMAECO301: INTERNATIONAL TRADE: THEORYAND POLICY	CO1	Explain various theories of international trade.
	CO2	Outline the importance of International trade under imperfect competition
	CO3	Analyse the concepts of terms of trades and gains from trade
	CO4	Understand various concepts of trade policy and related theories
	CO5	Understand the importance of economic integration in promoting international trade
20RMAECO302:RURAL DEVELOPMENT	CO1	Understand different approaches of rural development.
	CO2	Analyse the issues in rural development.
	CO3	Outline the significance of rural development programmes in India
	CO4	Explain the role of institutional support in rural development.
	CO5	Apply the concepts of project management to rural development.
20RMAECO303:PUBLIC ECONOMICS	CO1	Outline the major fiscal functions of the Government and various approaches to public finance

	CO2	Analyse various sources of Public Revenue in general India in particular
	CO3	Understand various concepts of Public Budget and outline the importance of Public expenditure
	CO4	Outline the concept of Public debt and role of public debt in Indian economic development
	CO5	Understand the functional areas of federal finance in India
20RMAECO304A: FINANCIAL INSTITUTIONS AND MARKETS	CO1	Understand the nature and role of financial system
	CO2	Analyse the structure, composition and instruments of money market
	CO3	Analyse the structure and composition of capital markets
	CO4	Explain the role of money and capital markets in India
	CO5	Outline the significance of financial institutions in India
20RMAECO304B: DEMOGRAPHY	CO1	Understand the nature and scope of demography and explain various theories of population
	CO2	Outline the composition and distribution of population in India
	CO3	Understand the concepts of fertility, mortality and migration in India
	CO4	Analyse the quality aspects of population in India
	CO5	Outline the programmes of Government of India to control population
20RMAECO304C: RESEARCH METHODOLOGY	CO1	Explain the basic concepts of research problem
	CO2	Understand the conceptual theories in social science research
	CO3	Outline various techniques of sampling
	CO4	Identify various sources of research
	CO5	Outline the elements of report writing and publication of research
20RMAECO305A: AGRICULTURAL ECONOMICS	CO1	Outline the significance of agriculture in economic development

	CO2	Understand the scenario of agriculture development
	CO3	Analyse the investment initiatives in agriculture in India
	CO4	Outline the government initiatives in the development of agriculture
	CO5	Explain the institutional structure of agriculture marketing
20RMAECO305B: INDUSTRIAL ECONOMICS	CO1	Understand the role of industrialisation in Economic Development
	CO2	Explain the theory of firm and optimum firm
	CO3	Outline the theories of industrial location.
	CO4	Understand the nature and types of investment decisions
	CO5	Understand various aspects of industrial management
20RMAECO305C: ECONOMICS OF INFORMATION TECHNOLOGY	CO1	Understand the introductory elements of information technology
	CO2	Explain various modes of information technology and their role in the economy
	CO3	Understand the role of information technology in human development
	CO4	Analyze the role of information technology in development of trade
	CO5	Understand the importance of Information technology in Government
SEMESTER-IV		
COURSE OUTCOMES		
20RMAECO401: LABOUR ECONOMICS	CO1	Explain the various aspects of labour markets
	CO2	Understand the theories of wage determination
	CO3	Analyse the significance of wage policy in India
	CO4	Understand various progammes to solve the unemployment in India
	CO5	Outline the role of state in welfare of labour
20RMAECO402: INTERNATIONAL FINANCE	CO1	Outline the conceptual framework of Balance of Payments
	CO2	Explain the adjustment mechanism in Balance of Payments

	CO3	Understand the significance of exchange rate and various theories of exchange rate
	CO4	Explain the role of International Developing Agencies in International Capital Movements
	CO5	Understand the role of international financial institutions in International Liquidity problem
20RMAECO403: ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT	CO1	Understand several aspects of entrepreneurship
	CO2	Outline various organisations offering Entrepreneurship Development programmes
	CO3	Analyse the essential attributes of entrepreneurship
	CO4	Outline the significance of employability skills for Entrepreneurship
	CO5	Understand various organisation for skill development and explain major skill development initiatives in India
20RMAECO404A: ECONOMICS OF INSURANCE	CO1	Explain the basic concepts and theories of insurance
	CO2	Analyse the importance of risk management in Insurance
	CO3	Assess the role of insurance industry in economic development.
	CO4	Understand the elements of various categories of insurance
	CO5	Outline several insurance plans for retirement and regulation of Insurance in India
20RMAECO404B: ANDHRA PRADESH ECONOMY	CO1	Explain the structure of Andhra Pradesh Economy
	CO2	Understand the importance of agriculture in Andhra Pradesh Economy
	CO3	Outline the role of industrial sector in Andhra Pradesh Economic Development
	CO4	Explain the significance of service sector in Andhra Pradesh Economy
	CO5	Understand the approach of five years plans, sources of revenue, trends in expenditure and Public debt scenario in Andhra Pradesh

20RMAECO405A: WELFARE ECONOMICS	CO1	Understand the functional areas of welfare economics
	CO2	Outline the theories of welfare economics
	CO3	Understand the elements of optimality
	CO4	Explain the relationship between utility and welfare concepts
	CO5	Outline various theories of second best in welfare economics
20RMAECO405B:INDIAN ECONOMIC REFORMS	CO1	Outline the significance of Economic reforms
	CO2	Analyse the reforms initiated in Banking sector
	CO3	Analyse the reforms initiated in Agriculture sector
	CO4	Analyse the reforms initiated in Industrial sector
	CO5	Assess the impact of economic reforms on trade
20RMAECO405C:URBAN ECONOMICS	CO1	Understand global frame work of urbanisation
	CO2	Analyze the scenario of urbanization in India
	CO3	Assess the impact of urbanization on labour markets
	CO4	Explain the environmental challenges arises due to urbanisation
	CO5	Analyze the policy initiatives for urbanization in India

DEPARTMENT OF BOTANY

SEMESTER-I		
COURSE OUTCOMES		
20RMSCBOT101:MICROBIOLOGY	CO1	Understand and Develop the skill of isolation and identification of Pathogenic and Non-Pathogenic microorganisms.
	CO2	To prepare different media for cultivation of industrially important microorganisms.
	CO3	Equip themselves with the methods to control Plant Pathogens.
	CO4	Understanding Plant diseases and Ag-Ab mechanism.
20RMSCBOT102:PHYCOLOGY, BRYOLOGY AND PTERIDOLOGY	CO1	Recall the morphological structure, evolution and differentiate the general characters of different algal groups.
	CO2	Describe the classification, reproduction and economic importance of Algae and understand the features of Lichens.

	CO3	Explain about structure, classification, reproduction, life cycle and economic importance of Bryophytes.
	CO4	Summarize the Structure, reproduction, life cycle, stelar evolution, fossilization and analyse geological time scale.
20RMSCBOT103:BIOLOGY AND DIVERSITY OF GYMNOSPERMS AND ETHNOBOTANY	CO1	Recall the morphological structure, evolution and differentiate the general characters of different algal groups.
	CO2	Describe the classification, reproduction and economic importance of Algae and understand the features of Lichens.
	CO3	Explain about structure, classification, reproduction, life cycle and economic importance of Bryophytes.
	CO4	Summarize the Structure, reproduction, life cycle, stelar evolution, fossilization and analyse geological time scale.
20RMSCBOT104: TAXONOMY OF ANGIOSPERMS	CO1	Distinguish and classify the plants based on the Morphological variation for experimental work.
	CO2	Summarize and illustrate plant species as per the rules formulated by IUCN.
	CO3	Describe and identify the plants for the research needs.
	CO4	Differentiate the orders and demonstrate the preparation of Herbaria for identification purpose.
SEMESTER-II		
COURSE OUTCOMES		
20RMSCBOT201: TECHNIQUES IN CELLBIOLOGY AND CYTOLOGY	CO1	Demonstrate and operate different instruments related to cell biology.
	CO2	Know about recent advancements in cell biology research and technologies that has enabled us understanding the structure and function of the cell.
	CO3	Understand an overview of cell cycle; ultra- and fine-structure of difference cell organelles such as mitochondria, nucleus, chloroplast, golgi apparatus etc.
	CO4	Differentiate and relate the role of each and every cell organelle of the cell.
20RMSCBOT202: GENETICS	CO1	Summarize the eukaryotic genetics

	CO2	Predict the phenotypic classes and their ratios from monohybrid and dihybrid crosses involving dominant and recessive alleles
	CO3	Acquire knowledge on Structural and Numerical alterations in Chromosomes
	CO4	Understand the methods of conventional and advanced breeding approaches in plant breeding programs
20RMSCBOT203: MOLECULAR BIOLOGY OF PLANTS	CO1	Describe Nucleic acids structure and mechanism of DNA replication and estimate the nucleic acid content in plants
	CO2	Describe and analyze gene organization in prokaryotes and eukaryotes.
	CO3	Distinguish mechanism of Transcription and Translation, and processing of gene products in Prokaryotes and Eukaryotes.
	CO4	Explain the mechanisms of regulation of gene expression in Prokaryotes and Eukaryotes.
20RMSCBOT204: PLANT BIOCHEMISTRY AND METABOLISM	CO1	Recognize carbohydrates, amino acids and proteins
	CO2	Recall and describe metabolic activities like photosynthesis, respiration and nitrogen metabolism.
	CO3	Define thermodynamic concept and gain knowledge about enzymology and water relations.
	CO4	Describe various plant growth regulators, elicitors and their mechanism of action.
SEMESTER – III		
COURSE OUTCOMES		
20RMSCBOT301: PLANT ANATOMY AND EMBRYOLOGY	CO1	Describe the organization of shoot and root apices and development of shoot and root;
	CO2	Differentiation of vascular tissue and wood formation
	CO3	Describe development and differentiation of leaf, transition to flowering and flower development
	CO4	Acquire the knowledge of formation of male and female gametophytes, pollination, pollen tube germination and Double fertilization and development of endosperm, embryogenesis, seed and fruit development
20RMSCBOT302: PLANT ECOLOGY	CO1	Understand the concepts of biome and their importance

	CO2	Develop concern about the environment protection and conservation.
	CO3	Evolve the relation between biotic and abiotic factors in an ecosystem.
	CO4	Comprehend the factors leading to environmental degradation and their impact.
20RMSCBOT 303 (A): BIOSTATISTICS AND BIOINFORMATICS	CO1	Draw conclusions or make predictions based on data summaries or statistical analyses.
	CO2	Design research studies in collaboration with life scientists, or other professionals.
	CO3	Demonstrate the usage of biological databases.
	CO4	Analyze information based on proteins and gene sequences.
20RMSCBOT 303 (B): BIODIVERSITY AND CONSERVATION	CO1	Understand variations in living organisms
	CO2	Analyze species diversity and understand modern tools like Remote Sensing and GIS
	CO3	They would get awareness in endemic, threatened species and participate in protection of the Taxa
	CO4	Know the causes for degradation of biodiversity and contribute to the protection of nature (Plants/Animals/Minerals/Air/Water)
20RMSCBOT305: MUSHROOM CULTIVATION	CO1	Describe the Biology and Ecology of mushrooms and identify wild mushrooms.
	CO2	Locate types of edible and poisonous mushrooms
	CO3	Perform preparation of spawn and culture maintenance
	CO4	Demonstrate method of cultivation of mushrooms
MSCBOT306(A):MARINE PLANT RESOURCES	CO1	Compare various algal divisions
	CO2	Distinguish structure, pigmentation, food reserves and methods of Photosynthesis and Reproduction of Algae
	CO3	Estimate the Ecological and Economic importance of marine algae, Mangroves and other marine plants
	CO4	Illustrate occurrence, distribution, structure and life history of Seaweed, Seagrasses, Mangroves and Coral reefs

MSCBOT 306(B): ECONOMIC BOTANY	CO1	Recognize useful plants to the affairs of mankind
	CO2	Identify medicinal and aromatic plants and their utility
	CO3	Demonstrate the useful plants to the local and world economy
	CO4	Formulate biofertilizers, organic compost and bioinsecticides
SEMESTER-IV		
COURSE OUTCOMES		
MSCBOT 401: PLANTCELL AND TISSUE CULTURE	CO1	Develop skill to produce tissue culture plants of economic importance
	CO2	Describe the production of transgenic plants
	CO3	Perform the molecular technique for Crop improvement
	CO4	Design Cell Culture systems for production of Secondary Metabolites
20RMSCBOT 402: PLANT GENETIC ENGINEERING AND GENOMICS	CO1	Summarize the tools and techniques of genetic engineering DNA manipulation enzymes, genome and transcriptome analysis and manipulation tools, gene expression regulation, production and characterization of recombinant proteins
	CO2	Associate the applications of genetic engineering in biological research
	CO3	Perform basic genetic engineering experiments at the end of course
	CO4	Acquire knowledge of advances in biotechnology-healthcare, agriculture and environment cleanup via recombinant DNA technology
20RMSCBOT 403 & 404(A):MOLECULAR PLANTPHYSIOLOGY	CO1	Summarize signal transduction mechanisms in plants.
	CO2	Describe the synthesis of food materials by plants through photosynthesis.
	CO3	Know about the diversity and characterization of various nano- particles and their utility in agriculture

	CO4	Distinguish the response of the plants in stressed conditions i.e., in low or excess availability of water, salts, heat, cold and pathogens.
20RMSCBOT403 &404 (B): PHYTOMEDICINE	CO1	Gain knowledge about some medicinal plants used in different alternative systems of medicine
	CO2	Understanding cultivation and processing methods of medicinal plants
	CO3	Recognize about drug adulteration and methods of detecting the same
	CO4	Perform phytochemical and biological screening of herbal drugs; Preparation of some herbal formulations
20RMSCBOT403 &404 (C): APPLIED PLANT PATHOLOGY	CO1	Introduce students to the basic principles and concepts of plant pathology
	CO2	Understand the changes in metabolic activities of diseased plants
	CO3	Understand the principles of host pathogen interactions of how diseases occur in plants,
	CO4	Understanding and identification of plant disease and control
20RMSCBOT 407: ORGANIC FARMING	CO1	Understand the importance of organic fertilizers in preventing environmental pollution
	CO2	Prepare Organic fertilizers and apply it to field level
	CO3	Develop the skill of preparing farmyard compost
	CO4	Learn the techniques of production and maintenance of Vermicompost
20RMSCBOT406(B): GARDENING AND NURSERY TECHNIQUES (EE)	CO1	Summarize basic knowledge about tools, equipmentand growing structures used in nurseries for plant production
	CO2	Recognize management practices of nursery practicesrecord keeping, nursery standards; Plant nutrition anditsmanagementinnursery
	CO3	Demonstratepropagationbycuttings,layering,grafting,budding,specializedstructures,andmicropropagation;Acquireknowledgeregardingthetheoryandpracticeofcultural andproductiontechniquesandmethods
	CO4	Learnmanagementpracticesfornutrition,watermanagement, pest management, pruning and training,storageandhandling,shipping

DEPARTMENT OF COMPUTER SCIENCE

SEMESTER-I		
COURSE OUTCOMES		
20RMSC101: DISCRETE MATHEMATICAL STRUCTURE	CO1	Analyze logical propositions via truth tables.
	CO2	Prove mathematical theorems using mathematical induction.
	CO3	Understand sets and perform operations and algebra on sets
	CO4	Construct a spanning tree by using search techniques
20RMSC102:COMPUTER ORGANIZATION	CO1	Demonstrate computer architecture concepts related to design of modern processors, memories and I/Os
	CO2	Analyze the performance of commercially available computers
	CO3	Identify, understand and apply different number systems and codes
	CO4	Design a pipeline for consistent execution instructions
20RMSC103:DATA STRUCTURES USING C	CO1	Define data structure and list out their applications and understands array & linked list data structures
	CO2	Identify suitable data structures for different scenarios
	CO3	Evaluates the strength and weakness of different data structures
	CO4	Design programs for linear and non-linear data structures‘ operations
20RMSC104:DATABASE MANAGEMENT SYSTEMS	CO1	Define and understand the basic concepts of relational data model, entity-relationship model, relational database design, relational algebra and SQL
	CO2	Develop ER-models to represent simple database application scenarios
	CO3	Accessing Databases from different Applications
	CO4	Improve the database design by normalization.
20RMSC105:OPERATING SYSTEMS	CO1	Understand the concept of OS, resource management in operating systems ,implementation of file systems and directories along with the interfacing of IO deviceswith the operating system
	CO2	Evaluate various scheduling algorithms ,

	CO3	Identify the dead lock situation and provide appropriate solution so that protection and security of the operating system is also maintained.
	CO4	Ability to design and solve synchronization problems, Apply memory management techniques in the design of operating systems
20R MSC103P: DATA STRUCTURES USING C LAB	CO1	Understand various algorithms implantation process of different data structures
	CO2	Apply suitable data stature for a need
	CO3	Analyse space and time complexity of various different data structures‘ operations
	CO4	Develops applications for implantations of different data structures‘ operations
20RMSC104P: DATA BASE MANAGEMENT SYSTEMS LAB	CO1	Understand the syntaxes for queries, procedures and functions
	CO2	Apply queries, procedures and functions for a need
	CO3	Analyze effectives of different normal forms implementation
	CO4	Design a commercial relational database system
20R MSC105P: OPERATING SYSTEMS LAB	CO1	Understand the syntaxes for queries, procedures and functions
	CO2	Apply queries, procedures and functions for a need
	CO3	Analyze effectives of different normal forms implementation
	CO4	Design a commercial relational database system
SEMESTER-II		
COURSE OUTCOMES		
20RMSC201:DESIGN & ANALYSIS OF ALGORITHMS	CO1	Analyze the performance of a given algorithm by using Asymptotic Notations.
	CO2	Solve problems by using Divide-and-Conquer and Greedy Method.
	CO3	Remember dynamic programming and backtracking techniques for solving optimization problems.
	CO4	Design algorithms by using Branch and Bound Techniques. Also classify computational problems into P, NP, NP Hard and NP Complete

20RMSC202:COMPUTER NETWORKS	CO1	Knowledge on Network Architectures (TCP/IP and OSI) models, Protocol Suites
	CO2	Understand functionalities of layers in each Network Architecture
	CO3	Analyse different routing algorithms
	CO4	Apply suitable routing algorithms and protocols based on requirements
20RMSC203: OBJECT ORIENTED PROGRAMMING USING JAVA	CO1	Understand various programming paradigms
	CO2	Implement the concepts of object-oriented programming
	CO3	Gain knowledge about basics of Java Language to write Java Programming.
	CO4	Ability to design and develop Object Oriented programs
20RMSC204:SOFTWARE ENGINEERING	CO1	To understand the concepts of software engineering, requirement models, design models, SCM, different kinds of risks, project estimations and software testing techniques
	CO2	Analyze software requirements and process models required to develop a software system
	CO3	Examine different Testing Strategies for conventional software and metrics to evaluate the product.
	CO4	Demonstrate skills in applying risk and quality management principles for effective management of software projects
20RMSC205:OPERATIONS RESEARCH	CO1	Analyze any real life system with limited constraints and depict in a model form.
	CO2	Construct mathematical model for the problem
	CO3	Design the mathematical model manually as well using soft resources / software such as solver, TORA etc.
	CO4	Understand Variety of problems such as assignment, transportation, travelling salesman etc
20RMSC204P – SOFTWARE ENGINEERING USING UML LAB	CO1	Understands UML Diagrams

	CO2	Construct Different Application software Systems
	CO3	Analyze Software Testing Methods
	CO4	Develop a Software application based on the principles of Software Engineering
20R MSC201P : COMPUTER NETWORKS LAB	CO1	Understands functionality of different error detection and correction techniques
	CO2	Apply suitable algorithm or protocols while designing the programme
	CO3	Analyze the efficiency of various different error detection and correction technique/ routing algorithms
	CO4	Design programs using computer language
SEMESTER-III		
COURSE OUTCOMES		
20RMSC301:ARTIFICIAL INTELLIGENCE	CO1	TheAbilitytoformulateanefficientproblemspaceforaproblemexpressedinnaturallanguage.
	CO2	Select a search algorithm for a problem and estimate its time and space complexities.
	CO3	Possess the skill for representing knowledge using the appropriate technique for a given problem.
	CO4	Possess the ability to apply AI techniques to solve problems of Natural Language Processing, Expert System, Pattern Recognition etc.,
20RMSC302: WEB TECHNOLOGIES	CO1	Analyze a web page and identify its elements and attributes.
	CO2	Outline XML fundamentals and usage of XML technology in electronic data interchange.
	CO3	Build dynamic web pages using JavaScript (client side programming).
	CO4	To design and develop web based enterprise systems for the enterprises using technologies like JSP, Servlet.
20RMSC303: PROGRAMMING USING PHP	CO1	Analyze a web page and identify its elements and attributes.
	CO2	Outline XML fundamentals and usage of XML technology in electronic data interchange.
	CO3	Build dynamic web pages using JavaScript (client side programming).

	CO4	To design and develop web based enterprise systems for the enterprises using technologies like JSP, Servlet.
20RMSC304(1): ADVANCED JAVA PROGRAMMING	CO1	Understanding on J2EE Architectures, Client & Server communication process, software components, Servlets, JSP and CORBA
	CO2	Handle Errors and Exceptions in Web Applications
	CO3	Analyse effectiveness of creating dynamic web pages using Servlet and JSP
	CO4	Develops Web Applications using Java Servlet and JSP
20RMSC304(2): C# PROGRAMMING	CO1	Understand code solutions and compile C# projects within the .NET framework.
	CO2	Design and develop professional console and window based .NET application
	CO3	Evaluate user requirements for software functionality required to decide whether the programming language C # can meet user requirements (analysis)
	CO4	Construct classes, methods, and assessors, and instantiate objects.
20RMSC304(3):SOFT WARE TESTING	CO1	Choose Test cases that are geared to discover the program defects.
	CO2	Design test cases before writing code and run these tests automatically.
	CO3	Apply test cases for testing different programming constructs.
	CO4	Test the applications using different testing methods and automation tools.
20RMSC305(1): DATAMING & DATA WAREHOUSING	CO1	Ability to understand the types of the data to be mined and present a general classification of tasks and primitives to integrate a data mining system
	CO2	Choose and employ suitable data mining algorithms to solve real world problems in business and scientific information using data mining
	CO3	Ability to apply the concepts, algorithm, techniques and tools for developing practical applications
	CO4	Ability to classify webpages, extracting knowledge from the web

20RMSC305(2): CRYPTOGRAPHY AND NETWORK SECURITY	CO1	Understand, compare and apply different encryptionand decryption techniques to solve problems related to confidentiality and authentication
	CO2	Apply the knowledge of cryptographic checksums and evaluate the performance of different message digest algorithms for verifying the integrity of varyingmessage sizes
	CO3	analyze different attacks on networks and evaluate the performance of firewalls and security protocols like SSL, IPSec, and PGP
	CO4	Apply the knowledge of cryptographic utilities and authentication mechanisms to design secure applications
20RMSC305(3): COMPUTER GRAPHICS	CO1	Understand mathematical basics which are used in computer graphics and also learn how to use them in designing computer graphics programs.
	CO2	Analyse basic graphics principles which are used in games, animations and film making.
	CO3	Apply geometric transformations on graphics objects and their application in composite form
	CO4	Choose scene with different clipping methods and its transformation to graphics display device
20RMSC302P :WEB TECHNOLOGIES LAB	CO1	Analyze a web page and identify its elements and attributes.
	CO2	Demonstrate the ability to retrieve data from a database and present it in a web page.
	CO3	Create dynamic web pages using JavaScript (Client side programming).
	CO4	Create XML documents and Schemas
20RMSC303P: PROGRAMMING USING PHP LAB	CO1	Understand Arrays, Operators,
	CO2	Create PHP Pages for different applications
	CO3	Define PHP Sessions to create Webpages
	CO4	Apply various PHP library functions that manipulate files and directories.

DEPARTMENT OF MATHEMATICS

SEMESTER-I		
COURSE OUTCOMES		
20RMSCMAT101: ALGEBRA	CO1	Classify groups in to G-Sets. Explain the concept of Sylow theorems.
	CO2	Understand the concept of maximal and prime ideals
	CO3	Acquire Knowledge On Ideals and Homeomorphisms
	CO4	Understand the Modules and quotient Modules.
20RMSCMAT102:REAL ANALYSIS	CO1	Understand the concepts of Riemann Integration and Differentiation.
	CO2	To learn the different types of Sequences and Series of Functions, Equicontinuous Families of Functions.
	CO3	Analyze the concept of functions of several variables.
	CO4	Study the applications of Integration and Differential forms.
20RMSCMAT103:ORDINARY DIFFERENTIAL EQUATIONS	CO1	Recognize and classify O.D.Es.
	CO2	Learn boundary value problems, Eigen values and Eigen functions
	CO3	Apply knowledge on special functions of Mathematical Physics
	CO4	Understand the method of successive approximation and solve the second order linear questions.
20RMSCMAT104:DISCRETE MATHEMATICS	CO1	Use standard notaions of propositional logic.
	CO2	Determine if a logical argument is valid or invalid.
	CO3	Understand the truth tables for expressions involving nagation, conjuction, and disjunction
	CO4	Find concepts and notations from discrete mathematics are useful in studying Automata theory, Number theory and mathematical cryptography.
20RMSCMAT105: COMPLEX ANALYSIS	CO1	Identify curves and regions in the complex plane defined by simple expressions.
	CO2	Describe conformal mappings between various plane regions.
	CO3	Describe basic properties of complex integration and having the ability to compute such integrals.

	CO4	Apply the concepts of Complex Analysis in many branches of mathematics, including algebraicgeometry, number theory, analytic combinatorics, Mathematics; as well as in physics, including the branches of hydrodynamics, thermodynamicsand particularly quantum mechanics.
SEMESTER-II		
COURSE OUTCOMES		
20RMSCMAT201: OPERATIONS RESEARCH	CO1	Understand applications of OR techniques in real life and gain the capacity to solve real life problems using these techniques. Understand components and assum ptions of linear programming problems and its mathematical formulation.
	CO2	Learn Graphical solution method, simplex method, use of artificial variables and methods to solve LP problems containing artificial variables. Understand the applicationof transportation problem in real life problems, representation of transportation problem in tabular form, duality in TP.
	CO3	Understand the applicationoftransportation problemin real life problems, representation of transportation problem in tabular form, duality in TP.
	CO4	Understand the purpose of introducing of assignment problem
20RMSCMAT202:GALOIS THEORY	CO1	Knowledge gained solving polynomial equations using formulas for roots, How to testify Polynomial is irredu cible finite field (Galoisfields).
	CO2	Understand the roots of polynomial equation it the same has degree less than five.
	CO3	Realize the facility in working with finite fields Apply the concept of a field extension to various mathematic al problems including geometric constructions and perfect division of a circle into nparts.
	CO4	Apply mathematical methods to the real- life problems including cryptography
20RMSCMAT203:PARTIAL DIFFERENTIAL EQUATIONS	CO1	Identify linear and nonlinear PDE and solve nonlinear PDE by Charpit‘s method.
	CO2	Apply Variables separable methods to solve Laplace Equation in cylindrical or spherical coordinates.
	CO3	Obtain equipotential surfaces using Laplace‘s equation
	CO4	Understand the importance of partial differential equations in geometry, physics and other subjects.

20RMSCMAT204: TOPOLOGY	CO1	Understand to construct topological spaces from metric spaces and using general properties of neighbourhoods, open sets, closed sets, basic and sub-basis.
	CO2	Apply the properties of open sets, closed sets, interior points, accumulation points and derived sets in deriving the proofs of various theorems.
	CO3	They know what we mean by connectedness, compactness, and hausdorf property and their general characteristics.
	CO4	Understand the classical theorems such as the Uryshon lemma, the Tietze extension theorem.
20RMSCMAT205: ADVANCED COMPLEX ANALYSIS	CO1	Learn topics of contemporary Advanced complex analysis in particular spaces of holomorphic functions, entire functions, harmonic functions and conformal mapping functions.
	CO2	Apply advanced techniques to evaluate definite integrals and differential equations in applied areas.
	CO3	Explain general principles of conformal mapping
	CO4	Compute the residue of a function and use the Residue Theory to evaluate a contour integral or an integral over the real line
SEMESTER-III		
COURSE OUTCOMES		
20RMSCMAT301:LINEAR ALGEBRA	CO1	Know the concept of characteristic values, Subspaces, Simultaneous Triangulation; Simultaneous Diagonalization.
	CO2	Understand concept of Direct-Sum Decompositions, Invariant Direct Sums
	CO3	.Demonstrate the Jordan Form, Computation of Invariant Factors, Summary; Semi-Simple Operators
	CO4	Know the Concept of Bilinear Forms, Symmetric Bilinear Forms
20RMSCMAT302: FUNCTIONAL ANALYSIS	CO1	They can work with different distance metrics and normed spaces. Understand continuous linear transformations and the Hahn-Banach Theorem.
	CO2	Comprehend the Open mapping theorem and Closed graph theorem
	CO3	Understand the relevance of self-adjoint operators, normal, unitary operators and projections.
	CO4	Comprehend the ideas of determinants and the spectrum of an operator.

20RMSCMAT303: DIFFERENTIAL GEOMETRY	CO1	Determine and calculate curvature of curves in different coordinate systems.
	CO2	Treat geodesic curves and parallel translation.
	CO3	Calculate and analyse curvature of surfaces in different settings.
	CO4	Know the concept of tensor and recognize tensors that are used in mechanics, image processing and theory of relativity.
20RMSCMAT304A: NUMBER THEORY	CO1	Find quotients and remainders from integer division Apply Euclid‘s algorithm and backwards substitution
	CO2	Understand the definitions of congruences, residue classes and least residues
	CO3	Add and subtract integers, modulo n, multiply integers and calculate powers, modulo n
	CO4	Determine multiplicative inverses, modulo n and use to solve linear congruence.
20RMSCMAT304B: PROGRAMMING AND DATA STRUCTURES	CO1	Understand the language of C
	CO2	To provide knowledge on theoretical concept of decision making
	CO3	To know the existence and uniqueness of solutions
	CO4	To study the structures and functions
20RMSCMAT304C: NON-COMMUTATIVE RINGS	CO1	Understand the concept of Primitive Rings and radicals
	CO2	Able to understand the concept of Notherian rings
	CO3	Acquire Knowledge On Ideals and Homeomorphisms
	CO4	Understand the Modules and Tensor product Modules.
20RMSCMAT305A: CLASSICAL MECHANICS	CO1	Understand D‘ Alembert‘s Principle and simple applications of the Lagrangian Formulation. Derive the Lagrange‘s Equation from Hamilton‘s Principle
	CO2	Study the concept of the Equations of Motion and the Equivalent One-Dimensional Problems.
	CO3	Distinguish the concept of the Hamilton Equations of Motion and the Principle of Least Action.
	CO4	Get familiar with canonical transformations, conditions of cononicity of a transformation in terms of Lagrange and Poisson brackets.

20RMSCMAT305B: ALGEBRAIC TOPOLOGY	CO1	Classify the dimensional Manifolds and The Euler Characteristic of a surface
	CO2	Understand the concept of maximal and prime ideals
	CO3	Acquire Knowledge groups and Product of Groups
	CO4	Seifert and Van Kampen Theorem on the Fundamental Group of the Union of Two spaces Applications
20RMSCMAT305C: INTERNET AND HTML	CO1	Explain the concept of Internet and Email illustrations & occurrence
	CO2	Apply the theory of Internet and E mail concepts in our routine life
	CO3	Explaining the concept of HTML
	CO4	Able to understand Cascading Style Sheets
SEMESTER-IV		
COURSE OUTCOMES		
20RMSCMAT401: COMMUTATIVE ALGEBRA	CO1	To learn the structures of composition series with ACC and DCC
	CO2	Understand the concept of Direct sum in Modules
	CO3	To study the theoretical properties of Noetherian rings. To study the theoretical properties of Noetherian rings. Explain Hlbert‘s basis theorem and decomposition theorem
	CO4	To develop applications in the different fields.
20RMSCMAT402: NUMERICAL ANALYSIS	CO1	solve Algebraic and Transcendental polynomial equations
	CO2	Learn how to apply the Numerical method for various Mathematical operations and tasks
	CO3	Understand Interpolation,Differentiation,Integration,the solution of Differential Equations
	CO4	Analyse and evaluate the accuracy of common Numerical methods
20RMSCMAT403:GRAPH THEORY	CO1	Able to define basic concepts of graphs Understand the properties of trees and use of connectivity
	CO2	Apply Cayley‘s formula to find number of spanning trees
	CO3	Identify Eulerian and Hamiltonian graphs.

	CO4	Understand the concepts of practical problems like Chinese postman problem and travelling salesman problem
20RMSCMAT404A: FUZZY SETS AND FUZZY LOGIC	CO1	Learn crips and fuzzy set theory
	CO2	Decide the difference between crips set and fuzzy set theory
	CO3	Make calculation on fuzy set theory.
	CO4	Recognize fuzzy logic fuzzy inference system
20RMSCMAT404B: APPROXIMATION THEORY	CO1	Understand the concept of Nomenclature
	CO2	Understand the Existence and Unicity of Best approximation
	CO3	Understand and apply algorithms in applications like sending messages without errors.
	CO4	Understand the concept of General linear forms
20RMSCMAT404C: BANACH ALGEBRA	CO1	Understand different types of Banach Algebras with examples.
	CO2	Define ideals, radicals and properties of semi simple Banach Algebras.
	CO3	Know the essence of Gelfand mapping.
	CO4	Derive the applications of Banach Algebra in analysis, Fourier series,Boolean Algebras and other significant areas of mathematics.
20RMSCMAT405A: MATHEMATICAL STATISTICS	CO1	Extensive knowledge on Distributive functions and Mathematical expectation Demonstrate MGF and Characteristic functions
	CO2	Acquire knowledge on Distributions like Binomial,Poission and Normal
	CO3	Distinguish between karl pearson correlation coefficient and spearman‖s rank correlation coefficient. To know the properties of Karl pearson coefficient
	CO4	Demonstrate the concept of parameter, static,sampling distribution of a static and its standard error,and their utility in Large sample test
20RMSCMAT405B: ALGEBRAIC CODING THEORY	CO1	Analyse Error detecting and error correcting codes.

	CO2	Understand and apply algorithms in applications like sending messages without errors.
	CO3	Use bounds for different types of codes.
	CO4	Understand the polynomial encoding and decoding.
20RMSCMAT405C: COMPUTER NETWORKS	CO1	Analyse Error detecting and error correcting codes.
	CO2	Understand and apply algorithms in applications like sending messages without errors.
	CO3	Use bounds for different types of codes
	CO4	Understand the concept of Domain Name System

DEPARTMENT OF ZOOLOGY

SEMESTER-I		
COURSE OUTCOMES		
20RMSCZOO101: INVERTEBRATA AND CHORDATA	CO1	Demonstrate knowledge of Species Concept,Zoological
	CO2	Nomenclature, feeding and digestion in different phyla
	CO3	Understand the Respiration, circulation, nervous system in Different Invertebrates, crustacean and echinoderm larval forms
	CO4	Understand the Evolutionary time scale, vertebrate integument, Heart, and Excretion
20RMSCZOO102:CELL BIOLOGY AND IMMUNOLOGY	CO1	Understand the importance of cytoskeleton cellular Respiration in mitochondria, causes of cancer and regulation of programmed cell death
	CO2	Demonstrate Knowledge of cell signaling
	CO3	Gain the Knowledge of phylogeny of Immune system and Lymphoid organs.
	CO4	Understand the importance of hypersensitivity, transplantation, tumor immunity and vaccines
20RMSCZOO103: ANIMAL PHYSIOLOGY AND ENDOCRINOLOGY	CO1	Perception of Physiological functions and Principles, Feeding, Mechanism, Respiration ,Circulation and excretion in different animal groups
	CO2	Understand the Thermoregulation, Biological Rhythms, Chromatophores and Contractile elements in different phylogenetic groups
	CO3	Gain the knowledge on structural anatomy of Neuro Endocrine system and Mechanism of Hormone action
	CO4	Acquire the knowledge of Hormonal regulation ,Reproductive Endocrinology, Insect Endocrine system and hormonal Regulation of Mineral Metabolism

20RMSCZOO104: BIOPHYSICAL AND BIOCHEMICAL TECHNIQUES	CO1	Understand the importance of Cell Disruption methods,
	CO2	Centrifugation and their applications
	CO3	Demonstrate the knowledge of separation methods based on polarity, size and affinity
	CO4	Gain the Knowledge of Electrophoresis, and Blotting Techniques
20RMSCZOO105:HUMAN VALUES AND PROFESSIONAL ETHICS	CO1	Demonstrate knowledge of human values and family values
	CO2	Understand the moral responsibility of medical practitioners
	CO3	Demonstrate the characteristics of ethical problems in business
	CO4	Gain the knowledge of remediation for environmental pollution
	CO5	Understand the Human rights violation and social disparities
SEMESTER-II		
COURSE OUTCOMES		
20RMSCZOO201: GENETICS AND EVOLUTION	CO1	Demonstrate knowledge of Concept of Gene ,Genome
	CO2	Organization ,Gene mapping and types of Crossing Over
	CO3	Understand the mutations,Pedigree Analysis,Eugenics
	CO4	Euphenics
20RMSCZOO202: MOLECULAR BIOLOGY	CO1	Demonstrate knowledge of Molecular nature of Genome
	CO2	Understand the Replication in Prokaryotes and Eukaryotes
	CO3	Demonstrate the organization and function of Trancription and Translation.
	CO4	Gain the knowledge of Gene expression and Molecular Biology Techniques
20RMSCZOO203: CHEMISTRY OF BIOMOLECULES	CO1	Understand the importance of Carbohydrates and Lipids

	CO2	Demonstrate Knowledge of Aminoacides.
	CO3	Gain the Knowledge of Protein structure.
	CO4	Understand the concepts in the structure of DNA&RNA
20RMSCZOO204: DEVELOPMENTAL BIOLOGY	CO1	Comprehension of gametogenesis, oogenesis and fertilization process
	CO2	Understand the patterns of cleavage, cellular differentiation and formation of placenta .
	CO3	Illustrate the organization and function of organogenesis
	CO4	Gain the knowledge of Chromosomal sex determination, Concept of test tube baby and theories of Ageing
SEMESTER-III		
COURSE OUTCOMES		
20RMSCZOO301: ENVIRONMENTAL BIOLOGY & BIODIVERSITY	CO1	Demonstrate knowledge of Biology of Different environments, Energitics of Ecosystem
	CO2	Understand the pollution, epidemiology, Environmental monitoring and assessment, Bioremediation
	CO3	Demonstrate the organization and function of Biodiversity and Conservation
	CO4	Gain the knowledge of wildlife protection organizations
20RMSCZOO302: ENZYMOLOGY AND METABOLISM	CO1	Demonstrate the usage of different culture equipments, types of tissue culture and application of animal cell culture.
	CO2	Gain the Knowledge about Invitro fertilization steps,
	CO3	cloning, stemcells,Gene therapy and transgenic animals
	CO4	Demonstrate the Knowledge of different concepts of applied microbiology
20RMSCZOO303(A): ANIMAL BIOTECHNOLOGY AND MICROBIOLOGY	CO1	Demonstrate the usage of different culture equipments, types of tissue culture and application of animal cell culture.
	CO2	Gain the Knowledge about Invitro fertilization steps,
	CO3	cloning, stemcells, Gene therapy and transgenic animals

	CO4	Demonstrate the Knowledge of different concepts of applied microbiology
20RMSCZOO304: AQUACULTURE	CO1	Understand the different types of culture systems and culture practices .
	CO2	Gain the Knowledge about the Preparation and management of pond
	CO3	Demonstrate the Knowledge of different concepts of Nutrition and health management of fishes and prawns
	CO4	Understand the concepts of processing andpreservation of fish and shrimp and Sustainability of environmental management
20RMSCZOO305: ANIMAL HUSBANDRY AND DAIRY TECHNOLOGY	CO1	Understand the breeds of Dairy cattle and process of Let down of Milk
	CO2	Gain the Knowledge about the Cloning, Artificial insemination and systems of Dairy cattle breeding.
	CO3	Get Knowledge of Dairy Technology and disposal of dairy effluents
	CO4	Understand the cream seperators and Manufacture of Milk by products
SEMESTER-IV		
COURSE OUTCOMES		
20RMSCZOO401: NEUROBIOLOGY AND ANIMAL BEHAVIOUR	CO1	Understand the importance of structure and types of nervous system.
	CO2	To demonstrate the functions of nervous system
	CO3	To gain Knowledge of Types of Behaviour and relation between Homeostasis and Behaviour .
	CO4	To Understand the concepts in Animal communications ,Social organization , forgettings and memory.
20RMSCZOO402: APPLIED TOXICOLOGY	CO1	Gain knowledge on dose relationship, factors affecting the toxicity and absorption and biotransformation of Xenobiotics.
	CO2	Understanding the bonding between toxicant and biological molecules and oxidative stress
	CO3	Demonstrate the Knowledge of Basic organ toxicity.
	CO4	Understand the concepts of ecotoxicology, occupational toxicology and legislation rules

20RMSCZOO403: BIOSTATISTICS AND BIOINFORMATICS	CO1	Understand the Basics of Biostatistics, variation and probability.
	CO2	Gain the Knowledge about the correlation, regression and statistical basis of biological assays
	CO3	Demonstrate the origin of bioinformatics in biological data, applications of bioinformatics in genome project
	CO4	Understand the concepts of databases querying with NCBI using keywords, sequence analysis and proteomics
20RMSCZOO404(A): GENETIC ENGINEERING	CO1	Understand the Enzymes used in Genetic Engineering and ligation of DNA fragments
	CO2	Gain the Knowledge about the Types of vectors designed for cloning, methods of introduction of foreign DNA
	CO3	Illustrate the Knowledge of gene transfer methods and cloning stratergies.
	CO4	Understand the concepts of DNA sequencing and Gene expression
ZOO404(B):WILDLIFE CONSERVATION BIOLOGY	CO1	Understand the Importance and Values of wild life, Concept of threatened Fauna
	CO2	Gain the Knowledge about the wild life conservation biology
	CO3	Evaluate the Knowledge of Field Biology.
	CO4	Applying the knowledge of information technology in wild life

DEPARTMENT OF COMMERCE

SEMESTER-I		
COURSE OUTCOMES		
20RMCOM101:BUSINESS MANAGEMENT	CO1	Evolution of Management concepts and Thoughts
	CO2	Applying all the types of planning process
	CO3	Understanding the structure of business organisation
	CO4	Knowledge gaining through different levels of staffing.
	CO5	Applying the motivation, leadership and communication, and their process.
20RMCOM102:BUSINESS ENVIRONMENT AND POLICY	CO1	To understand the different environment in the business climate

	CO2	To know the Internal and external factors affecting the business in various streams
	CO3	To evaluate the different environment like, political,Legislature,Executive,Judiciary,Judicialactivism,Government technological and economic environmentinthebusiness
	CO4	Understanding the Ethics in business, Social responsibilities of business and Corporate governance in India.
	CO5	Strategies for global, MNCs–Emerging challenges of international business.
20RMCOM103: MANAGERIAL ECONOMICS	CO1	Acquire managerial skills and responsibilities as a managerial economist.
	CO2	Forecast the demand using opinion polling and statistical methods for existing and new products.
	CO3	Analyze the cost output relationship and economies of scale for cost control and cost reduction.
	CO4	Appraise the input and output relationship through law of variable proportions and Cobb-Douglas production function
	CO5	Formulate the policies on profit maximisation and analysis of break-even.
20RMCOM104: MARKETING MANAGEMENT	CO1	Evolution of marketing concept, Marketing environment and Factors influencing buyer behaviour and understand the dynamics of consumer behaviour.
	CO2	Analysing the tree structure of product mix, learn to develop a new product and strategies during its life cycle, brand and label and price it.
	CO3	To know place mix and Supply chain management and acquire skills to design advertising, sales promotion techniques
	CO4	Acquire knowledge of Marketing Information System
	CO5	Lead and coordinate the strategies for service marketing.
20RMCOM105: CORPORATE FINANCIAL ACCOUNTING	CO1	Creates awareness about corporate accounts with provision of various companies act and concepts, conventions and policies by AICPA
	CO2	Provides knowledge about the valuation of goodwill, simple and super profit methods
	CO3	Gaining the knowledge of preparation of consolidated balance sheet

	CO4	Inculcates the techniques, methods and practice of inflation accounting.
	CO5	Acquireknowledgeofleasingbothfinancialandnonfinancialandleaseback
20RMCOM106:CUSTOMER RELATIONSHIP MANAGEMENT	CO1	Understand the basic concept and importance of Customer relationship management.
	CO2	To analysing marketing aspects of Customer relationship management.
	CO3	To analyse the Customer databases and database marketing
	CO4	Learn basics of analytical Customer relationship management
	CO5	Understand the Role of information technology in CRM.
20RMCOM107:HUMAN VALUES AND PROFESSIONAL ETHICS	CO1	Identify and analyze an ethical issue in the subject matter under investigation or in a relevant profession
	CO2	Articulate what makes a particular course of action ethically defensible and Demonstrate knowledge of ethical values in non-classroom activities
	CO3	Gaining the values of non violence, truth, celibacy, non possession, non-stealing to individual and society .
	CO4	Identify the multiple ethical interests at stake in a real-world situation or practice and Analyse the Bhagavad Gita
	CO5	To know the Crime and Theories of punishment
SEMESTER-II		
COURSE OUTCOMES		
20RMCOM201: QUANTITATIVE TECHNIQUES FOR BUSINESS DECISIONS	CO1	Identify the concepts Quantitative Techniques and business forecasting, quantitative approach to management as well as in business decision making.
	CO2	Understand the test for equality of two population variances, analysis of variance and one way and two way classified data, basics and distributions of probability
	CO3	Analyse the basic concepts of probabilities and probabilities distribution
	CO4	Demonstrate hypothesis testing, testing difference between the means of two independent/dependent samples chi-square test, requirements for application of linear programming,

	CO5	Formulationoflinearprogrammingproblemandgraphicandsimplexmethodsofsolvinglinearprogramming.
20RMCOM202:FINANCIAL MANAGEMENT	CO1	Understand the concept of finance and objectives of financial management. finance values and profit and wealth maximisations
	CO2	Analyses financing decisions using theories of capital structure and weighted average cost of capital and estimate the degree of risk through leverage concept.
	CO3	Evaluate of the requirement of working capital and estimate the working capital requirements of an enterprise.
	CO4	Evaluate opportunity of investment decision applying techniques of capital budgeting and using present value and future value concepts
	CO5	Assess the dividend distribution of a firm through important theories of dividend.
20RMCOM203:HUMAN RESOURCE MANAGEMENT	CO1	Understanding the basic concepts, functions and objectives, and the role of human resource planning, human resource information system and importance of recruiting in managing organisation.
	CO2	Understand the process of designing a training programme and its evaluation.
	CO3	Acquire knowledge on compensation management, grievance handling and collective bargaining discover the process of knowledge management and role of leader in organizations.
	CO4	To understand the discipline and employee rights Employee counselling.
	CO5	To analyse quality of circles, employee empowerment Collective bargaining and quality of work life.
20RMCOM204:COMPUTER APPLICATIONS IN ACCOUNTING	CO1	Acquire skills in operating gateway of tally and in preparing company financial statements
	CO2	Able to create inventory and stock registers and intaking inventory reports through Tally accounting software.
	CO3	Have a bird‘s eye view on GST system including methodology in evaluating time, place and value of supply of goods and services, and input tax credit mechanism.
	CO4	Skilful in recording interstate and intrastate supply and return of goods and in generating various GSTR reports.

	CO5	Demonstrate the practical knowledge on creating and printing of various payroll receipts.
20RMCOM205:WORKING CAPITAL MANAGEMENT	CO1	Knowledge on the basic concepts, types and sources of working capital requirements for business concern.
	CO2	Practical knowledge on determinants and techniques of working capital.
	CO3	Well equipped with preparing cash budget and cash management techniques
	CO4	Understand the credit policy and its evaluation methods
	CO5	Analyze the inventory management techniques
20RMCOM206:MARKETING RESEARCH	CO1	Understand the concepts about contemporary market research and process of marketing research and its different processes
	CO2	Apply and evaluate different sources of marketing information as well as various data collection techniques.
	CO3	Analysing the importance of marketing mix elements in conducting marketing research
	CO4	Basic awareness on Customer Satisfaction Measurement, mystery shopping, and Basic experimental designs
	CO5	Able to write a comprehensive market research report by using various statistical techniques.
SEMESTER - III		
COURSE OUTCOMES		
20RMCOM301: PERSONALITY DEVELOPMENT AND SOFT SKILLS	CO1	Able to differentiate the success and failure
	CO2	Clear understanding on the concept of attitude and motivation
	CO3	Able to demonstrate high confidence in his/her professional life.
	CO4	Familiar with the leadership theories
	CO5	Inspire from the leadership qualities of AbrahamLincoln, Mahatma Gandhi, Prakasam Pantulu, Dr.B.R.Ambedkar and J.R.D.Tata.

20RMCOM302: SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT	CO1	Apply the tools and techniques of fundamental analysis, technical analysis and Random Walk theory for expected return on investment.
	CO2	Ascertain the value of equity shares and bonds through different valuation models to buy and sell decision
	CO3	Analyze the portfolio selection through significant models like capital asset pricing model (CAPM) and Arbitrage pricing theory (APT).
	CO4	Evaluate the performance of the portfolio through ideal measures and revise the portfolio for better performance.
	CO5	To understand the passive management, active management and formula plans
20RMCOM303:ACCOUNTING FOR MANAGERIAL DECISION	CO1	Understand the Concept of managertial accounting, cost anmalysis, for pricing decision and also learn different product pricing methods
	CO2	To know the significance of different managerial decisions affecting the short term and long term financing
	CO3	Analyse the concept of RA, managerial utility of different responsibilitycenters and acquaintance with the emerging trends issues in RA
	CO4	Familiarize the evaluation of divisional performance parameters and describe the emerging issues.
	CO5	Awareness about reporting practice adopted by Indian corporate
20RMCOM304: FINANCIAL MARKETS AND SERVICES	CO1	To learn about the components of the Indian financial system and reforms in it with a detailed review on money market components.
	CO2	Have an in-depth knowledge of capital market including primary and secondary market and powers of SEBI regulating this market.
	CO3	Familiarize oneself with functions of merchant bankers and their obligations to SEBI.
	CO4	Acquiring knowledge of the methodology involved in rating the financial instruments by credit rating organizations and in mapping factoring mechanism.
	CO5	Explore the possibility of getting venture capital finance during different stages of business within the framework of SEBI regulations and to familiarize with mutual funds.
20RMCOM305: MERGERS AND ACQUISITIONS	CO1	Understand corporate restructuring concepts and forms

	CO2	Student have an idea about the waves and procedures of mergers and To understand the splitting up of companies
	CO3	Able to develop the procedures involved in acquisitions and know the constraints of acquisitions and the role of SEBI
	CO4	Understand about the concept and types of demerger and reverse merger.
	CO5	To apply the methods of accounting for M&A, and tax aspects.
20RMCOM306:ADVERTISING AND SALES PROMOTION	CO1	Demonstrate an understanding of the overall role advertising place in the business world.
	CO2	Able to understand advertising strategies and budgets.
	CO3	Understanding of how an advertising agency operates.
	CO4	Analysing sales management strategies in relation to India as well as international standards.
	CO5	Evaluate the role of sales promotion as a marketing tool.
20RMCOM307:BASICS OF FINANCIAL ACCOUNTING(EE)	CO1	Understanding the nature and principles of financial accounting
	CO2	Analyse the pattern of financial accounting
	CO3	Acquainted with Posting Subsidiary books, Ledger and preparation of Trial balance.
	CO4	Able to reconcile the bank pass book and cash book and basics of bills of exchange
	CO5	Acquainted with preparation of final accounts
20RMCOM308:BASICS OF ENTREPRENEURSHIP DEVELOPMENT(EE)	CO1	Understand the concept and development of entrepreneurship
	CO2	Familiar with the theories of entrepreneurship
	CO3	Gain knowledge on traits and various types of entrepreneurs
	CO4	Analyse in role SMEs in economic development.
	CO5	Understand the impact of global aspects on the entrepreneurship development.
SEMESTER-IV		
COURSE OUTCOMES		

20RMCOM401: CORPORATE TAX PLANNING AND MANAGEMENT	CO1	Know the concepts of tax law and able to identifythe difference between tax evasion, tax avoidance and tax planning.
	CO2	Understands the capital structure decisions, dividend polic yand bonus shares.
	CO3	Familiar with taxplanning in respect to managerial decisions
	CO4	Familiar with tax planning incentives
	CO5	Knowledge on Tax deductions and collection at source and on advance tax payment.
20RMCOM402: E-COMMERCE	CO1	Understand the fundamentals of EC, its applications, and models, and the provisions of IT ACT on EC.
	CO2	Comprehend the internet technology, its protocols, and acquire skills in designing a web page through HTML.
	CO3	Realize the theoretical base on the protocols and cryptography involved in E-payments, andmethodology involved in the use of e-payment tools.
	CO4	Critically examine the frauds and piracies involved in EC, including legal, privacy, ethical and IPR issues.
	CO5	Apply the EC technology in advertising, supply chain, marketing research, financial services, publishing, entertainment, retailing and stock market trading.
20RMCOM403: ENTREPRENEURSHIP DEVELOPMENT	CO1	Understand the concept of entrepreneurship, Women entrepreneurship and classification of entrepreneurs
	CO2	Familiar with sources and methods in generating business ideas.
	CO3	Able to prepare project report and familiar with project evaluation methods.
	CO4	Knowledge on institutions supporting MSMEs at central as well as state level.
	CO5	Recognise various government policies in providing tax benefits and incentives for the promotion of SMEs in India.
20RMCOM404: PROJECT REPORT & VIVA-VOCE		
20RMCOM405: INSURANCE & RISK MANAGEMENT	CO1	Understand the concept of risk identification, risk evaluation and risk management techniques..

	CO2	Well-known to indentify different types of policies and contracts, commercial risk management applications, workers compensation and risk financing
	CO3	Recognised the property and liability Insurance Coverage for auto owners, home owners.
	CO4	Familiar with risk management applications, Loss of Life, Loss of Health, annuities.
	CO5	In-depth knowledge on risk management environment and government regulations with respect insurance sector.
20RMCOM406: LOGISTICS AND SUPPLY CHAIN MANAGEMENT	CO1	understanding the principles and functions of logistics in today‘s business environment
	CO2	Develop a sound understanding of the important role of supply chain management in today‘s business environment
	CO3	Familiar with Inventory carrying, Warehousing, Material handling, Order Processing, Transportation
	CO4	Understanding of Role of Transportation in Logistics and Supply chain management
	CO5	To well-known Integrated IT solution for Logistics and Supply Chain Management
20RMCOM407: CAPITAL MARKETS(EE)	CO1	Understand the environment of Indian financial markets
	CO2	Knowledge on money market operations in India
	CO3	Familiar with Indian primary market system
	CO4	Well aware trading in Indian secondary market
	CO5	Analyse the bonds market and Government securities market.
20RMCOM408:TAX PLANNING FOR INDIVIDUAL ASSESSEE (EE)	CO1	Understanding the basic tax concepts
	CO2	Familiar with tax planning procedures with respect resident status of an assessee
	CO3	Compute gross total income of an Individual assessee after taking into account deduction u/s 80C.
	CO4	Acquiring knowledge on calculation of income from house property
	CO5	Knowledge of concepts of tax law and able to identify the tax evasion, tax avoidance and tax planning.