JIWAJI UNIVERSITY, GWALIOR

School of Studies in M.B.A (Chemicals Sales & Marketing Management)

The School of Studies in M.B.A (Chemicals Sales & Marketing Management), Jiwaji University, Gwalior came into existence in 1994to develop Technical business executives. M.B.A Chemical sales &marketing Management is offering innovative research oriented course with the quality vision that can meet the requirement of knowledge based skilled manpower by chemical industries, especially in pharmaceuticals and fine chemicals. The objective of the courses is to develop research and quality management aptitude in students with proper scientific & technical knowledge The Supervision system is one of the real strengths of the department for close individual support. As a graduate student in the department students are expected to work largely on their own initiative but this varies according to their area of work. The overall objective is to develop a research-oriented attitude and generate a confidence level to handle the challenges of industry.

Department has strong alumni base with industries all over India. Every year these companies are coming for placements of students. The department is able to provide placement to the students more than 90 percent.

The school is running following programme:

M.B.A (Chemicals sales & Marketing Management)

Programme Outcomes (POs)

The designing of the M.B.A (Chemical Sales & Marketing Management) program at the Jiwaji University is to provide knowledge of current theory and techniques of the major business disciplines which prepares students for careers as professionals in the fine and pharmaceutical industries. Program will exhibit the leadership capacity and teamwork skills for business decision making.

Our distinguishing features are:

- Up-to-date knowledge of broad range of disciplines of pharmaceutical, fine chemicals and management.

- Integrate tools and concepts from multiple functional areas (i.e., marketing, chemistry, biology etc.) to solve business problem.
- To prepare competent and best suited business executives with exposure to market conditions.

Programme Specific Outcomes (PSOs)

Curriculum of M.B.A (Chemicals sales & Marketing Management) is designed to prepare post graduates to attain the following program specific outcomes:

PSO1: An ability to design or develop knowledge base and skill base with incorporating impact of economic, environmental, social, health, safety and sustainability .

PSO2: Ability to practice or apply management principles, communication and other skills in a wide range of industrial and professional employment areas.

PSO3: Display critical thinking for creating new ideas and design innovative pathways.

PSO4: Explore global level research opportunities for doctoral studies.

PSO5: Demonstrate broad mindset with respect to knowledge penetration and accumulation in his/her professional activities**.**

PSO6: Display their true potential and get appropriate endorsement through qualifying NET/GATE/SLET/ State Civil Services and other competitive examinations.

Course Outcomes (COs)

Course wise outcome will be as follows:

Management Concept & Processes

Students after studying course Management Concept & Processes are expected:

CO1: To learn concept of management, management roles, functional areas of management evolution of management and management skills.

CO2: To learn concept of planning various types of plan concept of M.B.O, techniques and decision making.

CO3: To understand organizing process centralization and decentralization &types of organizational structure.

CO4: To understand concept of directing Leadership styles & motivation concept, communication essentials.

CO5: To understand concept of Coordinating and Controlling **t**echniques of Coordination, control types, areas of exercising control, Major Control System, and their designing.

Management Accounting

Students after studying management accounting course are expected:

CO1: To learn functions of Management Accounting., Role and Responsibility of Management Accountant &to prepare Journal, Ledger and Preparation of Trial Balance and Final Account.

CO2: To learn Accounting and Major Cost Concepts Methods and Techniques of Costing.

CO3: To perform Analysis & Interpretation of Financial Statements Preparation of comparative Balance sheet, Preparation of comparative Income Statements.

CO4: To understand Fund Flow Analysis Cash Flow Analysis Format of Companies Balance sheet.

CO5: To understand Budgeting and Budgetary Control Preparation of Sales Budget, Performance Budgeting, Concept of Management Audit and Responsibility Accounting.

Marketing Management

Students after studying Marketing Management are expected

CO1: To learn about concept of Marketing, Segmentation and Targeting, New Challenges in new "Connected" Millennium, Business actions towards socially responsible marketing.

CO2: To know about concepts of Product and Price Management..

CO3: To learn about Promotion and Distribution Management.

CO4: To learn about various concepts of Industrial Marketing.

CO5: To understand Customer Relationship Management and CRM implementation.

Analytical Chemistry

Students after studying Analytical Chemistry course are expected:

CO1: To learn data analysis including propagation of errors, significant figures, least square analysis, standard deviation T test, Q test, F test, average, stoichiometric calculations, acid base titrations, acid-base indicators, complexometric titrations, precipitation titrations adsorption indicator.

CO2: To learn gravimetric analysis, properties of precipitates, organic precipitation, solvent extraction, extraction equilibrium.

CO3: To understand ion exchange chromatography and chromatographic separation techniques.

CO4: To understand Gas chromatography GSC/GLC, GC/mass, GC/IR, HPLC, LC/MS.

CO5: To understand Nephelometry, turbidimetry, Flame photometry, Atomic absorption spectroscopy

Pesticide Chemistry

Students after studying Pesticide Chemistry course are expected:

CO1: To learn synthesis, mode of action and application of environmental impact of Insecticide of Plant Origin &Fungicide.

CO2: To learn Structure, synthesis, mode of action, application & environmental impact of Chlorinated hydrocarbons.

CO3: To know about Malathion, Structure, synthesis, mode of action, application & environmental impact of Dichlorovos, Paraoxon etc.

CO4: To understand Structure, synthesis, mode of action, application & environmental impact of Carbonate insecticides, Rodenticides.

CO5: To understand Dry formulations and Liquid formulations of Pesticides.

Bio-chemicals
Students after studying Biochemical are expected

CO1: To learn about Carbohydrates monosaccharide, Disaccharide and polysaccharide, disorders of carbohydrate metabolism.

CO2: To learn about Classification, structure & separation Biosynthesis of proteins.

CO3: To know about Classification of Enzymes Chemical kinetics and mechanism of enzyme – substrate complex Factors governing enzyme activity

.**CO4:** To understand classification of lipids, Biosynthesis & oxidation of fatty acids Disorders of lipid metabolism.

CO5: To understand classification of hormones. Hormone receptors ,thyroid adrenal gonads &pituitary hormones.

Paints & Pigments

Students after studying paints and pigments course are expected:

CO1: To learn general characteristics of pigments General properties and methods of preparations of white pigments.

CO2: To know about general characteristics, colour and constitution of Indigo dyes Reactive dyes Disperse dyes.

CO3: To learn properties and uses of printing inks, Raw materials. General process of manufacture of printing inks.

CO4: To understand general characteristics, function and manufacture of Paints and Varnishes.

CO5: To understand. Paint & Varnish Formulations Testing of formulations paints.

Anatomy & Physiology

Students after studying Anatomy & Physiology course are expected:

CO1: To learn about Cell structure, Tissues. Muscles, Skeleton, Joints Glands

CO2: To know about Nervous system and Special sense organs Brain Spinal chord Cranial nerves: Autonomic nervous system Eye Ear Skin.

CO3: To learn about Blood, heart, arterial system and lymph

CO4: To understand respiratory, digestive systems and nutritional value of food.

CO5: To understand Excretory System Male genital system Female genital system.

Marketing research & Analytical techniques

Students after studying these areas of knowledge are expected:
CO1: To understand Marketing Research Scope types, Ethical Issues in Marketing Research.

CO2: To enrich knowledge of Research Process, Research Design, Sampling Procedures and Problems.

CO3: To study Concept and Computation of mean, mode and median, Standard deviation.

CO4: To build a sound knowledge base of Correlation and Regression Analysis.

CO5: To understand Hypothesis &testing problems relating to test of significance of means, Test of significance of proportions.

Financial Management

Students after studying Financial Management are expected

CO1: To learn about Nature objective and scope of Finance Function and Financial Management. Profit Maximization V/S Wealth Maximization, Financial Forecasting.

CO2: To know about concepts of Capital Structure and Cost of Capital.

CO3: To learn about Management of Working Capital.

CO4: To learn about Capital Budgeting & Management of Capital.

CO5: To understand Management of Earnings Divided Decisions.

Business Environment

Students after studying Business Environment are expected

CO1: To learn about Nature and Significance of business environment, Salient feature of Capitalism, Socialism, Mixed economy, Emergence of public private and joint sector.

CO2: To know about Social Environment Social responsibilities of business, Consumerism, Ethics and Culture of business, SEBI, Indian Fiscal and Monetary Policy, Liberalization and Globalization, Foreign capital and technology, Import and Export policy, FEMA.

CO3: To learn about Industrial Environment, New industrial policy, Consumer Protection Act, Environment Protection Act, Competition Act 2004.

CO4: To learn about Demand and Production Analysis.

CO5: To understand Market Structure and Pricing.

Chemistry of Natural Products

Students after studying Chemistry of Natural products are expected

CO1: To learn about classification and industrial uses of Terpenoids and carotenoids ,citral, geraniol, Menthol, zingiberene, β-carotene.

CO2: To learn about Alkaloids; Conine, Nicotine, atropine, Quinine.

CO3: To know about Perfumes :, Extraction of perfumes from plants, synthesis of some important synthetic chemicals used in perfume industry.

CO4: To understand about Carbohydrate and Fermentation Industries.

CO5: To understand Milk and Milk Products, Chemical Composition, Processing of milk, Types of milk& Analysis of Milk.

Medicinal Chemistry I

Students after studying these areas of knowledge are expected:

CO1: To gain an overall understanding of Pharmacological principles like pharmacodynamics &pharmacokinetics.

CO2: To learn about the antipyretics analgesics &NSAIDS.

CO3: To understand sulphonamides quinolones & anticancer drugs.

CO4: To study of the various Antbiotic class drugs like aminoglycosides,tetracyclines,&macrolides.treatment of urinary tract infections

CO4: To study of the various Antitubercular drugs, antileprotic and antiprotozoal drugs.

Unit Operations

Students after studying unit operations are expected

CO1: To learn about Distillation & Absorption Batch and continuous distillation, Steam and extractive distillation.

CO2: To learn about Evaporation &Heat Exchanger Equipments.

CO3: To know about Crystallization &Extraction .

CO4: To understand about Filtration, Size Reduction and size Separation& mixing Equipment.

CO5: To understand about Drying and mixing.

Microbiology

Students after studying Microbiology are expected

CO1: To learn about Morphology, nutrition & reproduction of bacteria, Protozoa, virus & fungi.

CO2: To learn about Growth factors of bacteria, Bacterial toxins, Identification of bacteria, Microbial Straining techniques

CO3: To know about Principles of sterilization & Disinfections

CO4: To understand about Infection & factors influencing infection, bacterial, viral& protozoan disease.

CO5: To understand Innate & Acquired immunity, Immunoglobulin – Structure, types & functions, Antigen – Antibody reactions, Production of Monoclonal antibodies & vaccines.

Polymer Science-I

Students after studying polymer Science-I & II are expected

CO1: To learn about Concept of polymers, polymerization, definition, classification and types.

CO2: To learn about Chemical properties &Polymerization kinetics and Techniques.

CO3: To know about Molecular mass.

CO4: To understand about Rubber &Materials and Processing Technology.

CO5: To understand Plastics Materials, Introduction, Synthesis, properties and uses

Pharmaceutics

Students after studying pharmaceutics are expected

CO1: To learn about the design of dosage forms and Preformulation.

CO2: To learn about Physiochemical Principles of Pharmaceutics.

CO3: To know about Disperse systems and Biopharmaceutics.

CO4: To understand about Study of Pharmaceutical Dosages Form Design Considerations.

CO5: To understand about Pharmaceutical Preparations, Suspensions, Emulsions.

Organizational Behavior

Students after studying organizational behavior are expected

CO1: To learn about Organization and Organization Behavior and O.B. models

CO2: To know about Biological foundation of Human Behavior Personality, Learning, Attitudes, Perception, &Motivation.

CO3: To learn about Group Dynamics – Concept, Characteristics types, Stages of Group Development, Group Behavior models, Work Teams: Group Vs. teams.

CO4: To learn about Organizational Power Structure and Leadership Patterns.

CO5: To understand Organizational Changes and Development.

Advertising Management

Students after studying advertising are expected

CO1: To learn about Promotional Communication, Marketing communication, Process of Marketing Communication.

CO2: To know about Role of Advertising, Reasons for Advertising, Advertising and Marketing Mix, Advertising as translation of product concept into customer benefits.

CO3: To learn about Advertising Decision – Advertising Budget, Advertising Appeals, Media, and Concept of media.

CO4: To learn about Advertising Effectiveness - Advertising Effectiveness, Measuring Advertising Effectiveness, and Productivity in Advertisements

CO5: To understand Branding - Meaning of Branding, Strategic Relevance of Branding, Advantages and Limitation of Branding.

Sales & Distribution Management

Students after studying sales & distribution management are expected

CO1: To learn about Concept and objectives of sales management, designing of sales force.

CO2: To know about Sales organization, types of sales organization Recruitment, selection, training types, motivation, and compensation and performance evaluation.

CO3: To learn about Personal Selling Role& importance, types of personal selling, steps of personal selling.

CO4: To learn about structures of distribution channel; functions and flows in channels; Types of channels; Channel Management.

CO5: To understand Logistics; physical distribution (concepts and critical decisions); Sales quotas, sales territories; Sales budget.

Spectroscopy

Students after studying these areas of knowledge are expected:

CO1: To promote the active use of ultraviolet, visible spectroscopy and vibrational spectroscopy.

CO2: To learn the involvement of selection rules in infrared-spectroscopy and Raman spectroscopy .

CO3: To know about the nuclear magnetic resonance spectroscopy.

CO4: To know about the Concept, instrumentation & use of ESR spectroscopy.

CO5: To know about the Mass Spectroscopy &Massbaur spectroscopy.

Polymer Science II

Students after studying polymer science II are expected

CO1: To learn about Concept of Polymer Rheology and Morphology Physical & mechanical testing of Polymer.

CO2: To learn about Polymer Processing Compression molding, casting, extrusion, Fiber-spinning, injection molding, thermoforming Polymer Products, rubber footwear, Rubber to metal bonded components, cellular rubbers, sports goods, cables, latex products, rubber rollers.

CO3: To know about Functions and example of compounding ingredients Activator AcceleratorBlowing Agents Softeners PigmentsTactifers Release Agents Reclaimed Rubber TacticsGround crum Mineral& fillers.

CO4: To understand about Adhesives – Solvent based, water based and Dilutents and other additives and their applications.Blends: Preparation, processing, properties uses and Industrial aspects.

CO5: To understand concept of ChemicalTesting,Identification by colour tests. Estimation of specific chemical characteristics like; acid number, saponification value and hydroxyl value. Thermal analysisof DSC, TGA, TMA, DTA

Medicinal Chemistry-II

Students after studying these areas of knowledge are expected:

CO1: To gain an overall understanding of Drugs acting on gastrointestinal disorders Emetics, Antiemetics and other Gastrointestinal drugs. Drugs for constipation and Diarrheas.

CO2: To learn about. Cardiovascular Drugs: Hematopoietic Agents: Growth factors, minerals, anticoagulants, thrombolytic and antiplatelet drugs

CO3: To know about drugs acting on Kidney Diuretics Antidiuretics:

CO4: To study of the various Drugs of Arthritides& Gout: Drugs of Cough and Bronchial Asthama& Treatment of drug allergies.

CO5: To study of the various Drugs acting on skins and mucous membrane Anti-Fungal Drugs& Antiviral Drugs.

Business Law

Students after studying business law are expected

CO1: To learn &have an overview about principles of indutrial jurisprudence, constitutuional aspects of indutrial jurisprudence.

CO2: To know about laws of working conditions like The factories act, 1948; the mines act, 1952; the shop & establishment law, the plantation labor act, 1959; the contract labor (regulation and abolition act, 1970)

CO3: To learn about Laws on Industrial Relations like The trade union act, 1926; the industrial dispute act, 1947; the industrial employment (standing order) act, 1946; domestic enquiry

CO4: To learn about The minimum wages act, 1948; the payment of wages act, 1936; the payment of bonus act, 1965; the equal remuneration act, 1976

CO5: To understand Laws on Social Security

Business Policy & Strategic Analysis

Students after studying Business policy & Strategic analysis are expected

CO1: To learn Business policy &Various terms in business policy, Levels of strategy, Patterns of strategic behavior,

CO2: To know use of Competitive Advantage by external and internal environment analysis.

CO3: To learn about Strategy Formulation Environmental Appraisal Organizational Appraisal.

CO4: To learn about Strategy Implementation.

CO5: To understand Strategy Evaluation control and Other Strategic Issues.

International Marketing

Students after studying international marketing are expected

CO1:To learn about nature scope, major, Participants in International Marketing, Theories of International Trade.

CO2: To know Scanning International Marketing Environment, Environmental Analysis &Market Entry Strategies.

CO3:To learn designing of International Marketing Strategies related to Product Strategies, International Pricing distribution & promotion.

CO4: To learn about Export and Import Management.

CO5: To know about International Economics Institutions.

Petrochemicals, Oils and Soaps

Students after studying Petrochemicals oils and soaps are expected

CO1: To learn about Constituents of Petroleum, Processing or Refining of Petrochemicals.

CO2**:** To learn about edible and non-edible oils, chemical composition and physical properties of vegetable oils.

CO3**:** To know about Soaps and detergents.

CO4: To understand about Surfactant & Disinfectant.

CO5: To understand concept Lubricants.

Medicinal Chemistry-III

Students after studying Medicinal chemistry-III are expected

CO1: To learn about. Drugs acting on CNS

CO2: To learn about Sedatives and hypnotics Tranquilizers or Antianxiety Agents.

CO3: To know about Anticonvulsants and Antiepileptic drugs CNS stimulants Hallucinogens.

CO4: To understand about Antiseptic and Disinfectants Ectoparasiticides.

CO5: To understand anti-diabetic drugs and insulin.

Industrial Chemicals

Students after studying industrial chemicals are expected

CO1**:** To learn about Constituents, Zeolites as builder in detergents, Chemicals derived from ethylene: Isopropyl alcohol, acrylate, vinyl ester, vinyl chloride.

CO2**:** To learn about Chloro alkali industrial products Phosphorus chemicals &Synthetic Nitrogen Products.

CO3**:** To know about Glass & Ceramic Industries.

CO4: To understand about Lime, Gypsum, Plaster of Paris, Alumina, Hydrochloric etc.

CO5: To understand and contribute values of water and water treatment.

Clinical Pathology & Diagnostic Techniques

Students after studying clinical pathology & diagnostic techniques are expected

CO1: To learn about general concepts of blood and hematology.

CO2: To Know about Urine analysis.

CO3: To know about General description and analysis of stool, Sputum & Semen.

CO4: To understand about Inflammation and vascular disorders.

CO5: To understand Metabolic disorders like- Jaundice, Hepatolenticular degeneration, Brief idea about Biopsy Principles of autopsy (postmortem),biopsy.