Programme Outcomes,

Programme Specific Outcomes (PSOs) and

Course Outcomes (COs) of Post Graduate Programmes

Content

PROGRAMME OUTCOMES (POs)

PO1: Communicate effectively, and appropriately in all modes of communication

PO2: Demonstrate leadership showing respect to others while working in teams

PO3: Able to analyze the developments in the society and form a constructive, eco sensitive and compassionate opinion

PO4: Develop a multidisciplinary perspective and pursue research to solve socially relevant problems

PO5: Develop sensitivity for social issues and act proactively upholding the values of peace, fraternity and love

PO6: Become confident and critically reflective lifelong learners

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO1: Create a social awareness in terms of society, culture, ethnicity, ecology and gender backgrounds of literature.

PSO2: Develop skills of research through interpretation, critical thinking and clear writing.

PSO3: Compile their research by applying research methodology.

PSO4: Identify the significance of internationally acclaimed works through the writings of highly celebrated writers including translated versions.

PSO5: Have a command over the four basic communicative skills LSRW.

PSO6: Exhibit a definite mastery of English language skills.

PSO7: Develop analytical, research-oriented and organizational skills.

<p style="text-align: center;">**COURSE OUTCOMES (COs)**</p>

SEMESTER 1

EN010101- Up Until Chaucer: Early Literatures in English

On successful completion of the course, the students will be able to

CO1: **Analyze** the major themes in Ancient and Medieval English literature as an expression of Anglo-Saxon culture and society as it emerges into a Britain-consciousness.

CO2: **Assess** and understand the personal experiences of people living in a society very different from our own.

CO3: **Evaluate** the literature of the Anglo-Saxons written over a thousand years ago.

CO4: **Examine** the standardization of creative consolidation initiated by Chaucer and his peers; a paradigm shift that made possible the emergence of English literature with a purpose and identity of its own.

CO5: **Describe** how these texts/readings proactively link up with the other texts/ readings in the module.

EN010102- Literatures of the English Renaissance

On successful completion of the course, the students will be able to

CO1: **Relate** with the literature, thought and culture of the Renaissance period in England, a historical watershed marking the transition from the medieval to the modern.

CO2: **Inspect** the era and the texts in the light of recent theoretical interventions like New Historicism and Cultural Materialism which had a special interest in Renaissance texts.

CO3: **Discuss** about Renaissance writings bearing the stamp of radical changes in the outlook and ways of life.

CO4: **Compare and contrast** major genres like Drama, Poetry and Prose which provides an introduction to the literature of the English Renaissance studied in a variety of historical contexts.

CO5: **Explain** how literary luminaries like William Shakespeare and Christopher Marlowe emerged and influenced each other leaving their mark on their own time and the time to come.

EN010103- Literatures of the English Revolution/ Enlightenment

On successful completion of the course, the students will be able to

CO1: **Describe** the English literary texts which reflect the austere Puritan ideals of the late seventeenth century and the neoclassical vigour of the eighteenth century.

CO2: **Analyse** the comprehensive account of the late seventeenth and the eighteenth century literary scenario drawing upon the significant social and the political developments of the times.

CO3: **Discuss** the rise of new genres like novel and are familiarised with Ian Watt's perspective on the inception of this new genre in England.

CO4: **Outline** an in-depth critique of the philosophy of the Enlightenment.

CO5: **Compare and contrast** the poetry of John Milton the epic poet of the late seventeenth century, the neoclassical satirists such as John Dryden and Alexander Pope, Aphra Behn the first professional woman writer of England, and Thomas Gray, the transitional poet.

EN010104 -Nineteenth Century English Literatures

On successful completion of the course, the students will be able to

CO1: **Analyse** the fundamental premises of the Romantic Movement and Victorian literature, their theoretical and ideological frameworks, and the major trends and offshoots across various genres.

CO2: **Illustrate** the initial flowering of Romanticism, followed by the rapid growth of industrialization, scientific thinking and materialism.

CO3: **Discuss** the theoretical premises of the British Romantic Movement as well as the Victorian Age that chronologically follows the Romantic Era.

CO4: **Examine** the historical significance of the Ode as a poetic form best suited to examine the subjective and individualistic imagination of the romantic poet which finds expression as most of the poems in this section are odes.

CO5: **Write** about the Victorian Sensibility with increased attention being paid to the decline of the romantic sensibility, the growth of reason, ascent of materialism etc.

EN010105 – Literary Criticism

On successful completion of the course, the students will be able to

CO1: **Examine** the key concepts and texts of literary criticism ever since its emergence.

CO2: **Provide** theoretical familiarity with the range, approaches, and mechanics of critique.

CO3: **Identify** the historical, political and aesthetic dimensions of the growth of literary criticism.

CO4: **Discuss** issues like canon formation, evolution of the genres and methods of literary analysis.

CO5: **Compare and contrast** topics like classical western criticism from Plato, Aristotle Horace and Longinus, English Renaissance and neoclassical criticism, the 18th century trends, the romantic revolt, the Victorian tradition, the new critics, Eliot's critical positions, Psychoanalysis, myth/archetypal criticism, Russian Formalism, and Reader response theories.

SEMESTER - II

EN010201 – Modernity and Modernisms

On successful completion of the course, the students will be able to

CO1: **Evaluate** the literary trends of the early twentieth century in the context of the sensibility of literary modernism in the wake of the World War.

CO2: **Describe** the changed literary perspectives in the twentieth century, along with the social, economic and political background.

CO3: **Examine** some key issues like the Imperial expansion which had reached a boiling point and the onset of the World War I coupled with the attempts at creating a new world order.

CO4: **Assess** the impact of the Soviet experiment at the global level that needs to be read against the backdrop of the spread and influence of Marxism on a global scale.

CO5: **Discuss** the rise of Fascism and Nazism, followed curiously by the shadow of doubt cast over communism.

CO6: **Analyze** the reaction against Romanticism and Victorianism led to experimentation in writing in all genres.

EN010202 –Postmodernism and Beyond

On successful completion of the course, the students will be able to

CO1: **Justify** the postmodern works of literature which defy categorisation and prove to be experimental in nature, subverting what is conventionally revered as the norm.

CO2: **Illustrate** the eclectic dimensions of postmodern thought as reflected in these literary works in which the boundaries that demarcate the different genres are often blurred.

CO3: **Analyze** the rigid frames of nomenclature and rejects the concepts of objectivity, absolute truth and the notion of the stratification into the high and the low culture.

CO4: **Examine** the underlying ideologies that nurture oppressive institutions and give emphasis on acknowledging the heterogeneity of thought and articulation.

CO5: **Inspect** the evolution of postmodern fiction over the decades with its culmination in the cyberpunk.

EN010203 -American Literatures

On successful completion of the course, the students will be able to

CO1: **Discuss** the most important branch of English literature belonging to the non- British tradition.

CO2: **Examine** information regarding the processes and texts chiefly responsible for the evolution of American Literature as a separate branch possessing characteristic features which sets it apart from others.

CO3: **Assess** the major conflicts, struggles and movements that are closely connected with the experiences of a group of people struggling to establish themselves as a nation.

CO4: **Compare and contrast** the usage of words and context in American and British Literature.

EN010204 -English Language History and Contemporary Linguistics

On successful completion of the course, the students will be able to

CO1: **Create** awareness about the basic concepts of linguistics, the scientific study of language after initiating them into the history of English language.

CO2: **Evaluate** the most recent advances in the theory of language study.

CO3: **Analyze** the historical perspective of English language.

CO4: **Discuss** areas like Phonetics, Phonology, syntax, morphology and semantics.

EN010205 -Thinking Theory

On successful completion of the course, the students will be able to

CO1: **Examine** certain core aspects of what is currently designated as 'literary theory' and also provide exposure to select current developments in this domain.

CO2: **Analyze** readings which will serve as signposts that mark the moments that retrospectively are termed as turns to/within 'theory' – Jonathan Culler's 'over-view essay' on the emergence of 'Theory', Levis-Strauss' application of Saussurean Theory, and Derrida's critique of Levis-Strauss.

CO3: **Assess** the theoretical ruminations on Authorship and Discourse:Roland Barthes' "The Death of the Author" and Michel Foucault's "What Is an Author?" problematises the hallowed

assumptions of Literary Criticism; Robert J. C. Young's "Poems That Read Themselves" takes the unsettling deconstructive project of Poststructuralism forward.

CO4: **Write** a reference wherein Psychoanalysis tackles issues pertaining to the Unconscious and Cognition: Shoshana Felman's "Beyond Oedipus: The Specimen Story of Psychoanalysis" traces the shift from Freud to Lacan; "The Phantom of Hamlet or the Sixth Act: Preceded by the Intermission of "Truth" by Nicolas Abraham and Nicholas Rand is an interface where Literary Creativity takes Theory *per se* as its content!; Julia Kristeva's "Approaching Abjection" throws light on how insights from psychoanalysis enrich our understandings of contemporary [literary] cultures.

CO5: **Present** a discussion platform that goes beyond the normative heterosexual assumptions of Identity and even Feminism.

SEMESTER - III

EN010301: READING INDIA

On successful completion of the course, the students will be able to

CO1 - **Construct** an insight to the historical, cultural and literary heritage of India by **analyzing** the major movements and figures of Indian Literature in English.

CO2- **Evaluate** the origin and growth of Indian writing in English especially in the colonial and post colonial context.

CO3- **Describe** all the four major genre of Poetry, Prose, Novel and Drama which highlight the evolution of the colonizer's language in the native soil.

CO4- **Outline** the thematic and stylistic aspects between the pre independence and post independence Indian Literature.

CO5- **Investigate** the problem of modernization in Indian writing in English.

CO6- **Assess** the issues of Diaspora and their quest for identity.

C07- **Examine** the cultural diversity of India by getting exposed to translations of regional literature.

CO8- **Examine** the Indian philosophy imbibed in the literature.

EN010302: POSTCOLONIAL FICTION

On successful completion of the course, the students will be able to

CO1- **Evaluate** the discursive nature of colonialism, and the counter- discursive impulses of postcolonial theory, narratives and texts.

CO2- **Assess** the writing, reading and the critical-theoretical practices based on postcolonial experience through representative texts.

CO3- **Compare** the consequences of European expansion, creation and exploitation of 'other' worlds, with the internal colonization of diverse kinds.

CO4- **Categorize** the impact of concepts like hybridity, spectrality and subalternity in the lives of colonial victims.

CO5- **Examine** the postcolonial concerns in West Asia with the help of Arabic literature by writers like Edward Said.

CO6- **Discuss** about the African post colonialism.

CO7- **Restate** the South American/ Caribbean literature as postcolonial texts rather than reducing it as part of magic realism.

EN010303: BODY, TEXT AND PERFORMANCE

On successful completion of the course, the students will be able to

CO1: **Evaluate** the basic structural, thematic and theoretical patterns which govern the poetic process, especially in its relation to the performative or the theatrical.

CO2: **Compare and contrast** the verbal and the visual, as well as drama, theatre, body, performance and performativity.

CO3: **Analyze** the way the aspects of power and powerlessness are constructed.

CO4: **Justify** the importance of cinematic medium in the study of performance.

CO5: **Inspect** the issues like gender, ethnicity and caste.

CO6: **Discuss** Anti- Aristotelian notions like Alienation Effect, modern dramatic modes like Comedy of Menace and the techniques of cinematic adaptations.

CO7: **Explain** Expressionism and similar modes of theatrical performance along with gender/ transgender autobiography.

EN010304: LITERATURE AND GENDER

On successful completion of the course, the students will be able to

CO1: **Prioritize** the historic, thematic and cultural concerns that literature attempts against the backdrop of gender issues.

CO2: **Evaluate** the fundamental political, religious and social issues that shape gender relations.

CO3: **Illustrate** the fact that gender is fluidic in nature rather than a mere fixed hetero-normative male- female concept.

CO4: **Discuss** the 'woman quotient' in Gender Studies, where the concept of masculinity which looms large in a patriarchal social order is also examined.

CO5: **Analyze** the prominence of ecriture feminine with the help of a series of poems by women.

CO6: **Construct** an understanding of the problems faced by the black women and lesbians.

EN010305: ETHICS IN/ AS LITERATURE

On successful completion of the course, the students will be able to

CO1: **Examine** the various 'ethics' that narrative fiction has adopted across centuries, continents and languages.

CO2: **Evaluate** the various ethical, formal choices that schools, influences and narrative devices have upheld so as to shape narrative fiction into its present expressive plurality.

CO3: **Analyze** how fiction has dealt with the issue of disabilities at different levels.

CO4: **Compare** the literatures which are usually understood as fictional/ narrative realism.

CO5: **Illustrate** the intersectionality between nature and human.

SEMESTER - IV

EN010401: CULURAL STUDIES

On successful completion of the course, the students will be able to

CO1: **Examine** certain interpretive strategies commonly employed in Cultural Studies.

CO2: **Explain** how cultural processes and artifacts are produced, shaped, distributed, consumed, and responded to in diverse ways.

CO3: **Analyze** the pervading cultural semiosis that one can discern in societies the world over.

CO4: **Evaluate** the different modes that Lifestyles assume, with the help of readings from Michel de Certeau, Pierre Bourdieu,and George Simmel offer means by which we can and 'read' the various negotiations of socio-cultural identities.

EN010402: POSTCOLONIAL POETRY

On successful completion of the course, the students will be able to

CO1: **Write** about the diversity of poetry coming from the erstwhile colonies of the European Colonial Empires.

CO2: **Analyze** the regional specifics that 'in a hybrid mode' negotiate issues of sovereignty, language, race, gender, identity and place.

CO3: **Examine**, through representative texts, the entire gamut of poetry that has emerged from and still addresses the colonial and postcolonial experience, the world over.

CO4: **Justify**, in a somewhat general way, certain contours that 'Poetic Postcolonialisms' assume.

CO5: **Compare and contrast** certain colonial poems from certain parts of Asia and Africa.

EN810401: TRAUMA NARRATIVES AND MEMORY

On successful completion of the course, the students will be able to

CO1: **Examine** a range of 'texts' from the critical perspective of trauma theory.

CO2: **Analyze** the recent field which touches upon narrative, historical, theoretical, psychoanalytic and aesthetic categories.

CO3: **Access** the familiarization of the interface between narratives, trauma and memory.

CO4: **Evaluate**, in a somewhat general way, the issue of 'the uncanny' through the readings of Ernst Jentsch, Sigmund Freud, Colin Davis, and Cathy Caruth.

CO5: **Justify** newer modes of representation like 'Graphic literature', that surpasses what is usually discussed under the rubric of 'literary representation', especially with regard to traumatic and uncanny events.

EN810402: THE ISLAND IN LITERATURE

On successful completion of the course, the students will be able to

CO1: **Explain** how 'islands' have been portrayed as symbols, metaphors, motifs and themes in literature.

CO2: **Evaluate** how these portrayals have been understood, situated and subsequently discussed in relation to contemporary theories, especially post-colonial, and self-reflexive perspectives.

CO3: **Assess** a broad framework within which one can discern the whole notion of 'literary islands.' The essays by Stephanos Stephanides/Susan Bassnett, Ashleigh Harris and Ioana Andreescu chart out the domain of the subsequent discussions.

CO4: **Discuss** the ways in which 'Europe' has created the 'island-as-metaphor'. The political and semiotic layers of this endeavor are reflected in the works of D H Lawrence, Jose Saramago and Joseph Conrad.

CO5: **Write** about a selection that has 'meta-ramifications'; the works of Adolfo Bioy Casares, Umberto Eco and John Fowles all retain an onus on self-reflexivity with regard to the literary notion of 'the island.'

EN810403: LITERATURE AND FILM

On successful completion of the course, the students will be able to

CO1: **Compare and contrast** the relationship between literature and cinema.

CO2: **Discuss** the terrain of 'Adaptation' – of Literature into Film.

CO3: **Illustrate** film adaptations of literature in the domains of Epic/Myth, Theatre and Novel.

CO4: **Write** about Shakespearian works and their adaptations into cinemas, in addition to which, they can argue how much similar the cinemas are to the works they are inspired from.

M.Sc. Physics

(PGCSS, 2019 admission onwards, MG University)

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO1	Acquire high-level knowledge in classical mechanics, quantum mechanics, electrodynamics and statistical mechanics, Nuclear Physics, atomic and Molecular Physics and apply it to complex problems in physics and other areas
PSO2	Develop proficiency in the analysis of complex physical problems and the use of mathematical or other suitable techniques to solve them
PSO3	Apply theoretical knowledge and critical reasoning skills to model and solve practical problems
PSO4	Understand and apply inter-disciplinary concepts and computational skills for understanding and describing the natural phenomenon
PSO5	Explore the multidisciplinary areas through the selection of advanced electives
PSO6	Develop skills for communication and for a research career in academia or industry by learning advanced ideas and techniques with emphasizing the underlying concepts of Physics

COURSE OUTCOMES (COs)

SEMESTER 1

PH010101: MATHEMATICAL METHODS IN PHYSICS – I

CO1	Familiarize the theorems in vector analysis and solve the mathematical problems related to the theorem
CO2	Differentiate between the types of matrices and to find the solution for linear equations
CO3	Explain the elementary probability theory and different theoretical distributions
CO4	Explain about tensors, its applications and properties
CO5	Familiarize tensor differentiation

PH010102: CLASSICAL MECHANICS

CO1	Remember the methods involved to study motion of a system
CO2	Apply this concepts to formulate basic principle
CO3	Explain the need of canonical transformation to solve some simple problems
CO4	Understand Poisson and Lagrange brackets with their properties
CO5	Apply Hamilton-Jacobi equation in harmonic oscillator problem
CO6	Analyze central force problem to solve Kepler's law
CO7	Solve Lagrange's equations of motion for small oscillations

PH010103: ELECTRODYNAMICS

CO1	Explain Maxwell's equations in matter and Poynting's theorem
CO2	Explain laws of reflection, refraction as outcomes of electromagnetic boundary conditions
CO3	Understand the idea of electromagnetic wave propagation through waveguides

	and transmission lines
CO4	Express the laws of electrodynamics under relativistic methods
CO5	Explain the concept and principle of electromagnetic radiation

PH010104: ELECTRONICS

CO1	Explain the characteristics and applications of FET devices
CO2	Describe the concept of Op Amp as a differential amplifier
CO3	Differentiates between voltage series and voltage shunt feed-back amplifier
CO4	Identifies the functions of integrator and differentiator
CO5	Describes the compensating circuits and different filter circuits
CO6	Explains analog modulation , working of AM and FM receivers

PH010105: GENERAL PHYSICS PRACTICALS

CO1	Describe the methodology of science and the relationship between observation and theory
CO2	Practice the methodology by performing laboratory exercises
CO3	Acquire necessary skills to produce accurate measurements and tabulate properly.
CO4	Understand data and draw inferences wisely
CO5	Rediscover concepts of physics through optical and mechanical experiments
CO6	Express their knowledge and ideas orally and in writing

SEMESTER II

PH010201: MATHEMATICAL METHODS IN PHYSICS – II

CO1	Comprehend the application of mathematical concepts needed to solve problems

	in physics as well as other areas of science, and acquire practical skills in the use of these methods
CO2	Explain the basic elements of complex mathematical analysis, including the integral theorems, obtain the residues of a complex function and use the residue theorem to evaluate definite integrals in solving physical problems
CO3	Apply integral transform (Fourier and Laplace) to solve mathematical problems of interest in physics
CO4	Apply functions like Alpha, Beta, Dirac Delta, Gamma and Green function to solve mathematical problems of interest in physics
CO5	Solve partial differential equations that are common in physical sciences by making use of standard methods like separation of variables
CO6	Elaborate the orthogonal polynomials of special functions

PH010202 QUANTUM MECHANICS-I

CO1	Explain mathematical tools of Quantum Mechanics
CO2	Apply Dirac formulation to state kets, operators and bras
CO3	Explain measurements, observables and uncertainty relations
CO4	Analyze the Quantum Dynamics of a system
CO5	Explain the general formalism of angular momentum

PH010203 STATISTICAL MECHANICS

CO1	Explain the fundamentals of thermodynamics, Carnot cycle, statistics and distributions
CO2	Grasp the basis of ensemble approach in statistical mechanics to a range of situations
CO3	Explain the fundamental differences between classical and quantum statistics and learn about quantum statistical distribution laws

CO4	Discuss various phenomena in solids using statistical mechanics.
CO5	Develop and apply Ising model and mean field theory for first and second order phase transitions

PH010204: CONDENSED MATTER PHYSICS

CO1	Recognize different types of Materials and their Classification
CO2	Explain the Free Electron Theory of Metals
CO3	Interpret Band Theory of Metals and semiconductors
CO4	Discuss the Dielectric Properties of Solids
CO5	Explain the Superconductivity phenomena and related theorems
CO6	Solve problems related to metals, semiconductors, dielectric materials, magnetic materials and superconductivity

PH010205: ELECTRONICS PRACTICAL

CO1	Design and construct different circuits based on op amp
CO2	Design different oscillators , filters, amplifiers circuits for various frequencies
CO3	Select the appropriate integrated circuit models to build a given application

SEMESTER – III

PH3C09 QUANTUM MECHANICS – II

On completion of the course students will be able to :-

CO 1	Outline the foundations of quantum mechanics
CO 2	Apply the knowledge on the fields of non-relativistic and relativistic quantum mechanics like time-dependent perturbation theory, scattering theory, relativistic wave equations, and second quantization.
CO 3	Apply theoretical studies and calculations of quantum mechanics in atomic and subatomic level problems
CO 4	Reinstate independent knowledge from literature and effectively impart it to peers

PH3C10 COMPUTATIONAL PHYSICS

CO 1	Familarize with the mathematical skills in the field of numerical analysis
CO 2	Analyse different numerical methods, such as interpolation, differentiation, integration, the solution of linear and nonlinear equations, and the solution of differential equations and evaluate their accuracy
CO 3	Compare the calculation and interpretation of errors in numerical methods
CO 4	Apply the numerical analysis to obtain approximate solutions to otherwise intractable mathematical problems., in the field of science and engineering
CO 5	learn effective communication on solution methods and results

PH3EC1 SOLID STATE PHYSICS

CO 1	Familarize with the basic theories of electronic structure of materials and defects and dislocations and how they help to tune the properties of materials
CO 2	Apply solid state theory to describe physical behaviour of solids and electronic devices and develop new semiconductor devices
CO 3	Discuss the lasing principle and current crystal lasers
CO 4	Analyse the electrical and optical properties of materials and how they helped to develop new technological advances relevant in our lives and in future

PH3EC2 CRYSTAL GROWTH TECHNIQUES

CO 1	Compare the different crystal growth techniques
CO 2	Motivates for individual development and provide opportunity to explore basic research aptitude
CO 3	Discuss the development of current optoelectronic devices
CO 4	Engage in lifelong learning and adapt to changing needs of profession and society and get updated with current state-of-art

PH4C11 ATOMIC AND MOLECULAR PHYSICS

CO 1	Explain the role of atoms and molecules in the development of physics and analysing the structure of matter
CO 2	Describe the behaviour of atoms in external electric and magnetic field, which gives the foundation for analysing theoretical models and experimental results in the concerned fields
CO 3	Describe the basics of different spectroscopic methods and their applications in characterisation of research samples relevant in all fields of applied science
CO 4	Describe electron and nuclear magnetic resonance spectroscopy and their application in material science and medical field

PH4C12 NUCLEAR AND PARTICLE PHYSICS

CO 1	Explain the structure of the nucleus, radioactive decay, nuclear reactions and the interaction of radiation and matter;
CO 2	Discuss the smallest building blocks of the universe and inspect the unanswered questions about dark matter, antimatter and the origin and evolution of the universe.
CO 3	Design new ideas in fundamental research and apply them to develop higher theoretical models and experimental applications
CO 4	Describe the various particle interactions and their correlation, basic laws of particle physics and how they are applied to study the particle properties and their behaviour in the subatomic world.
CO 5	Critical evaluate theoretical predictions using quantum mechanical reasoning

PH4EC3 NANOSTRUCTURES AND CHARACTERIZATION

CO 1	Apply the basic principles of physics to describe scientific phenomena in nanoscale and qualitatively explain how the nanoparticle size can affect the morphology, crystal structure, reactivity, and electrical properties
CO 2	Compare and contrast advanced characterisation methods for measurement, observation, and fundamental understanding of phenomenon at nanomaterials

CO 3	Describe the nano systems in quantum realm by applying principles of quantum mechanics in nanmaterials
CO 4	specialize in theoretical and experimental techniques and plan for a career in academia and Nano technology driven industry
CO 5	Engage in lifelong learning and adapt to changing needs of profession and society and get updated with current state-of-art

PH4OE3 THIN FILM AND NANO SCIENCE

CO 1	Compare different methods of synthesis of thin films and inorganic nanoparticles and nanostructures
CO 2	Apply the knowledge to evaluate and select the proper synthesis method best suited for fabricating nanostructured materials of various inorganic compounds
CO 3	Analyse the basic ethical, health-related and environment-related concerns with respect to nanoparticles in general.
CO 4	specialize in theoretical and experimental techniques and plan for a career in academia and Nano technology driven industry
CO 5	Engage in lifelong learning and adapt to changing needs of profession and society and get updated with current state-of-art

PH3P03 COMPUTATIONAL PHYSICS PRACTICALS

CO 1	Illustrate and visualise the problems and the solutions using computer simulations
CO 2	Identify the role of computer models and simulations in the solutions of physical problems
CO 3	Familiarise with programming languages like C++ and apply them to solve physical problems using numerical methods
CO 4	Construct foundation of computational methods for specialised interests an research
CO 5	Identify leadership as well as effective communication with the team
CO 6	Identify interpersonal skills and responsibility like working in a group, time management, acquiring information through literature, and presenting the

	work in a scientific language

PH4PC4 MATERIAL SCIENCE PRACTICALS

CO 1	Investigate research equipment (microscope, oscilloscope, etc.) and apply them for materials analysis and data acquisition.
CO 2	Examine and conduct experiments which measures materials properties and apply the conceptual knowledge to analysis the experimental data.
CO 3	Identify leadership as well as effective communication with the team
CO 4	Identify interpersonal skills and responsibility like working in a group, time management, acquiring information through literature, and presenting the work in a scientific language

PH4D05: PROJECT/DISSERTATION

CO 1	Execute a significant research-based project
CO 2	lead and manage projects through collaboration with others
CO 3	Synthesize novel materials, characterize and analyse data to cultivate research findings
CO 4	Identify the ethical issues related to a researcher in publishing and practising
CO 5	Utilize findings from research for advanced education
CO 6	Report and publish research findings in internationally accepted written formats
CO 7	specialize in theoretical and experimental techniques and plan for a career in academia and Nano technology driven industry
CO 8	Engage in lifelong learning and adapt to changing needs of profession and society nd get updated with current state-of-art

PH4V06: VIVA VOCE

CO 1	Effectively communicate the acquired knowledge in a timely manner
CO 2	Identify areas of research in relevant theoretical/experimental field

M.Sc. Mathematics

(PGCSS, 2019 admission onwards, MG University)

PROGRAMME SPECIFIC OUTCOME (PSO)

1. On completion of this programme a student can classify and explain several specialised areas of advanced mathematics and its applications

2. A Student will be able to construct and formulate problems in appropriate theoretical frameworks to facilitate their solution.

3. A Student will be able to construct logical arguments for solving abstract or applied mathematical problems.

4. A Student will be able to discuss and communicate mathematics effectively to a wide range of audience.

5. A Student will be able to analyze, identify and benefit from opportunities for personal and career development.

6. A Student will be able to explain the correct use of mathematical language to express both theoretical concepts and logical argument.

7. A Student will be able to apply formulae and numerical information effectively and confidently in an employment environment.

COURSE OUTCOMES (COs)

<u>**SEMESTER I**</u>

ME010101: LINEAR ALGEBRA

CO1 - Identify the basic definitions of Vector spaces, basis and dimension of vector spaces, subspaces and linear transformations.

CO2- Discuss the knowledge of linear functional, dual spaces, double dual spaces and transpose of a linear transformation.

CO3 -Describe basic theorems such as Rank- Nullity theorem and Annihilator theorem.

CO4 - Explain Eigen values and Eigen vectors, Cayley Hamilton Theorem and diagonalizable and triangulable properties of a linear operator.

CO5- Discuss the concept of Hyper spaces and its dimension.

CO6 - Identify the properties of determinants.

ME010102 -ABSTRACT ALGEBRA

CO1 -To use the basic concepts in groups, rings and fields

CO2 -To describe about cyclic groups, normal subgroups and homomorphism

CO3 -To explain about isomorphism theorems and sylows theorems

CO4 -Identifies various applications of sylows theorems

CO5 -To synthesize new ideas in the fields of quotients of an integral domain

CO6 -To describe various properties about rings of polynomials

ME010103 - BASIC TOPOLOGY

CO1- Analyze the transition from metric spaces to topological spaces.

CO2- Investigate whether a given family of subsets is a topology or not.

CO3- To apply the relationship between base and sub base of a topology.

CO4- Discuss various problems related to quotient topology and suggest solutions.

CO5- Explain the concept of separation axioms.

ME010104 - REALANALYSIS

CO 1 - Discuss functions of bounded variation and rectifiable curves.

CO 2 - Explain Riemann-Stieljes Integral and its properties.

CO 3 - Describe Uniform convergence of sequence and series of functions.

CO 4 - Describe some special functions like exponential function and logarithmic.

CO 5 - Equips the students to abstract thinking.

ME010105- GRAPH THEORY

CO1- To discuss the basic definitions namely, graph, cut vertex, bridge, block and Automorphism group of a graph.

CO2 – Explain the properties of trees and connectivity.

CO3 - Identify Eulerian graphs and apply results to identify Hamiltonian graphs.

CO4 – To describe the concepts Planarity including Euler identity, non-planarity of celebrated graphs and its practical applications.

CO5 – Explain major theorems and inventions in the history of graph theory and understand how it made the subject to develop to the present state.

SEMESTER II

ME010201: ADVANCED ABSTRACT ALGEBRA

CO1 - Identify extension fields, algebraic extensions, geometric constructions and finite fields.

CO2 - Explain theorems on Unique factorization domains, Euclidean domains, and Gaussian integers

CO3 - Describe the properties of Automorphism of fields, Splitting fields, Separable Extensions and Normal Extensions.

CO4 - Explain the major theorems such as Isomorphism Extension theorem and Splitting field theorems.

CO5 - Discuss the concept of Galois Theory.

CO6- Identify and explain Main Galois Theorem and the illustrations of Galois Theory and Cyclotomic extensions.

ME010202 - ADVANCED TOPOLOGY

CO1 - Understanding of topological spaces and having a grasp on basic results and the separation axioms

CO2 – Explain the product space and its pointwise relevance

CO3 – Understand classical theorems in Topology such as Urysohns lemma and Urysohns metrization theorem.

CO4 – Formulate variations of compactness and explain their equivalence in certain constraints.

CO5 – Differentiate paths in topological spaces according to the homotopy relation among their class

CO6 – Understand the concepts and applications of Topology in medical field such as muscle formulation, simulations and especially in pharmaceutical science fields

ME010203- NUMERICAL ANALYSIS WITH PYTHON 3

CO1 – Able to solve numerical problems both manually and using Python 3 programming.

CO2 – To find the mathematical concepts in algebra and calculus using Python such as root of an equation, limit and derivatives of functions, continuity of a function at a point, etc.

CO3 – To find the area between two curves and the length of a curve easily by programming in Python

CO4– Able to construct programs for finding the roots of equations using bisection method, Newton-Raphson method, etc.

CO5 – Able to apply the techniques of solving set of linear equations using Gauss Elimination method , LU decomposition method, Doolittle method, etc.

CO6 – Able to design programs for numerical methods such as interpolation, curve fitting, numerical integration, etc.

ME010204 - COMPLEX ANALYSIS

CO1 -To explain about the various basic ideas in complex analysis like analytic functions, harmonic functions etc.

CO2 - Identifies various applications of complex integration

CO3 -To explain about different versions of Cauchy theorems

CO4 - To describe Taylor's theorem , types of singularities and Schwarz lemma

CO5 -Apply the concepts to derive the theorems of Cauchy, argument principles etc.

ME010205 -MEASURE THEORY AND INTEGRATION

CO 1 - Explain Lebesgue Measure.

CO 2 - Describe concept of integration of non – negative functions.

CO 3 -Explain Lebesgue's differentiation theorem.

CO 4 –Illustrate signed measure and related theorems.

CO 5 - Explain Measure spaces, Measurable functions.

CO 6 - Explain measurability in a product space and the product measure.

CO 7 - Compare integration and differentiation in the aspect of measure.

SEMESTER III

ME010301 - FUNCTIONAL ANALYSIS

CO1 - Understand how functional analysis uses and unifies ideas from vector spaces and the theory of metrics

CO2 – Explain the fundamental properties of normed spaces and of the transformations between them

CO3 - Understand the notions of dot product and Hilbert space

CO4- Understand and apply fundamental theorems from the theory of normed and Banach spaces, including the Hahn-Banach theorem, the open mapping theorem and the closed graph theorem

CO5 – Apply the spectral theorem to the resolution of integral equations

ME010302 - PARTIAL DIFFERENTIAL EQUATIONS

CO1 – Able to solve linear partial differential equations using various techniques

CO2 – To describe orthogonal trajectories of a system of curves on a surface

CO3 – To apply methods such as Charpit's method, Jacobi's method, etc.

CO4 – To discuss non linear equations of second order.

CO5 – Able to describe families of equipotential surfaces and relation of logarithmic potential to the theory of functions.

CO6 – Able to solve Laplace equation.

ME010303 - MULTIVARIATE CALCULUS AND INTEGRALTRANSFORMS

CO 1- Transition from elementary analysis to advanced analysis.

CO 2 - Describe other forms of Fourier Series.

CO 3 - Discuss multivariable differential Calculus.

CO 4 - Describe application of complex valued function.

CO 5 - Explain the matrix of a linear transformation.

CO 6 - Explains integrations of differential forms.

ME010304- ADVANCED COMPLEX ANALYSIS

CO1-To examine the concepts of analytic functions, conformal mapping, homology etc.

CO2 -To describe various properties of harmonic functions

CO3 - To illustrate various series representations of analytic function

CO4 - To discuss Riemann zeta functions, Weirstrars zeta functions, p-functions etc.

CO5 - Identify the relevance of Riemann mapping theorem

CO6- Compare and contrast between harmonic and sub harmonic functions.

ME010305-OPTIMIZATION TECHNIQUES

CO1- To describe the basics of Integer programming.
CO2- Apply the concept of LPP to solve problems.
CO3- Evaluate optimal measures related to flow and potentials in networks.
CO4- To describe the basics of game theory.
CO5- To use the basic concepts of Non linear programming for optimization.

SEMESTER IV

ME010401 – SPECTRAL THORY
CO1- To learn the fundamental theorems of normed spaces - the open mapping theorem, closed graph theorem.
CO2-Develop the fundamentals of spectral theory of operators .
CO3- Apply fundamental theorems from the theory of Compact linear operators and their spectrum.
CO4-Able to apply the basic theory of Banach algebras.

ME010402 - ANALYTIC NUMBER THEORY

CO1-Introduce Different types of Arithmetic Functions and Identify their properties.

CO2- Explain Dirichlet product of Arithmetical Functions, and the Average Order of Arithmetical functions.

CO3- Introduce Chebyshev's Functions and describes equivalent forms of Prime Number Theorems.

CO4- Discuss and explain congruences,   Chinese Reminder Theorem, Lagranges Theorem and its Applications.

CO5- Describe the concept of Quadratic Residues ,Primitive Roots , Legendre's symbol , Gauss' Lemma and the Quadratic Reciprocity law.

ME800401 - DIFFERENTIAL GEOMETRY

CO 1 - Able to Calculate and work with principal, Gaussian and mean curvatures for surfaces in R^3 and deduce general features of the surface from these functions

CO 2 - Analyse Gauss map, Weingarten map

CO 3 - Discuss geodesics

CO 4 -Explains curvature of surfaces

CO 5 -Identify different types of surfaces

ME800402 - ALGORITHMIC GRAPH THEORY

CO1 – To recall the basic definitions and ideas of graph theory such as vertex, isomorphic graphs, subgraphs, etc.

CO2 – To compose algorithms for searching, sorting, etc.

CO3 – To create graphs in a computer

CO4 – To outline activity digraphs and critical paths.

CO5 – To design algorithms for networks, matchings, etc.

ME800403 - COMBINATORICS

CO1 – To differentiate between basic counting principles and apply them to solve practical problems of counting

CO2 – To design solution to logical questions of practical importance

CO3 – To illustrate the existence of certain true observations regarding societal problems

CO4 – To justify the need of application of generalized principle of inclusion and exclusion in solving practical problems

CO5 – To examine end explain the use of recurrence relation and generating functions in complex counting problems

(PGCSS, 2019 admission onwards, MG University)

PROGRAMME SPECIFIC OUTCOMES (PSOs)

After the completion of MSc Zoology Programme students will be able to

PSO1: Plan self-employment opportunities in fish culture, ornamental fish culture, etc.

PSO2: Develop skill sets to make fishery by-products and fishery value-added products.

PSO3: Recommend to the farmers on how to control and manage agricultural pests, agricultural weeds, etc.

PSO4: Analyse water and soil quality parameters of their respective regions

PSO5: Develop skills for communication for a research career in academia or industry

PSO6: Develop required skill sets to pursue their interest in subject through research

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SEMESTER 1

ZL010101: ANIMAL DIVERSITY: PHYLOGENETIC AND TAXONOMIC APPROACHES

1. The students are getting a chance to to understand the phylogenetic relationships among the different groups of animals
2. To provide the latest trends in animal taxonomy and phylogenetic systematics
3. To impart the knowledge   about the fauna on the verge of extinction , especially in the Indian   sub-continent and how we can save them.
4. Getting chances to   study the techniques in taxidermy.
5. Imparting the new trends in computer -aided taxonomic studies
6. Getting an awareness of the types of taxonomic publications.

ZL010102:   EVOLUTIONARY BIOLOGY AND ETHOLOGY

1. To describe the concept of relatedness and its connection to biological evolution
2. To apply knowledge to new information and data, as well as the capacity to effectively communicate the principles of evolution and its application to human biology.
3. To expose students to the basics and advances in ethology.
4. To generate an interest in the subject in order to understand the complexities of studying animal behavior .
5. To study the origin of life on earth.
6. To study the process of extinction and extinct animals on earth , till date.

ZL010103:   BIOCHEMISTRY

1. To provide   the basic knowledge of the chemical nature of life and life processes   and the structure and function   of biologically important molecules
2. To generate an interest in the subject and help students to explore the new developments in Biochemistry.
3. Imparting the importance of metabolism of bio-molecules in normal physiology of man
4. Providing the basic knowledge of abnormal metabolism of biomolecules in man.
5. To get a basic knowledge of   the diseases   caused by errors in metabolism.

ZL010104:   BIOSTATISTICS AND RESEARCH METHODOLOGY

1. To impart concepts of statistics and   research methodology, and create awareness about the gadgets, tools and accessories of biological research
2. Providing   materials to improve analytical and critical thinking , skills through problem solving
3. To enable learners to effectively apply suitable statistical tests in research
4. To sensitize students about the ethics involved in research and enable them to come up with innovative research designs
5. To equip learners to prepare research papers and project proposals

SEMESTER-II

ZL010201:   FIELD ECOLOGY

1. To provide the knowledge of animal adaptations to a variety of environments
2. Providing knowledge about the ill effects of population explosion.
3. To understand the different aspects of population and its interactions
4. To understand   the natural resources
5. To make an awareness of man made issues on environment
6. Giving the importance of wastes and waste   management .
7. Imparting   knowledge about   sustainability., green technology and ecosystem monitoring.

ZL010202:   DEVELOPMENTAL   BIOLOGY

1. Imparting   knowledge about   the concepts and processes in developmental biology
2. Providing the students   to understand and appreciate the genetic mechanisms and the unfolding of the same during development
3. To expose the learner to the new developments in embryology and its relevance to Man.

ZL010203:   GENETICS AND   BIOINFORMATICS

1. Imparting   knowledge about   the fine structure of genetic material and molecular basis of hereditary transmission
2. Imparting   knowledge about   the significances of Genetics in Principle in heritance of traits in Man
3. Providing knowledge about the role of genetics in evolution
4. Giving an opportunity to explore the emerging field of bioinformatics
5. To equip the students to take up bioinformatics studies ; as the basics of bioinformatics such as data mining, proteomics , Microarrays, Protein modeling , drug designing etc:

6. To equip the students , how to Identify of human genes and diagnosis of human diseases

ZL010204: MICROBIOLOGY   AND   BIOTECHNOLOGY

1. Providing   a basic knowledge of the microbial world ,   its structure and function .
2. To give students an intensive and in-depth learning in the field of biotechnology
3. Imparting   the students to familiarize with   the emerging field of biotechnology - to understand the modern biotechnology practices and approaches , with an emphasis on its application   in - medical, industrial, environmental , agricultural ,   nano medicine etc.
4. Providing the basics of   Gene therapy, Cell and tissue engineering, Gene products in medicine etc.
5. Familiarizing   the students with issues like - public policy, biosafety, and intellectual property rights , related to biotechnology
6. To explore the area of Fermentation technology ,Enzyme engineering and applications, Transgenic plants, Bio fertilizers ,Bio pesticides , gene technology etc

SEMESTER-III

ZL010301:   ANIMAL   PHYSIOLOGY

1. Providing   the basic knowledge of the functioning of organ systems across the animal world
2. Providing   an over view of the comparative functioning of different systems in animals
3. Chances to learn more about human physiology

ZL010202:   CELL   AND   MOLECULAR   BIOLOGY

1. Providing the students   to understand   the structural and functional details of the basic units of life at the molecular level
2. Imparting   ways   to refresh the basics of cell biology
3. Providing the students   to understand   the new developments in molecular biology and its implications in human Welfare

ZL010303: BIOPHYSICS, INSTRUMENTATION AND BIOLOGICAL   TECHNIQUES

1. Providing   a basic knowledge of the biological system and processes based on physical principles
2. Providing   an   insight on the tools and techniques of various instruments available for biochemical and biophysical studies
3. Training the learner the operational skills of different instruments required in Zoology.

ZL010304:   IMMUNOLOGY

1. Providing   an intensive and in-depth knowledge to the students in immunology
2. Imparting ways   to   help the learner to understand the role of immunology in human health and well-being
3. Familiarizing   the students the new developments in immunology

SEMESTER-IV

ELECTIVE SUBJECT- FISHERIES

ZL800401:   NUTRITION, GROWTH AND   PHYSIOLOGY OF FISHES

1. Imparting knowledge about the various aspects of fish biology
2. Providing ways to   understand the basic principles of fish nutrition and the functions   of individual nutrients.
3. Providing   the basic knowledge   of   the functional   physiology of fishes.
4. Imparting a basic knowledge about various fish diseases.

ZL800402:   FISHERY RESOURCES   AND   MANAGEMENT

1. Imparting   knowledge   in inland and marine fishery resources of India
2. Giving a chance to study the oceanographic concepts related to fisheries
3. Imparting theoretical knowledge on application of latest electronic and computer devices used in   fisheries ,as remote sensing , GIS etc:
4. Imparting theoretical knowledge of benthic ecology.
5. Providing   knowledge on interactions   between aquaculture and the environment.
6. Making awareness in students about the ecological problems as riverine sand mining, dam construction, mangrove degradation , invasive species etc:
7. Providing   knowledge on integrated fish culture , Composite fish culture. Integrated farming and   aquaponics
8. Imparting knowledge about the basics of ornamental fishery and its export from India , Aquarium fishes , Setting up and maintenance of an aquarium.
9. Providing   knowledge on management of hatcheries and farms.
10. Imparting   a basic   knowledge on control and management of aquatic weeds in the system

ZL800403:   FISHERY SCIENCE AND TECHNOLOGY

1. Getting familiarized with the latest advances in aquaculture
2. Making awareness in students about the potential marine resources for bioactive compounds and pharmaceuticals

3. Getting aquainted with the various aspects of fish processing techniques.
4. Imparting   a basic   knowledge on the techniques in fish feed technology
5. Getting familiarized with   various aspects of quality assurance system, quality management and national / international   certification system.
6. Getting familiarized with   factory sanitation and hygiene, water quality and standard
7. Providing   information on various fish by-products .
8. Imparting   an average knowledge about the crafts and gears used in inland and marine waters.
9. Imparting   knowledge about   fish breeding   techniques as Induced breeding and hypophysation: synthetic and natural hormones, cryopreservation of gametes and artificial fertilization.
10. Providing the basics of biotechnology for accelerating gonadal growth and manipulation of the duration of spawning

M.Com. Finance & Taxation

(PGCSS, 2019 admission onwards, MG University)

PROGRAMME SPECIFIC OUTCOME (PSO)

PS01   Acquire managerial skills and theoretical knowledge for managing business units with special focus on functional areas of business and management.

PS02   Acquire advanced accounting knowledge and skills and assess latest developments in the field of accounting.

PSO3 Enabling learners to acquire advanced theoretical knowledge on research methods and techniques and also developing capabilities in the application of research in solving business related problems.

PS04   Acquire expertise in specialized fields like finance, taxation, marketing, management and information technology.

PS05 Acquire quantitative aptitude and analytical skills.

PSO6 Enable the learner to pursue career in professional areas of commerce and management such as taxation, financial services, consultancy etc.

COURSE OUTCOME (CO)

SEMESTER I

Course Code & title: (CM010101) SPECIALISED ACCOUNTING

CO1.1- Apply the knowledge of accounting in different practical situations.

CO1.2- Examine the value of goodwill and value of companies based on the value of shares and compare the real value of shares with the market prices and identify the mispricing.

CO1.3- Outline determination of purchase consideration in the event of amalgamation and to construct post amalgamation financial statements

CO1.4- List different types of NBFCs, their provisioning norms and to investigate NAV of mutual funds through hits computation.

CO1.5- Analyze theoretical aspects of emerging areas in accounting

Course Code & Title: (CM010102) ORGANISATIONAL BEHAVIOUR

CO2.1- Explain concepts of organization behaviour.

CO2.2- Examine individual behaviour, personality and motivation.

CO2.3- Assess group behaviour and leadership related to organizational behaviour.

CO2.4- Outline change management and deal with stress.

CO2.5- Explain role of organizational culture and conflict in organizational behavior.

Course Code & Title: (CM010103) MARKETING MANAGEMENT

CO3.1-Describe customer centricity, CRM, value chain and customer delight.

CO3.2- Illustrate market segmentation process and its applications in marketing strategies.

CO3.3- Examine consumer behavior and its impact in marketing.

CO3.4- Identify product line, product mix, brand equity, brand identity, brand personality and brand image.

CO3.5- Describe ideas regarding services marketing and service quality.

Course Code & Title: (CM010104) MANAGEMENT OPTIMISATION TECHNIQUES

CO4.1-Explain various business optimisation models.

CO4.2-Ability to develop Linear Programming Models for business problems and solve the same.

CO4.3- Application of Linear Programming in the areas of transportation and assignment.

CO4.4- Develop decision making skills under uncertainty, risk and replacement of assets.

CO4.5- Apply network analysis techniques for project implementation.

Course Code & Title: (CM010105) METHODOLOGY FOR SOCIAL SCIENCE RESEARCH

CO5.1-Explain basic concepts of social science research.

CO5.2- Ability to formulate a research design.

CO5.3-Illustrating a sampling design.

CO5.4-Construct an instrument, its validation and different forms of scaling.

CO5.5-Discuss the technique of research reporting.

SEMESTER – II

Course Code & Title: (CM010201) ADVANCED CORPORATE ACCOUNTING

CO1.1-Ability to prepare consolidated financial statements of group companies.

C01.2- Ability to prepare financial statements of public utility companies and deal with the disposal of surplus.

CO1.3- Describe the procedure of bankruptcy under the recent Bankruptcy Procedure Code.

CO1.4- Explain the accounting procedures of liquidation of companies and gaining the ability to prepare various statements required as per the Companies Act.

CO1.5- Outline the preparation of accounts of some special lines of businesses like shipping, hospitals and hotels.

Course Code & Title: (CM010202) HUMAN RESOURCE MANAGEMENT

CO2.1-Describe basic concepts of HRM and performance appraisal.

CO2.2- Describe human resource development, stress management and work life management.

CO2.3- Explain various aspects of training.

CO2.4- Explain various aspects of industrial relations so as to evaluate the real cases of industrial relations.

CO2.5- Examine HR outsourcing, HR accounting and HR audit.

Course Code &Title: (CM010203) INTERNATIONAL BUSINESS AND FINANCE

CO3.1- Compare and contrast globalisation, internationalisation of business and the international business environment.

CO3.2- Describe theories of international trade, trade barriers and trade blocks.

CO3.3- List various economic institutions related to international trade.

CO3.4- Describe various aspects of international monetary system.

CO3.5- Predict international investment environment.

Course Code & Title: (CM010204) QUANTITATIVE TECHNIQUES

CO3.1- Application of quantitative techniques in business and management.

CO3.2- Design appropriate parametric test for testing the hypotheses.

CO3.4- Identify the most suitable non parametric test for testing a hypothesis.

C03.5-Identifying the most suitable sampling technique in research.

CO3.5- Application of the principles of SQC.

Course Code & Title: (CM010205) STRATEGIC MANAGEMENT

CO4.1-Explian theoretical foundations of strategic management.

CO4.2- Examine various models of environmental and internal analysis.

CO4.3- Outline strategy formulation process at the corporate level.

CO4.4- Illustrate various tools of strategic planning and evaluation.

CO4.5- Identifying modes of implementation and control of strategies.

SEMESTER – III

Course Code & Title:(CM010301) STRATEGIC FINANCIAL MANAGEMENT

CO1.1- Describe theoretical foundations of financial management and financial management decisions.

CO1.2- Examine the feasibility of different options regarding discount, credit period, storage cost etc. related to current assets and current liabilities and estimate working capital requirements.

CO1.3- Assess long term proposals and evaluate the risk associated with long term investment.

CO1.4- Justify the decisions regarding leasing of capital assets.

CO1.5- Explain the performance of business entities.

Course Code & Title: (CM010302) INCOME TAX - LAW AND PRACTICE

CO2.1-Explain the basic concepts of Income Tax.

CO2.2-Illustrate/compute the income from salary and house property.

CO2.3- Examine taxable profit of a business or profession.

CO2.4- Solve capital gain and income from other sources.

CO2.5- Examine Gross Total Income of an Individual.

CO2.6- Explain eligible deductions and examine taxable Income and tax liability of an individual.

Course Code & Title: (CM010303) SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

CO3.1-Describe the concepts of investments, different types of investments, views of investment and process of investment and use the theoretical knowledge in investment information for selection of securities.

CO3.2- Explain the types of risk in security market and use various tools for the valuation of bonds as well as economic indicators to predict the market.

CO3.3- Explain the tools of technical analysis, examine the patterns and trends in the market by using various tools and recommend to take investment decisions after understanding market efficiency level also.

CO3.4- Design Modern portfolio theories and construct optimum portfolios.

CO3.5-Justify revising of constructed portfolios as per risk and return association by using different strategies

Course Code & Title: (CM800301) INDIRECT TAX LAWS

CO4.1-Describe the basic concepts of the Goods and Services Tax.

CO4.2- Explain the levy and collection of tax and tax credit

CO4.3- Illustrate the provisions regarding registration, preparations of books of accounts and filing of returns under the Act.

CO4.4- Discuss the powers of GST authorities regarding inspection, search and seizure.

CO4.5- Describe the Customs Law in India.

SEMESTER – IV

Course Code & Title: (CM010401) ADVANCED COST AND MANAGEMENT ACCOUNTING

CO1.1-Solve activity based absorption methods instead of conventional absorption method.

CO1.2- Use the marginal costing principles in decision making situations of businesses.

CO1.3- Assess practical cases of pricing decisions in different situations.

CO1.4- Describe the concepts of standard costing, and the process of cost control through it.

CO1.5- Assess the practical issues related to transfer pricing.

Course Code & Title: (CM010402) INCOME TAX – ASSESSMENT & PROCEDURES

CO2.1-Illustrate and solve the total income and tax liability of firms and Association of Persons

CO2.2- Explain assessment of companies and determine their tax liability

CO2.3- Explain and justify assessment of co- operative societies and trusts.

CO2.4- Describe the assessment procedures, TDS and advance payment of tax and application in various situations.

CO2.5-Discuss tax planning concepts and apply the same.

Course Code & Title: (CM800401)DERIVATIVES AND RISK MANAGEMENT

CO3.1-Describe derivative market in India, its evolution, types, players, risks involved and basic quantitative foundations.

CO3.2-Examine the implications of Risk in the perception of individuals and Institutions and measurement of risks.

CO3.3- Describe and explain the concept of forward market and its function.

CO3.4- Examine the operation and pricing of various types of futures.

CO3.5- Describe the concepts and methodology of option trading and apply the models of pricing the option contracts.

CO3.6- Describe exchanges through Swaps.

Course Code & Title: (CM800402) PERSONAL INVESTMENT AND BEHAVIOURAL FINANCE

CO4.1 - Explain the meaning and significance of Financial literacy, Financial Discipline& Financial Competency, the role of family and parents in financial socialization.

CO4.2- Describe and justify the Significance of savings on financial destiny and it relationship with Consumerism and to explain the different elements/steps in Personal Financial Planning to attain Financial Well Being and Examine the different retail investment avenues.

CO4.3- Describe Behavioural Finance, its evolution and related theories

CO4.4- Explain Different Heuristics, Biases and other Irrational Investment Behaviours.

CO4.5- Describe the relationship between biases and to adopt techniques to lower the impact of biases.