M.Sc. CHEMISTRY

(CBCS System)

PROGRAM OUTCOMES / COURSE OUTCOMES

After the completion of Programme a graduate with a Master's degree in Chemistry is able to:

1. Apply the knowledge of the fundamental concepts and experimental methods of chemistry in chemical research and engineering.
2. Acquire specific skills in planning and conducting advanced Chemical experiments.
3. Perform analysis of sample through techniques like UV, IR, FTIR, NMR, Mass Spectra TGA, SEM HPLC etc.
4. Contribute to the generation of new scientific insights or to the innovation of new applications of Chemical research.
5. Work in the interdisciplinary and multidisciplinary areas of chemical Sciences.
6. Apply green/sustainable chemistry approach towards planning and execution of research in frontier areas of chemical sciences.
7. Helps in understanding the causes of environmental pollution and can open up new methods for environmental pollution control.
8. Carry out experiments in the area of organic analysis, estimation, separation, inorganic semi micro analysis, Organic Synthesis, conductometric and potentiometric analysis
9. Understand the background of organic reaction mechanism.
10. Understand the complex chemical structures, and instrumental method of chemical analysis.

With all these acquired knowledge and skills a post Graduate students will get employment opportunity in various field on large scale such as:

1. **Academic Institutions**
2. **Research & Development**
3. **Analytic Chemist**
4. **Forensic Chemist**
5. **Chemical Engineer**
6. **Industrial Management**
7. **Chemical Health &Safety Professional**
8. **Hazardous Waste Chemist**
9. **Pharmacologis**
10. **Teaching**

Semester	Course Code	Course Name	Course Outcomes
I	CHEM101	Inorganic Chemistry Theory-1	This course will equip the learner with symmetry operations, concept of group, Matrix representations, point group and applications of group theory to chemical bonding. The need and justifications of non-Aqueous solvents Different reactions in non-Aqueous solvents Differentiating solvents and labeling solvents. Classification, preparation, bonding and applications of inorganic hydrides and transition metal compounds with hydrogen. Applications of organic reagents in Inorganic Chemistry. Supramolecular Chemistry
I	CHEM 102	Organic Chemistry Theory-1	This course able the students to understand the bonding and applications of macromolecule in the field of food, ,agriculture and medicine. Stereo Chemical concept of organic compounds. Structure and reactivity relationship in organic compounds and Mechanism of aliphatic Electrophilic and Nucleophilic substitution reactions.
I	CHEM103	Physical Chemistry Theory-1	This course enables the students to understand about Molecular Spectroscopy and structural information ,kinetics of complex reactions, collision and transition state theory for both uni-molecular and bimolecular reactions, study of fast reactions , adsorption and catalysis

I	CHEM104	Mathematics for Chemist	This course enables the students to learn about basic mathematics, (Differential calculus, function, Integral calculus, Matrices and Determinants) and its applications in Chemistry
I	CHEM105	Applications of Computer in Chemistry	Computer Language (FORTRAN) and Programme used in Chemistry.
I	CHEM106	Inorganic Chemistry Practical-1	At the end of this course the students will acquire experimental knowledge about volumetric analysis and various types of titrations such as Potassium bromate titrations. Potassium iodate titrations and EDTA titrations.
I	CHEM107	Organic Chemistry Practical	At the end of this course the students will acquire experimental knowledge about separation of binary Mixture of organic compounds. Preparation and Purification of organic compounds.
I	CHEM108	Physical Chemistry Practical-1	At the end of this Lab. course the students will able to determine: Refractive Index of solvents and analysis of solvent mixtures. Surface tension and viscosity of pure solvents and analysis of two miscible solvents. Study the rate of reaction
II	CHEM201	Inorganic Chemistry Theory-2	This course enables the students to learn about various theories of Metal Ligand Bonding like (CFT, MOT ACFT) and factor affecting Magnitude of CFT

			and Thermodynamic effects of CFT Evidences for Metal Ligand overlap in complexes. Atomic Spectroscopy Orgel diagram, Tanabe Sugano diagram and transitions from weak to strong crystal fields. Origin of magnetic moment, magnetic susceptibility, Russel Saunder's coupling, coupling, quenching of orbital angular moment and applications of magneto chemistry in co-ordination chemistry in spin free and spin paired octahedral and tetrahedral complexes.
II	CHEM202	Organic Chemistry Theory-2	At the end of this course the students will able to understand: Mechanism of Aromatic electrophilic and nucleophilic substitution and some naming reactions. Important organic reactions and their mechanism, Reagent used in organic synthesis and elimination reactions. Molecular orbital symmetry FMO, PMO electrocyclic reactions, and sigmatropic rearrangements and correlation diagram
II	CHEM203	Physical Chemistry Theory-2	At the end of this course the students will able to understand: Important Laws of Thermodynamics, Carnot cycle ideal solutions, fugacity, and activity and Thermodynamic criterion of feasibility of process. Clausius Claperyon equation and its applications in determination in Colligative properties. Relationship between relative lowering of vapor pressure and osmotic pressure, VantHoff equation for dilute solutions. Distribution law, its applications and construction of

			phase diagram to two component system. Non -Equilibrium Thermodynamics and corrosion.
II	CHEM204	Chemistry of Life Science	At the end of this course the students will able to understand: Cell structure and function. Nucleic acids, Carbohydrate metabolism proteins and lipid metabolism
II	CHEM205	Environmental Chemistry	Environmental Chemistry. Hydrosphere Water quality parameters and standards, Environmental analytical Chemistry and Green Chemistry
II	CHEM206	Inorganic Chemistry Practical-2	Commercial Analysis. Analysis of mixture by Gravimetric and volumetric methods from the mixture solutions. Green methods for preparation of some Inorganic compounds.
II	CHEM207	Organic Chemistry Practical-2	Separation, purification and identification and Characterization of binary mixtures of organic compounds
II	CHEM208	Physical Chemistry Practical-2	At the end of this Lab. course the students will able to determine: Partition Coefficient Thermo chemistry Preparation and study of colloidal solution Construction of phase diagram

			Verification of Ostwald dilution law for weak acid. Surface tension of pure solvents and analysis of two miscible solvents. Partition coefficient. Flocculation value of electrolytes. Heat of Neutralization and Hydration of salts.
III	CHEM301	Inorganic Chemistry Theory-3	At the end of this course the students will able to understand: Preparation, structure and bonding in Metal Carbonyls Nitrosyl and cyanides complexes and structural evidences from vibrational spectra. Analytical Chemistry and Data analysis and Chemistry of Lanthenides and Actinides. Photoelectron spectra of simple molecules and for iso-electronic sequence. Auger Electron spectroscopy. Spectral, magnetic properties uses and comparison of Lanthanides and actinides. Nuclear Chemistry, Nuclear models, nuclear fusion and fission. Radioactive techniques
III	CHEM302	Organic Chemistry Theory-3	At the end of this course the students will able to understand: Structure elucidation of organic compounds by using UV, IR, NMR and Mass Spectra and various terms used in these techniques. Photochemistry of alkenes, conjugated olefins, aromatic compounds and carbonyl compounds.

III	CHEM303	Physical Chemistry Theory-3	At the end of this course the students will able to understand: Various terms used in statistical thermodynamics, Maxwell-Boltzman distribution, quantum statistics, The Bose-Einstein statistics, Fermi-Dirac statistics, Thermodynamic probability and Stirling approximation. Molecular and nuclear partition functions for monatomic diatomic and polyatomic gases. Thermodynamic properties of molecules from partition function, calculation of equilibrium constant for gaseous solution in term of partition function Basics Quantum chemistry, time independent and time dependent Schrodinger wave equation. Quantum solutions of some problems. Various photophysical processes of electronically excited molecule, energy transfer from electronically excited molecules and E-type and P-type delayed fluorescence.
III	CHEM304	Inorganic Special Theory-1	At the end of this course the students will able to understand: Photochemical behavior of transition metal complexes, charge transfer spectra of crystalline and gaseous alkali halides. Photochemistry of chromium(III) octahedral complexes $[Cr(H_2O)_6]^{3+}$ and $[Cr(NH_3)_6]^{3+}$ Substitution reactions in octahedral and square planar complexes. Theories of trans-effect, labile and inert complexes. Synthesis, properties and structure of phosphazenes, borazines, silicones. Stability constants, stepwise formation constants,

			overall formation constants. Relationship between stepwise and overall formation constants. Determination of stability constants by different methods. Electronic Spectra of complex ions.
III	CHEM307	Inorganic Chemistry Practical-3	At the end of this Lab. course the students will able to: Prepare some Coordination compounds. Characterization of prepared compounds by the following techniques i) Molar conductance values ii) I.R. Spectral interpretation
III	CHEM308	Organic Chemistry Practical-3	At the end of this Lab course the students will able to determine: Quantitative Analysis , Various Chromatographic techniques and Multistep Synthesis.
III	CHEM309	Physical Chemistry Practical-3	At the end of this Lab course the students will able to measure: Heat of solution from solubility measurements. Heat of transfer measurements. Conductance measurements and acid base titration. Colorimetric measurements.
IV	CHEM401	Inorganic Chemistry Special Theory-2	At the end of this course the students will able to understand: Hapto-nomenclature, synthesis, structure and bonding aspects of organometallic compounds with carbon- π

		(Advanced Organomatallic)	donor ligands. Fluxional organometallic compounds and their classification. Reason for selecting transition metals in catalysis, basic concept of catalysis, proximity interaction. Homogeneous hydrogenation of unsaturated compounds and asymmetric hydrogenation of olefins. Ziegler Natta polymerization of ethylene and propylene. Hydroformylation of unsaturated compounds using cobalt and rhodium complexes. Structures of metal carbonyl clusters of three atoms $M_3(CO)_{12}$ (M=Fe, Ru & Os), Four metal atoms (tetrahedra) $[M_4(CO)_{12}$ {M= Co, Rh &Ir}] and octahedron of type $M_6(CO)_{16}$ [M= Co & Rh Metal carbonyls involving bridged-terminal exchange and scrambling of CO group. Preparation, reactions, structure and bonding of metal carbenes. Biological and industrial applications and environmental aspects of organometallic compounds.
IV	CHEM402	Inorganic Chemistry Special Theory-3 (Modern Techniques of Chemical Analysis)	At the end of this course the students will able to understand: Fundamental laws of photometry, Beer-Lambert's Law, deviation from Beer-Lambert's Law. Relationship between excitation spectra and florescence spectra, florescent species, effect of concentration on florescence intensity. The Theory of Atomic Absorption Spectroscopy (AAS), Origin of atomic spectra and its application. Atomic emission spectroscopy (AES) and description

			of the techniques of inductively coupled plasma. Principle, classification of chromatographic methods and Chromatographic behavior of solutes. Applications and comparison of gas chromatography (GC) and High-Performance Liquid Chromatography (HPLC). Polarographic measurements and polarograms, interpretation. Dropping mercury electrode advantages and limitations. Thermogravimatric analysis, Differential thermal analysis.
IV	CHEM403	Inorganic Chemistry Special Theory-4 (Inorganic Spectroscopy)	At the end of this course the students will able to understand: Applications of Infrared Spectroscopy in structure interpretation. Applications of Nuclear Magnetic Resonance Spectroscopy in structure interpretation of inorganic complexes. Quadrupole Resonance Spectroscopy. Mossbauer Spectroscopy. Electron Spin Resonance Spectroscopy.
IV	CHEM404	Inorganic Chemistry Special Theory-5 (Bio-Inorganic Chemistry)	At the end of this course the students will able to understand: Metalloporphyrins and metalloenzyme, structure and functions of Carboxy peptidases and Carbonic anhydrase. Natural oxygen carriersand Synthetic oxygen carriers. Structure of hemoglobin and myoglobin. Transport and storage of metals.

			Inorganic compounds as therapeutic Agents. Nitrogen fixation and Nitrogen metabolism.
IV	CHEM413	Inorganic Chemistry Special Practical-1	At the end of this Lab course the students will able to understand: Preparation of varios Coordination Complexes Conductometric Titrations Potentiometric Titrations. Colorimetric Analysis. pH metric –titrations. Polarography/Pulse polarography. Cyclic voltammetry. Flame Photometry.
IV	CHEM416	Seminars	Every candidate will have to deliver a seminar of 20-30 minutes duration on a topic (not from the syllabus) which will be chosen by him / her in consultation with the teacher of the department. After completing this student will become more confident

			Inorganic compounds as therapeutic Agents. Nitrogen fixation and Nitrogen metabolism.
IV	CHEM413	Inorganic Chemistry Special Practical-I	At the end of this Lab course the students will able to understand: Preparation of varios Coordination Complexes Conductometric Titrations Potentiometric Titrations. Colorimetric Analysis. pH metric –titrations. Polarography/Pulse polarography. Cyclic voltammetry. Flame Photometry.
IV	CHEM416	Seminars	Every candidate will have to deliver a seminar of 20-30 minutes duration on a topic (not from the syllabus) which will be chosen by him / her in consultation with the teacher of the department. After completing this student will become more confident

1. Dr. Kumari Bandna
2. Prof. Pooja
3. Prof. Anita
4. Dr. Chanderesh

Principal
Govt. College Nalagarh
Distt. Solan (H.P.)

Principal
GC Nalagarh

LEARNING OUTCOME
ECONOMICS [P.G. CLASSES)

Master of Arts in Economics (MA Economics)

Programme Outcome / Learning Outcom

Over the duration of study, students are expected to acquire:

- Economic reasoning to view and analyze the working of the world by evaluating the cost of an action with the benefits generated.
- Ability to identify and solve of economic problems so as to contribute to the development of the subject through creative analysis and evaluation.
- Critical and creative thinking to analyze everyday problems faced by society, evaluate specific policy proposals, compare arguments with different conclusions to a specific societal issue and assess the role played by assumptions in such arguments.
- Scientific temperament of logical and rational thinking.
- Ethically articulate and apply values and ideals that demonstrate awareness of ongoing socio-economic challenges.
- Analytical tools for application of appropriate quantitative/qualitative techniques used in economics along with ICT, software etc.
- Resource management to plan usage of resources at different levels.
- Ability of research and development to apply principles of economics to analyze and evaluate issues of relevance.
- Specialization and employability through development of a deeper understanding, creativity, originality, analytical and critical skills.
- Research temperament through the use statistical and econometric tools and techniques that help in drawing inferences about various issues of economics importance and thereby contribute to the development of the subject.

Programme Specific Outcome

Upon completion of this Master's degree programme the students are expected to attain:

- An understanding of the theoretical and practical dimensions of economics;
- A scientific temperament through provisioning of concurrent input;
- Exposure to a wide range of economic specializations and familiarization with different branches of economics.

DSC Course Code: ECON-111

MICRO-ECONOMICS

Course Outcomes

By the end of the course, students will be able to:

- Comprehend consumer behaviour in all its ramifications.
- Locate optimum products and factors combinations.
- Describe different market conditions so as to understand equilibrium in price and output combinations.
- Examine various factors of production and their price determination.
- Discuss welfare economics and various criteria to determine the society's welfare.

DSC Course Code: ECON-112

ELEMENTARY MATHEMATICS FOR ECONOMICS

By the end of the course, students will be able to:

- understand the basic rules of matrix algebra and apply the same to solve mathematical models containing systems of simultaneous equations.
- understand and extend the techniques of differential calculus to compute values of variables etc.
- solve the differential and difference equations along with their economic applications to economic models.
- compute the consumer's surplus and producer's surplus by utilising the tools of integral calculus.
- apply linear programming and input-output model to analyse behaviour of economic agents.

DSC Course Code: ECON113

INTERNATIONAL ECONOMICS

By the end of the course, students will be able to:

- explain theories of international trade and their applications.
- outline the impact of dynamic factors on international trade.
- analyse various policies and role of international organizations to international trade.
- illustrate balance of payment and explain determination of exchange rates.
- identify long and short run capital requirements of developing countries.
- discuss the role of financial institutions like IMF, ADB, IFC and IDA.

DSC Course Code: ECON114

LABOUR ECONOMICS

MA 1st

By the end of the course, students will be able to:

- examine various factors affecting demand and supply of labour.
- explain unemployment as a source of human capital.
- illustrate wage rate determination in different sectors of the economy.
- classify various methods of the settlement of industrial disputes.
- evaluate the govt. labour policies for the socio-economic upliftment of labour.

DSC Course Code: ECON121

MACRO-ECONOMICS

MA 2nd

By the end of the course, students will be able to:

- discuss the classical viewpoint about income, output and employment determination and explain various macroeconomic theories of consumer behaviour.
- distinguish between Keynesian and post Keynesian views regarding the income, output and employment.
- understand Money market and related concepts.
- explain various macro-economic growth models elaborate stabilisation policies.

DSC Course Code: ECON122

BASIC STATISTICS

By the end of the course,students will be able to:

- acquire and apply statistical techniques in the empirical analysis of economic relationships.
- understand and infer from the process of data collection and various sampling methods.
- construct and interpret index numbers for economic variables. Measure and evaluate components of time series.
- apply, solve and prove various probability theorems using appropriate probability distributions.
- understand, explain, solve and apply hypothesis testing and selection of appropriate techniques for testing hypotheses.

DSC Course Code: ECON-123

MONEY AND BANKING

Course Outcomes By the end of the course, students will be able to:

- understand the concept of money and various approaches related to money.
- explain the functioning of money and capital markets, process of credit creation, role of NBFCs etc.
- interpret demand and supply of money, money multiplier and its determinants and role of RBI.
- analyse the working of monetary policy.
- summarize the role of national and international financial institutions.

DSC Course Code: ECON-124

HISTORY OF ECONOMIC THOUGHT

By the end of the course, students will be able to:

- trace the evolution of the subject matter of economics starting with mercantilists.
- draw inferences about the relevance of classical economics, socialist economic thoughts, historical critiques and Marx in the present context.
- demonstrate the relevance of neo-classical economics and identify contribution of Austrian School.
- explain and interpret Keynesian and Post Keynesian Economics.
- understandbasic Indian economic thought.

DSC Course Code: ECON231

AGRICULTURAL ECONOMICS

By the end of the course, students will be able to:

- develop the understanding of the interdependence between agriculture and industrial development.
- make use of agriculture production functions, identify and solve risk and uncertainty in agriculture.
- understand and build models for India's agricultural development.
- evaluate Agricultural policies in lieu of their effectiveness.
- compare and contrast the traditional and modern sources of agricultural finance.

DSC Course Code: ECON232

GENDER ECONOMICS

Upon completion of the course students will be able to:

- Describe and critically discuss how incorporating the gender dimension influences economic development and how economic development also impacts the gender discourse.
- Understand gender inequalities that exist in many spheres of the economy and how they become an obstacle to development.
- The feminist economics project tries to overcome these limitations of mainstream economic theory
- Develop an understanding of theory on feminist economics and the challenges it poses to theories of economic development and therefore to raise new questions in economics along with exploring different ways in which questions can be answered.
- Thoroughly understand common economic problems in developing and developed countries and how they affect different groups in society.
- Know and be able to work out and interpret different measures and indicators of gender and development and eliminate restricting standards.
- Develop competence to assess different development/economic policy measures from a theoretical and empirical perspective through a gender lens.

DSC Course Code: ECON233

RESEARCH METHODOLOGY

By the end of the course, students will be able to:

- Understand the scientific methods of research, research process and research design.
- Understand the sampling techniques and sampling procedures.

• dissect and examine sectoral development specifically agricultural and industrial development.

• interpret and elaborate financial sector and related policies.

• inspect and explain Indian economy in the context of India's foreign trade.

• evaluate the performance of Indian economy's development trajectory.

DSC Course Code: ECON242

PUBLIC FINANCE

By the end of the course student will be able to:

• examine the concept of maximum social advantage, keeping in view market failure and free riders' problem.

• understand and make use of taxation system of India.

• outline the theories, concepts and meaning of public debt and public expenditure in India. • interpret and elaborate classification of budget and fiscal policy for stability, growth and economic development.

• evaluate the growth and composition of statutory and non- statutory financial resources in India.

DSC Course Code: ECON243

ECONOMICS OF DEVELOPMENT AND PLANNING

By the end of the course, students will be able to:

• explain the concepts of economic growth, structural change and economic development.

• compare and contrast Classical, Marxian, Schumpeterian and other theories of economic development.

• analyse state intervention under LPG and evaluate and construct development plans using appropriate techniques.

• understand and evaluate development models.

• critically examine the policy debate around India's development trajectory.

DSE Course Code: ECON245

INDUSTRIAL ECONOMICS

By the end of the course, students will be able to:

• have the knowledge of different theories of international trade and their applications.

• to know about impact of dynamic factors on international trade.

- Know the various methods of data collection, tools and techniques.
- Know the reliability and validity of measurement of scaling.
- Know the purpose of project proposal and project report

DSE Course Code: ECON234

ECONOMICS OF POPULATION

By the end of the course student will be able to:

- apply general awareness of the relationship between economics and population.
- take part in analytical insights and knowledge population processes, structure and distribution.
- examine and analyze gross and per capital output.
- identify plans development, policies and strategies of economic development.
- identify facts of economic push and pulls in the causation of population growth.
- analyse deep insights into economic inequalities.

AEC Course Code: ECON236

CONTEMPORARY ECONOMIC ISSUES AND DATA HANDLING

By the end of this laboratory based hands-on practical training course, students will be able to:

- handle data and solve basic algebraic problems using Excel.
- use different logical and statistical functions in Excel to compute descriptive statistics of a univariate and multivariate data set.
- present data using different types of graphs Using solver in excel student will be able to solve linear equation system and LPP and NLPP.
- The course proposes to develop the capacity of students to analyse and appreciate contemporary economic issues and policy pronouncements. The course will start with an introduction to the basic principles of report writing. Subsequent modules will involve interactive lectures, group discussions, and group presentations.
- By the end of the course student will be able to present their analysis in the form of a written report.

DSC Course Code: ECON241

INDIAN ECONOMY

By the end of the course student will be able to:

- evaluate the evolution of Indian economy and identify key issues in development of Indian economy.

- have the knowledge of various policies related to international trade besides, role of international trade organizations.
- attain the knowledge of balance of payment and determination of exchange rates.
- have the knowledge of capital requirements of developing countries both in short and long run.
- have the knowledge of financial institutions like IMF, ADB, IFC and IDA.

Principal
G C Nalagarh

Govt. P.G. College Nalagarh
Department of Commerce
Programme : M.Com.
Statement of Course Outcomes

MC 101 Management Theories and Practices:

1. Understand classical, modern, and contemporary management theories.
2. Analyze organizational environment and culture.
3. Apply management concepts to real-world scenarios.
4. Develop strategic planning and decision-making skills.
5. Integrate management theories with ethical considerations.

MC 102 Business Environment:

1. Understand the internal and external factors influencing business.
2. Analyze the economic, social, political, and technological environment.
3. Identify and evaluate the impact of government policies and regulations.
4. Develop skills to adapt to changing business environments.
5. Apply environmental scanning techniques for strategic decision-making.

MC 103 Managerial Economics:

1. Apply economic concepts to managerial decision-making.
2. Analyze market structures and their impact on business.
3. Evaluate costs, revenue, and profit maximization strategies.
4. Develop pricing and output determination skills.
5. Apply optimization techniques for business problem-solving.

MC 104 Statistical Analysis for Decision Making:

1. Apply descriptive and inferential statistics to business data.
2. Analyze and interpret data for informed decision-making.
3. Evaluate probability distributions and statistical models.
4. Develop hypothesis testing and confidence interval skills.
5. Apply regression and correlation analysis for predictive modeling.

MC 105 Income Tax Laws and Administration:

1. Understand income tax laws, legislation, and principles.
2. Calculate taxable income, deductions, and exemptions.
3. Apply tax planning strategies for individuals and businesses.
4. Comply with tax administration procedures.
5. Analyze and interpret tax laws, rules, and regulations.

MC 106 Corporate Legal Framework:

1. Understand the Companies Act and corporate governance.
2. Analyze company formation, structure, and management.
3. Identify roles and responsibilities of directors and shareholders.
4. Apply corporate law principles to business transactions.
5. Comply with legal requirements for corporate operations.

MC 201 Corporate Financial Accounting:

1. Prepare financial statements (Balance Sheet, Income Statement).

2. Analyze and interpret financial data for decision-making.
3. Apply accounting standards (GAAP, IFRS) and principles.
4. Calculate and manage assets, liabilities, equity, and cash flows.
5. Evaluate financial performance using ratios and metrics.

MC 202 Human Resource Management:

1. Understand HRM functions (recruitment, selection, training).
2. Develop strategic recruitment and retention plans.
3. Apply performance management and appraisal techniques.
4. Analyze and implement employee compensation and benefits.
5. Foster positive employee relations and organizational culture.

MC 203 Corporate Finance and Policy:

1. Develop capital budgeting and investment strategies.
2. Evaluate financing options (debt, equity, hybrid).
3. Analyze and manage risk (market, credit, operational).
4. Optimize capital structure and dividend policy.
5. Apply financial modeling and valuation techniques.

MC 204 Marketing Management:

1. Develop marketing strategies and plans.
2. Conduct market research and analyze consumer behavior.
3. Create and manage brand identity and positioning.
4. Design and implement pricing and distribution strategies.
5. Evaluate and measure marketing performance and effectiveness..

MC 205 Research Methodology and Data Science:

1. Formulate research questions and hypotheses.
2. Collect and analyze data using statistical and machine learning tools.
3. Apply research design and methodology.
4. Interpret and visualize data insights.
5. Communicate data-driven research findings and recommendations.

MC 206 Corporate Governance and Business Ethics:

1. Understand principles of corporate governance and stakeholder roles.
2. Analyze ethical dilemmas and apply moral frameworks.
3. Develop and implement effective board governance practices.
4. Evaluate risk management and compliance strategies.
5. Promote transparency, accountability, and social responsibility.

MC301 ADVANCED COST ACCOUNTING (DSC)

1. Understand advanced cost accounting concepts, theories, and frameworks.
2. Analyze and interpret cost data for strategic decision-making.
3. Develop cost management strategies to enhance profitability and competitiveness.

MC 302: INTERNATIONAL FINANCIAL MANAGEMENT AND POLICY (DSC)

1. Understand international financial concepts, theories, and frameworks.
2. Apply financial models and tools for global investment and financing decisions.
3. Assess and mitigate international financial risks, including currency, interest rate, and political risks.

MC303: FINANCIAL INSTITUTIONS AND MARKETS (DSC)

1. To get acquainted with the financial system
2. To know about the different financial institutions and markets.
3. To understand financial intermediation and its implication.
4. To know about the changing role of financial institutions.

MC304 (a): MANAGEMENT CONTROL TECHNIQUES (DSE)

1. To understand the different accounting techniques required for taking managerial decision.
2. Design and implement effective management control systems to achieve organizational goals.
3. Analyze and evaluate financial and non-financial performance metrics using various control techniques.
4. Apply strategic control measures to manage risk, improve efficiency, and enhance organizational performance.

MC 305 (a) E commerce and digital marketing

1. Develop integrated e-commerce and digital marketing strategies to drive online business growth.
2. Analyze and optimize online performance using data-driven insights and digital tools (e.g., Google Analytics, social media analytics).

MC 306(a) Strategic human resource management

1. Develop and implement strategic HR plans aligned with organizational goals.
2. Analyze and apply HR metrics and analytics to drive evidence-based decision-making.
3. Design and implement HR strategies to enhance organizational competitiveness and sustainability

MC 307 COMPUTER APPLICATIONS IN BUSINESS (AECC)

1. Student will able to apply Computer Knowledge in Business Decision Making.
2. Operate a variety of advanced spreadsheet, operating system and word processing
3. functions.
4. Identify the basics of information technology and apply software applications to enhance
5. efficiency of business functions.

MC401: SECURITY ANALYSIS & PORTFOLIO MANAGEMENT (DSC)

1. To know about the different risks and returns involved in different securities.
2. To develop portfolio by reducing risk and getting better returns.

MC 402: ENTREPRENEURSHIP DEVELOPMENT AND PROJECT MANAGEMENT (DSC)

1. To develop entrepreneurship skills.
2. To know about the process of pursuing projects and preparing project reports.

MC403: STRATEGIC MANAGEMENT AND BUSINESS POLICY (DSC)

1. Formulate and implement comprehensive strategic plans aligned with organizational goals and vision.
2. Analyze internal and external environments using tools like SWOT, PESTLE, and Porter's Five Forces.
3. Evaluate and recommend strategic options to drive competitiveness, innovation, and sustainability.

MC 404 AF(a): ADVANCED FINANCIAL MANAGEMENT AND POLICY (DSE)

1. Evaluate and optimize financial performance using advanced financial analysis and modeling techniques.
2. Develop and implement strategic financial plans, including capital budgeting, funding, and risk management.
3. Apply contemporary financial management concepts, such as financial derivatives, hedging, and value-based management.

MC404AF(b): BUSINESS TAXATION

1. Analyze and apply tax laws and regulations to business decisions, including income tax, VAT, and other indirect taxes.
2. Calculate and optimize tax liabilities for individuals and businesses, considering tax planning strategies.
3. Evaluate the impact of taxation on business operations, financial planning, and decision-making.

Department of Commerce

Principal
Govt. College Nalagarh
Distt. Solan (H.P.)