

**MBA (Agribusiness Management)**  
**New Syllabus as per ICAR recommendation**  
**with effect from 2010-12 batch**  
**SEMESTER WISE COURSE SCHEDULING**

**First Semester**

Course No.	Name of Course	Credit
ABM-501	Principles of Management and Organization Behaviour	3+0
ABM-502	Agribusiness Environment and Policy	2+0
ABM-503	Managerial Economics	3+0
ABM-504	Managerial Accounting and Control	1+1
ABM-505	Communication for Management and Business	1+1
ABM-507	Marketing Management	3+0
ABM-513	Computers for Managers	1+1
ABM-515	Operations Research	2+0
	TOTAL	16+3

**Second Semester**

Course No.	Name of Course	Credit
ABM-506	Business Law and Ethics	2+0
ABM-508	Human Resource Management	2+0
ABM-509	Financial Management	2+0
ABM-510	Production and Operations Management	2+0
ABM-511	Research Methodology in Business Management	2+1
ABM-512	Project Management and Entrepreneurship Development	2+0
ABM-514	Management Information Systems	2+0
ABM-536	Quality Management in Agribusiness	2+0
ABM-591	Master's Seminar	1
ABM-595	Industrial Attachment**	S/US
	TOTAL	17+1

**Note:** Non credit compulsory course. PGS 501,503,505 and 506 to be completed in the first year of programme.

\*\*To be completed in companies after completion of first year **(4 weeks)**.

**Third Semester**

(Total 16 credits = 4 courses from (Group I) Stream specialization + 4 courses from (Group II) Industrial specialization)

**Group 1 (Total 8 credits) (Select only One Sub group and 4 courses)**

<b>Sub Group 1.1 (Agribusiness Marketing)</b>		
Course No.	Name of Course	Credit
ABM-516	Rural Marketing	2+0
ABM-517	Agricultural Marketing Management	2+0
ABM-526	International Trade and Sustainability governance	2+0
ABM-527	Management of Agribusiness Cooperatives	2+0
ABM-529	Food Retail Management	2+0
ABM-538	Sales and Distribution Management	2+0

ABM-539	Consumer Behaviour	2+0
ABM-540	Contract Farming	2+0
<b>Sub Group 1.2(Agribusiness Finance)</b>		
ABM-528	Agribusiness Financial Management	2+0
ABM-537	Commodity Futures ,Markets and Derivatives	2+0
ABM-541	Microfinance for Agribusiness	2+0
ABM-542	Agricultural Risk Management	2+0
ABM-543	Working Capital Management	2+0
ABM-521	Farm Business Management	2+0
<b>Sub Group 1.3( IT in Agribusiness )</b>		
ABM-544	Agricultural Information Systems	1+1
ABM-545	Problem solving methodologies	1+1
ABM-546	Web design	1+1
ABM-547	Remote Sensing, GIS and GPS	1+1
ABM-548	Information delivery systems and models for agriculture	1+1
ABM-549	Data mining and knowledge management	1+1

**Group 2 Industrial Specialization (Total 8 credits) (Select only One sub group and 4 courses)**

<b>Sub Group 2.1 (AGRI INPUTS)</b>		
ABM-519	Fertilizer Technology and Management	2+0
ABM-520	Management of Agrochemical Industry	2+0
ABM-522	Seed Production Technology and Management	2+0
ABM-530	Management of Agricultural Input Marketing	2+0
ABM-532	Agri-supply Chain management	2+0
ABM-550	Management of Watershed Development Project and Irrigation equipments	2+0
<b>Sub Group 2.2 (HORTICULTURE)</b>		
ABM-524	Fruit Production and Post Harvest Management	2+0
ABM-532	Agri-supply Chain Management	2+0
ABM-535	Management of Floriculture and Landscaping	2+0
ABM-551	Vegetable Production and Post Harvest Management	2+0
ABM-552	Organic Food Production Technology and Management	2+0
ABM-518	Food Technology and Processing Management	2+0
<b>Sub Group 2.3( LIVESTOCK PRODUCTS)</b>		
ABM-523	Technology Management for livestock products	2+0
ABM-534	Poultry and Hatchery Management	2+0
ABM-531	Feed Business Management	2+0
ABM-532	Agri-supply chain management	2+0
ABM-533	Management of Veterinary Hospitals	2+0

ABM-553	Dairy Products Management	2+0
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#### Fourth Semester

Course No.	Name of Course	Credit
ABM-599	Management Traineeship Project	10
	<b>TOTAL</b>	<b>10 credits</b>

#### Pre requisite Courses:

Students who have completed their graduation in subjects other than Agriculture and allied sciences are required to compulsorily study Any TWO Pre requisite courses out of the Four courses mentioned below in the first year of study.

Course number	Title of the course	Credit
FRT 1.1	Fundamentals of Horticulture	2+1
AGRON 1.1	Introductory Agriculture and Principles of Agronomy	2+1
VAE-311	Principles and Techniques of Veterinary and Animal Husbandry Extension	2+1
AGRENG 1.1	Fundamentals of Agricultural Engineering	2+1

#### Summary of credit distribution

Particulars	Credit
Core courses	30
Seminar	1
Basic Supporting Courses	6
Project	10
Elective courses	16
Non-credit course	4*
Pre requisite Courses( Only for students of non agricultural background)	6**
<b>Total</b>	<b>63+4*+6**</b>

#### FIRST YEAR ----SEMESTER-I

<b>ABM-501</b>	<b><i>Principles of Management and Organization Behaviour</i></b>	<b><i>Credit 3+0</i></b>
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#### Objective

To acquaint the learner with meaning and concepts of management and organizational behavior. Focus will be on understanding the concepts, processes, significance, and role of management and organizational behaviour.

#### Contents

- UNIT I  
Nature, Scope and Significance of Management, Evolution of Management Thought, Approaches to Management, Functions of a Manager, Planning -Types, Steps, Course Objective, Process, Strategies, Policies, MBO, Strategic Planning Process, SWOT analysis, Organizing – Structure & Process, Line Staff, Authority & responsibility.
- UNIT II  
Staffing – Selection process, Directing – Training, Communication & motivation, Controlling- Significance, Process, Techniques, Standards & Benchmarks, Management Audit.
- UNIT III

Nature, Scope and Significance of Organizational Behavior; Evolution and Historical Background of Organizational Behavior; Models of Organizational Behaviour Foundations of individual behaviour, Diversity, Micro Organizational behavior - Personality, self-concept, self-esteem and Self-Efficacy; Attitudes, Perception, Power – types & structures.

- UNIT IV  
Motivation- Types of motivation. Theories of motivation, Applications of motivation. Transactional analysis-Johari window-self-fulfilling prophecy, Interpersonal relations- understanding, determinants, and developing; leadership styles and influence process; leadership theories; types of leaders, and effective leader; group dynamics-, types of groups, group formation, Group decision making, Team Building.
- UNIT V  
Organizational culture or climate-concept, dimensions, ethos, determinants;organizational conflicts-concepts, sources, implications, and management;organizational changes - types, resistances to change, role of change agents.

**Suggested Readings**

- Fred Luthans 1998. *Organizational Behavior*. Tata McGraw Hill.
- Harold Koontz & Keing Weighhrich. *Essentials of Management*. McGraw Hill.
- John W Newstrom & Keith Davis. 1997. *Human Behaviour at Work*. Tata McGraw.
- Robert C Appleby. 1997. *Modern Business Administration*. Macmillan India.
- Stephen P Robbins 2007. *Organizational Behaviour*. Prentice Hall.
- Stoner James AF. 2005. *Management*. Pearson Edu.

<b>ABM-502</b>	<b>Agribusiness Environment and Policy</b>	<b>Credit 2+0</b>
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**Objective**

To expose learners to the environment in which the agri-business is conducted. Focus will be on understanding micro and macro environmental forces and their impact on agri-business.

**Contents**

- UNIT I  
Role of agriculture in Indian economy; problems and policy changes relating to farm supplies, farm production, agro processing, agricultural marketing, agricultural finance etc. in the country.
- UNIT II  
Structure of Agriculture - Linkages among sub-sectors of the Agribusiness sector; economic reforms and Indian agriculture; impact of liberalization, privatization and globalization on Agri business sector.
- UNIT III  
Emerging trends in production, processing, marketing and exports; policy controls and regulations relating to the industrial sector with specific reference to agro-industries.
- UNIT IV  
Agribusiness policies- concept and formulation; and new dimensions in Agri business environment and policy.
- UNIT V  
Agricultural price and marketing policies; public distribution system and other policies.

**Suggested Readings**

- Adhikary M. 1986. *Economic Environment of Business*. S. Chand & Sons.
- Aswathappa K. 1997. *Essentials of Business Environment*. Himalaya Publ.
- Francis Cherunilam 2003. *Business Environment*. Himalaya Publ.

<b>ABM-503</b>	<b>Managerial Economics</b>	<b>Credit 3+0</b>
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**Objective**

To familiarize the students with the fundamental economic concepts and principles in the context of managerial decision making.

**Contents**

- UNIT I  
Scope of managerial economics, objective of the firm and basic economic principles; mathematical concepts used in managerial economics.
- UNIT II  
Demand analysis - meaning, types and determinants of demand; demand function; demand elasticity; demand forecasting-need and techniques.
- UNIT III  
Production, cost and supply analysis- production function, least-cost input combination, factor productivities and returns to scale, cost concepts, cost-output relationship, short and long-run supply functions.
- UNIT IV  
Pricing-determinants of price - pricing under different market structures, pricing of joint products, pricing methods in practice, government policies and pricing
- UNIT V  
Market structure -Concepts of competition and Monopoly ,Pricing Strategies and Tactics.; Long term planning decisions Risk and Decision making, Capital Budgeting ,Case studies.

**Suggested Readings**

- Baumol WJ. 1980. *Economic Theory and Operations Analysis*. Prentice Hall of India.
- Craig PH & Chris LW. 1996. *Managerial Economics*. Prentice Hall of India.
- Dernberg TF. et. al. 1986. *Macro Economics: Concepts, Theories and Policies*. McGraw Hill.
- Dwivedi DN. 2002. *Managerial Economics*. Vikash Publ.
- Gupta GS. 1997. *Managerial Economics*. Tata McGraw Hill.
- Koutsoyiannis A. 1989. *Modern Micro Economics*. Mac Millan Press.

<b>ABM-504</b>	<b>Managerial Accounting and Control</b>	<b>Credit 1+1</b>
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**Objective**

The objective of this course is to expose the learner to the concept and methods of financial and management accounting. Focus will be on understanding techniques, uses and applications of financial and management accounting.

**Contents**

- UNIT I  
Financial Accounting- Meaning, Need, Concepts and Conventions; Branches of Accounting, Internal and External Users of Accounting, Advantages and Limitations of Financial Accounting, Accounting Standards.
- UNIT II  
The Double Entry System- Its Meaning and Scope, The Journal, Cash Book, Ledger, Trial Balance, Trading Account, Profit and Loss Account, Balance Sheet, Entries and Adjustments of different heads in different Books and Accounts. Introduction of Company Accounts.
- UNIT III

Managing Accounting-Meaning, Functions, Scope, Utility, Limitations and Tools of Management Accounting, Analysis of Financial Statements-Ratios, Comparative and Common Size Statements, Cash Flow and Funds Flow Analysis, Management Audit and Financial.

- UNIT IV  
Cost Accounting – Nature, Course Objective, Significance of Cost Accounting; Classification of Cost, Costing for Material, Labour, and Overheads; Marginal Costing and cost volume profit Analysis- Its Significance, Uses and Limitations; Standard Costing – Its Meaning, Uses and Limitations; Determination of Standard Cost, Variance Analysis- Material, Labour and Overhead.
- UNIT V  
Responsibility Accounting- Its Meaning and Significance, Cost, Profit and Investment Centres, Accounting for Price Level Changes- Concepts, CPP and CCA Methods. Budget and Budgetary Control- Its Meaning, Uses and Limitations, Budgeting and Profit Planning, Different Types of Budgets and their Preparations, Sales Budget, Purchase Budget, Production Budget, Cash Budget, Flexible Budget, Master Budget, Zero Based Budgeting.

**Suggested Readings**

- Horngren. 2008. *Introduction to Financial Accounting*. 8th Ed. Pearson Edu.
- Khan MY & Jain PK. 2004. *Management Accounting*. Tata McGraw Hill.
- Maheshwari SN & Maheshwari SK. 2003. *Financial Accounting*. 3rd Ed. Vikas Publ. House.

<b>ABM-505</b>	<b>Communication for Management and Business</b>	<b>Credit 1+1</b>
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**Objective**

The course aims to make students proficient in written as well oral communication. The focus will be on business related communication.

**Contents**

- UNIT I  
Introduction to communication, Communication process, Barriers to Communication, Effective Communication, types of communication in organisations viz. Downward, Upward, Horizontal, Static Vs dynamic.
- UNIT II  
Non-Verbal Communication, Communication through clothes/ colours / space/ symbol, Body language and etiquettes, Interpersonal Communication, Self-concept and communication, Assertive Communication.
- UNIT III  
Types of business writing viz, News letters, Reports, Folders, Fact Sheets, Press release; Readership and writing style - human aspects of writing.
- UNIT IV  
Meetings - Planning for meeting, tips for chairing, opening, progress & ending, Behavior of ordinary members, the character of business meeting, Energies for meetings, Group discussions, brain storming sessions and presentations.
- UNIT V  
Handling personal communication - Letters, dictation, reading, problemsolving, listening skills, self-talk, self - reflection, steps to personal creativity, public speaking.

**Suggested Readings**

- Bovee. 2008. *Business Communication Today*. 7th Ed. Pearson Edu.
- Brown L. 2006. *Communication Facts and Ideas in Business*. Prentice Hall.
- Lesikar. 2004. *Basic Business Communication*. McGraw Hill.

<b>ABM-507</b>	<b>Marketing Management</b>	<b>Credit 3+0</b>
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**Objective**

The objective of this course is to develop an understanding of the field of marketing. The focus will be on imparting knowledge of the basic concepts, tools, and functions of marketing.

**Contents**

- UNIT I  
The Concept of Marketing Management; Marketing Environment; Marketing Mix, Strategic Marketing, Market Segmentation, Targeting, and Positioning; Buyer Behavior, Marketing Information System, Marketing Organization and Control
- UNIT II  
Marketing potential and forecasting, Classification of Products; Product Life Cycle; New Product Development; Product Line and Product Mix; Branding, Packaging and labeling.
- UNIT III  
Factors affecting prices; Pricing Policies and Strategies; Pricing Methods.
- UNIT IV  
Types of Distribution Channels; Functions of Channel Members; Channel Management Decisions.
- UNIT V  
Promotion Mix; Introduction to Advertising, Personal Selling, Sales Promotion, Publicity and Public Relations. and Direct marketing, managing integrated marketing promotion, Customer Relationship Management.

**Suggested Readings**

- Brassington 1997. *Marketing Management*. Pitman Publ. House.
- Kotler P. 2002. *Marketing Management – Analysis, Planning, Implementation and Control*. Pearson Edu.
- McCarthy 2003. *Marketing Management*. Tata McGraw-Hill.
- Saxena R. 2002. *Marketing Management*. Mc Graw Hill.
- Stanton WJ, Etzel MJ & Walker BJ. 1996. *Fundamentals of Marketing*. McGraw-Hill.

<b>ABM-513</b>	<b>Computers for Managers</b>	<b>Credit 1+1</b>
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**Objective**

The course objective is to acquaint the students with the knowledge and use of computers and simple applications of computers in managerial decisions. Effort will also be made to provide them an orientation about the increasing role of computers in corporate/business world.

**Contents**

- UNIT I  
Concept of Computers- Brief History of Computers, Generation and Its Evolution, Characteristics of Computers, Hardware and Software, introduction to computer languages, Main Areas of Computers and their Applications; Types of Computers – Analog, Digital, Hybrid, General Purpose and Special Purpose Computers, Micro Computers, Mini-Computers, Main-frame Computers, and Super Computers.
- UNIT II  
Input-Output Devices, Storage Units ( Disks, CD-ROM, DVD-ROM, Blue Ray Disk and tapes), Memory Types ( Cache, RAM, ROM), Memory Units, Generation and types of Microprocessor.

- UNIT III  
Data and Information – Data Definition, Data Processing Systems, Data Type Numeric, Alphabetic, Audio, Graphic, and Video and Their Presentation; Data Processing- Introduction to Data Processing, Computer as a Tool For Data Processing, Data Processing Cycle, Data Processing Techniques, Data Analysis, Data Inputs and Outputs, Data Processing Management, , Data Security.
- UNIT IV  
Introduction to Operating Systems, MS Windows, and UNIX, MS Office (MS Word, MS Power Point, MS Excel, MS-Access and use of various management software's Like SPSS.
- UNIT IV  
Introduction to LAN, WAN, MAN, internet and search engines; Introduction to agri-portals like agriwatch.com, agmarknet.nic.in, echaupal.com

### Suggested Readings

- Lucas. 2004. *Information Technology for Management*. McGraw Hill.
- Norton P. 1998. *Introduction to Computers*. 2nd Ed. Tata McGraw Hill.
- Rajaraman V. 2006. *Introduction to Information Technology*. Prentice Hall of India.

<b>ABM-515</b>	<b>Operations Research</b>	<b>Credit 2+0</b>
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### Objective

The objective of this course is to acquaint the learner with the applications of some important Operations Research techniques. Focus will be on understanding the use of these techniques in solving business problems.

### Contents

- UNIT I  
Linear Programming: Objective, Assumptions, Formulation of Linear Programming Problem, Graphic Method, Simplex method, Transportation and Assignment Problems.
- UNIT II  
Inventory control Models: Costs Involved in Inventory Management, Types of Inventory, Economic Order Quantity (EOQ) Model, Continuous Review (Q) System, Periodic Review (P) System, Hybrid System, Simulation.
- UNIT III  
Waiting Line Models: Waiting Line Problem, Characteristics of a Waiting-Line System, Single- Channel Model, Multiple-Channel Model, Constant-Service Time Model, Finite Population Model, Sequencing and Replacement models.
- UNIT IV  
Decision making under Risk and uncertainties, Decision problem, Maximax Criterion, Maximin criterion, Minimax Regret Criterion, Laplace Criterion, Pay off Tables, Decision Trees, Expected Value of perfect Information.
- UNIT V  
Game Theory - Two -Person Zero-Sum Game, Simulation, Network analysis – PERT & CPM.

### Suggested Readings

- Cook TM & Russell RA. 1989. *Introduction to Management Science*. Prentice Hall.
- Taha HA. 2005. *Operations Research - An Introduction*. Prentice Hall.
- Vohra ND. 2006. *Quantitative Techniques in Management*. McGraw Hill.
- Wagner HM. 2005. *Principles of Operation Research*. Prentice Hall.



**FIRST YEAR ---- Semester -II**

<b>ABM-506</b>	<b>Business law and Ethics</b>	<b>Credit 2+0</b>
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**Objective**

The objective of this course is to expose the learner to various ethical issues and laws affecting business. Focus will be on understanding provisions of various business laws and also ethical practices to conduct the business properly.

**Contents**

- UNIT I  
Introduction to Indian legal system, The Indian Contract Act-1872:Contract- meaning, nature, significance, types of contract, essentials of a valid contract, offer and acceptance, capacity to contract, free consent, performance of contract.
- UNIT II  
Companies Act-1956: incorporation, commencement of business, types of companies, management, winding of companies, Negotiable Instruments Act.
- UNIT III  
Essential Commodities Act, APMC Act, Consumer Protection Act, RTI Act, MRTP Act- major provisions and implications.
- UNIT IV  
Factory Act, Labour laws, Industrial dispute Act.
- UNIT V  
Nature and importance of ethics and moral standards; corporations and social responsibilities, scope and purpose of business ethics; Ethics in business functional areas; industrial espionage; solving ethical problems; governance mechanism.

**Suggested Readings**

- Gulshan SS & Kapoor GK. 2003. Business Law including Company Law. 10th Ed. New Age Publ.
- Kapoor ND. 2005. Business Law. S. Chand & Sons.
- Tulsain PC. 2006 Business Law. Tata McGraw Hill.
- Tuteja SK. 2005. Business Law for Managers. S. Chand & Sons.

<b>ABM-508</b>	<b>Human Resource Management</b>	<b>Credit 2+0</b>
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**Objective**

The objective of this course is to expose the learner to the field of human resource management. The focus will be on human resource practices and their utility for managers.

**Contents**

- UNIT I  
Introduction to Human Resources Management; Human Resource Planning- Nature and Significance, Job Analysis, Job Description, job Specification, Job enlargement, Job enrichment, Job rotation, Job evaluation.
- UNIT II  
Recruitment and Selection Process, Induction, Training and Human Resource Development-Nature, Significance, Process and Techniques, Internal mobility including Transfers, Promotions, employee separation.
- UNIT III  
Performance Appraisal – Significance and methods, Compensation management, Wage and Salary Administration - Course Objective; Wage Fixation; Fringe Benefits, Incentive Payment, bonus, and Profit Sharing.

- UNIT IV  
Industrial Relations-Role and Status of Trade Unions; Collective Bargaining; Worker's Participation in Management, Career planning and employee retention.
- UNIT V  
Quality of work life, employee welfare measure, Disputes and grievance Handling Procedures; Arbitration and Adjudication; Health and Safety of Human Resources; Human Resources accounting, Human Resources outsourcing.

#### **Suggested Readings**

- Ashwathapa K. 1997. *Human Resource Management*. Tata McGraw.
- Flippo EB. 1984. *Personnel, Management*. McGraw-Hill.
- Garry D. 2001. *Human Resource Management*. 7th Ed. Prentice-Hall of India.
- Mamoria CB. 1996. *Personnel Management*. Himalaya Publ. House.
- Subba Rao P. 2004. *Essentials of Human Resource Management and Industrial Relations*. Himalaya Publ. House.

<b>ABM-509</b>	<b>Financial Management</b>	<b>Credit 2+0</b>
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#### **Objective**

The course aims to make students proficient in concepts and techniques of financial management. Focus will be on developing understanding of the application of Financial and investment decisions.

#### **Contents**

- UNIT I  
Introduction to Financial Management, Its meaning and functions, Interface of financial management with other functional areas of a business. Financial Statements and Analysis - Proforma Balance Sheet and Income Statements, ratio, time series, common size and Du-Pont analysis.
- UNIT II  
Capital Structure, Determinants of size and composition of Capital Structure, Capital Structure Theories; Long term financing and Cost of Capital.
- UNIT III  
Working Capital Management, Determinants of Size and Composition of Working Capital, Cash and receivables management, Working Capital Management Theories, Financing of Working Capital.
- UNIT IV  
Financial planning and Forecasting, Financial planning for mergers & acquisition, Capital Budgeting, Undiscounted and Discounted cash flow methods of Investment Appraisal; Hybrid finance and lease finance.
- UNIT V  
Business Financing System in India, Money and Capital Markets, Regional and All - India Financial Institutions; venture capital financing and its stages, micro finance and International financial management.

#### **Suggested Readings**

- Chandra P. 2000. *Financial Management*. Tata McGraw Hill.
- Khan MY & Jain PK. 2004. *Financial Management: Text, Problems and Cases*. Tata McGraw Hill.
- Pandey IM. 1997. *Financial Management*. Vikas Publ. Ramachandran N & Kakani RK. 2005. *Financial Accounting for Management*. Tata McGraw Hill.
- Van Horne JC. 1997. *Financial Management and Policy*. Prentice Hall.

<b>ABM-510</b>	<b><i>Production and Operations Management</i></b>	<b><i>Credit 2+0</i></b>
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### **Objective**

The objective of this course is to expose the learner to the field of production and operations management. The focus will be on imparting knowledge of the basic concepts, tools, and functions of production management.

### **Contents**

- UNIT I  
Nature and Scope of Production and Operations Management; Its relationship with Other Systems in the Organization; Factors Affecting System Location, Types of Manufacturing Systems and Layouts, Layout Planning and Analysis.
- UNIT II  
Productivity Variables and Productivity Measurement, Production Planning and Control, Mass Production, Batch Production, Job Order Manufacturing, Product Selection, Product Design and Development, Process Selection, Capacity planning.
- UNIT III  
Scheduling, Maintenance Management Concepts, Work Study, Method Study, Work Measurement, Work Sampling, Work Environment, Industrial Safety,
- UNIT IV  
An Overview of Material Management, Determination of Material Requirement, Purchase Management, Store Management, Logistics management, Material Planning and Inventory management, JIT, Safety Management .
- UNIT V  
Quality Assurance, Accepting Sampling, Statistical Process Control, Total Quality Management, ISO standards and their Importance, Introduction to re-engineering, value engineering.

### **Suggested Readings**

- Adam & Ebert. 2006. *Production and Operations Management: Concepts, Models and Behaviour*. 5th Ed. Prentice Hall of India.
- Buffa ES. 2008. *Modern Production/Operations Management*. Wiley India.
- Stevenson WJ. 2005. *Operations Management*. Tata McGraw Hill

<b>ABM-511</b>	<b><i>Research Methodology in Business Management</i></b>	<b><i>Credit 2+1</i></b>
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### **Objective**

The objective of this course is to develop an understanding of research methodology. The focus will be on process and techniques of research.

### **Contents**

- UNIT I  
Meaning, Course Objective, types, and process of research; research methodology in management- exploratory, descriptive, experimental, diagnostic, Problem formulation, setting of Course Objective, formulation of hypotheses.
- UNIT II  
Scales of measurement - nominal, ordinal, interval, ratio, Likert scale and other scales; Primary and secondary data, sources of data, instruments of data collection, data editing, classification, coding, validation, tabulation, presentation, analysis.
- UNIT III  
Concept of Sampling, Probability and non-probability sampling techniques including Simple Random Sampling, Stratified Sampling, Multi-stage Sampling, Systematic

Sampling, Purposive Sampling, Quota sampling, judgment sampling, and convenience sampling, sample size determination, sampling and non-sampling errors.

- UNIT IV  
Role and uses of quantitative techniques in business decision making, Use of Equations, Use of Determinants and Matrices in business decisions, Frequency Distribution, Measures of Central Tendency, Measures of Variation, Skewness and Kurtosis, Simple, partial, and multiple correlation, rank correlation, simple and multiple regression, Discriminant and dummy variable analysis.
- UNIT V  
Index Numbers, Hypothesis testing, ANOVA, Factor analysis, cluster analysis, conjoint analysis, multi-dimensional analysis etc, Report writing: Types of report, essentials and contents of good report writing.

**Suggested Readings**

- Cooper DR & Schindler PS. 2006. *Marketing Research Concepts and Cases*. Tata McGraw Hill.
- Green PE, Tull DS & Albaum G. 1998. *Research for Marketing Decisions*. Prentice Hall of India.
- Kothari CR. 1989. *Research Methodology*. Wiley Eastern.
- Wilkinson & Bhandarker 1989. *Research Methods in Social Sciences*. Himalaya Publ. House.

<b>ABM-512</b>	<b><i>Project Management and Entrepreneurship Development</i></b>	<b>CREDIT 2+0</b>
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**Objective**

The objective of this course is to expose the learner to the fields of project management and entrepreneurship development. Focus will be to train the students to develop new projects and encouraging them to start their own ventures.

**Contents**

- UNIT I  
Concept, characteristics of projects, types of projects, project identification, and Project's life cycle.
- UNIT II  
Project feasibility- market feasibility, technical feasibility, financial feasibility, and economic feasibility, social cost-benefit analysis, project risk analysis.
- UNIT III  
Network Methods: Meaning, Network Analysis, Requirements for Network Analysis, Critical Path Method (CPM), Programme Evaluation and Review Technique (PERT), Project scheduling and resource allocation.
- UNIT IV  
Financial appraisal/evaluation techniques- discounted/non-discounted cash flows; Net present values, profitability index, Internal rate of returns; Cost benefits ratio; Accounting rate of return, Pay back period, Project implementation; Cost over run, Project control and information system.
- UNIT V  
Entrepreneurship, Significance of entrepreneurship in economic development qualities of entrepreneur, entrepreneurship development programs and role of various institutions in developing entrepreneurship, life cycles of new business, environmental factors affecting success of a new business, reasons for the failure and visible problems for business, Developing effective business plans, Procedural steps in setting up of an industry.

**Suggested Readings**

- Chandra P. 2005. *Project Management*. Tata McGraw Hill.

- Gopal Krishan P & Nagarajan K. 2005. Project Management. New Age.
- Hisrich RD & Peters MP. 2002. Entrepreneurship. Tata McGraw Hill.
- Kaplan JM. 2003. Patterns of Entrepreneurship. John Wiley & Sons.
- Nandan H. 2007. Fundamentals of Entrepreneurship Management. Prentice Hall.
- Ramamoorthy VE. 2005. Textbook of Project Management. MacMillan.

<b>ABM-514</b>	<b>Management Information Systems</b>	<b>CREDIT 2+0</b>
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**Objective**

The objective of this course is to develop an understanding and utility of MIS. The focus will be on imparting knowledge of the basic concepts, development, functions and usage of MIS.

**Contents**

- UNIT I  
The concept of MIS – Definition, importance, Course Objective, prerequisites, advantages and challenges; Information Needs of organization, IS and Decision – Making.
- UNIT II  
Types/Classification of Information System for organizations – Office Automation Systems, Transaction Processing Systems, Decision Support System, Executive Support System, Knowledge Based Expert System.
- UNIT III  
Applications of MIS in the areas of Human Resource Management, Financial Management, Production/Operations Management, Materials Management, Marketing Management.
- UNIT IV  
Development of MIS for an organization – The concept and stages of System Development Life Cycle.
- UNIT V  
Information Technology– concept, applications, advantages and prerequisites, Choice of Information Technology, Social and Legal Dimension of IT.

**Suggested Readings**

- James O'Brien 1999. *Management Information System*. Tata McGraw-Hill.Lauden & Laudan. 2003.
- Management Information System. Pearson Edu.

<b>ABM-536</b>	<b>Quality Management in Agribusiness</b>	<b>CREDIT 2+0</b>
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Basic concepts of quality management, importance of quality and the role of quality assurance in agribusiness. TQM and business strategy. Quality control process and its relevance. Quality grades and standards; overview and relevance, benefits to consumers, producers and food processors, food grades and standards for various food commodities; cereals, fruits and vegetables, meats, poultry products. Statistics relevant to quality control, quality control charts used in the food industry, process control to assure food quality, food processing, food quality standards and world food trade. HACCP, ISO9000, auditing and certification.

<b>ABM-591</b>	<b>Master's Seminar</b>	<b>CREDIT 1+0</b>
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<b>ABM-595</b>	<b>Industrial Attachment*</b>	<b>S/US</b>
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## **SECOND YEAR ----Semester-III**

(Total 16 credits = 4 courses from (Group I) Stream specialization + 4 courses from (Group II) Industrial specialization)

### **Group 1 (Total 8 credits) (Select only One Sub group and 4 courses)**

#### **Sub Group 1.1 (Agribusiness Marketing)**

<b>ABM-516</b>	<b>Rural Marketing</b>	<b>CREDIT 2+0</b>
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#### **Objective**

To objective of this course is to develop understanding regarding issues in rural markets like marketing environment, consumer behaviour, distribution channels, marketing strategies, etc.

#### **Contents**

- UNIT I  
Concept and scope of rural marketing, nature and characteristics of rural markets, potential of rural markets in India, rural communication and distribution.
- UNIT II  
Environmental factors - socio-cultural, economic, demographic, technological and other environmental factors affecting rural marketing.
- UNIT III  
Rural consumer's behaviour - behavior of rural consumers and farmers; buyer characteristics and buying behaviour; Rural v/s urban markets, customer relationship management, rural market research.
- UNIT IV  
Rural marketing strategy - Marketing of consumer durable and non-durable goods and services in the rural markets with special reference to product planning; product mix, pricing Course Objective, pricing policy and pricing strategy, distribution strategy.
- UNIT V  
Promotion and communication strategy - Media planning, planning of distribution channels, and organizing personal selling in rural market in India, innovation in rural marketing.

#### **Suggested Readings**

- Krishnamacharyulu C & Ramakrishan L. 2002. *Rural Marketing*. Pearson Edu.
- Ramaswamy VS & Nanakumari S. 2006. *Marketing Management*. 3rd Ed. MacMillan Publ.
- Singh AK & Pandey S. 2005. *Rural Marketing*. New Age.
- Singh Sukhpal. 2004. *Rural Marketing*. Vikas Publ. House.

<b>ABM-517</b>	<b>Agricultural Marketing Management</b>	<b>CREDIT 2+0</b>
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## Objective

The objective of this course is to give the students an understanding of concept, various policies, strategies and decisions relating to marketing that can be developed by agribusiness firms.

## Contents

- UNIT I  
Meaning and scope, agricultural marketing and economic development; Agricultural market structure – meaning, components and dynamics of market structure; marketing strategy – meaning & significance, formulation of marketing strategy; agribusiness marketing environment, design of marketing mix, market segmentation and targeting, determinants of consumer's behaviour.
- UNIT II  
Product management - product management process and decisions, new product development – significance and classification of new product, stages and estimation of demand of new product; product life cycle.
- UNIT III  
Pricing policies and practice for agribusiness - determinants of price, objectives of pricing policies and pricing methods.
- UNIT IV  
Promotional management - advertising planning and execution; sales promotion; grading and standardization.
- UNIT V  
Distribution management - storage and warehousing and transportation management for agricultural products; marketing agencies/intermediaries – roles and functions; distribution channels involved in agribusiness.

## Suggested Readings

- Acharya SS & Agarwal NL. 2004. *Agricultural Marketing in India*. 4th Ed. Oxford & IBH.
- Kohls RL & Uhj JN. 2005. *Marketing of Agricultural Products*. 9th Ed. Prentice Hall.
- Kotler P. 2002. *Marketing Management – Analysis, Planning, Implementation and Control*. Pearson Edu.
- Krishnamacharyulu C & Ramakrishan L. 2002. *Rural Marketing*. Pearson Edu.
- Ramaswamy VS & Nanakumari S. 2002. *Marketing Management*. 2nd Ed. Mac Millan India

<b>ABM-526</b>	<b><i>International Trade and Sustainability governance</i></b>	<b>CREDIT 2+0</b>
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## Objective

To impart knowledge to the students of international trade in agriculture and various provisions under WTO in the new trade regime.

## Contents

- UNIT I  
International trade – basic concepts, WTO and its implications for Indian economy in general and agriculture sector in particular.
- UNIT II  
TRIPS, TRIMS quotas, anti dumping duties, quantitative and qualitative restrictions, tariff and non-tariff measures, trade liberalization, subsidies, green and red boxes, issues for negotiations in future in WTO; CDMs and carbon trade.
- UNIT III

Importance of foreign trade for developing economy; absolute and comparative advantage, foreign trade of India.

- UNIT IV  
Composition of India's foreign trade policy; India's balance of payments; inter regional Vs international trade; tariffs and trade control; exchange rate; the foreign trade multiplier.
- UNIT V  
Foreign demand, supply side analysis, opportunity cost, trade and factor prices, implications for developing countries, market entry methods, export procedures & documentations.

### Suggestive Readings

- Chadha GK. 2003. *WTO and Indian Economy*. Deep & Deep.
- *Economic Survey of India*. Ministry of Finance, Govt. of India. (various issues)
- HAU 2003. *Refresher Course on Technological Interventions to Face WTO Challenges*. AAREM & HRD CCS HAU Hisar.
- *Indian Journal of Agricultural Economics*  
Vasisht AK & Singh Alka. 2003. *WTO and New International Trade Regime- Implication for Indian Agriculture*. Advance Publ. Concept.

<b>ABM-527</b>	<b>Management of Agribusiness Cooperatives</b>	<b>CREDIT 2+0</b>
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### Objective

To provide the students an understanding about the agribusiness cooperative organizations and their management.

### Contents

- UNIT I  
Cooperative administration- a global perspective, ecology of cooperative administration, cooperative sector and economic development.
- UNIT II  
Cooperative management- nature, functions and purpose of cooperatives – procurement, storage, processing, marketing, process of cooperative formation, role of leadership in cooperative management.
- UNIT III  
The state and cooperative movement, effects of cooperative law in management, long range planning for cooperative expansion, policy making.
- UNIT IV  
Human resource management, placement and role of board of directors in cooperative management.
- UNIT V  
Overview of agribusiness cooperative – credit cooperatives, cooperative marketing, dairy cooperative; financing agribusiness cooperative.

### Suggested Readings

- Akmat JS. 1978. *New Dimensions of Cooperative Management*. Himalaya Publ. House.
- Ansari AA. 1990. *Cooperative Management Patterns*. Anmol Publ.
- Sah AK. 1984. *Professional Management for the Cooperatives*. Vikas Publ. House.

<b>ABM-529</b>	<b>Food Retail Management</b>	<b>CREDIT 2+0</b>
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### Objective



The objective of this course is to assist students in understanding the structure and working of food marketing system in India, to examine how the system affects farmers, consumers and middlemen and to illustrate the response of this dynamic marketing system to technological, socio-cultural, political and economic forces over time.

**Contents**

- UNIT I  
Introduction to International Food market, India's Competitive Position in World Food Trade, Foreign Investment in Global Food Industry, Retail management and Food Retailing, The Nature of Change in Retailing, Organized Retailing in India, E-tailing and Understanding food preference of Indian Consumer, Food consumption and Expenditure pattern, Demographic and Psychographic factors affecting Food Pattern of Indian Consumer.
- UNIT II  
Value Chain in Food Retailing, Principal trends in food wholesaling and retailing, food wholesaling, food retailing, the changing nature of food stores, various retailing formats, competition and pricing in food retailing, market implications of new retail developments, value chain and value additions across the chain in food retail, food service marketing.
- UNIT III  
4 P's in Food Retail Management, Brand Management in Retailing, Merchandise pricing, Pricing Strategies used in conventional and nonconventional food retailing, Public distribution system, Promotion mix for food retailing, Management of sales promotion and Publicity, Advertisement Strategies for food retailers.
- UNIT IV  
Managing Retail Operations, Managing Retailers' Finances, Merchandise buying and handling, Merchandise Pricing, Logistics, procurement of Food products and Handling Transportation of Food Products.
- UNIT V  
Retail Sales Management Types of Retail Selling, Salesperson selection, Salesperson training, Evaluation and Monitoring, Customer Relationship Management, Managing Human Resources in retailing, Legal and Ethical issues in Retailing.

**Suggested Readings**

- Berman & Evans. 2008. *Retail Management: A Strategic Approach*. 10th Ed. Prentice Hall of India.
- Cox. 2006. *Retailing: An Introduction*. 5th Ed. Pearson Edu.
- Levy M & Weitz BW. 2004. *Retailing Management*. 5th Ed. McGraw Hill.

<b>ABM-538</b>	<b><i>Sales and Distribution Management</i></b>	<b>CREDIT 2+0</b>
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**Contents**

- UNIT 1: Introduction  
Meaning and objectives of sales management, responsibilities of sales manager; role of sales manager as leader of sale force, sales management and marketing management relationship  
Organization of the Sales Department:  
Objectives; determination of functions; types of sales organizational structures; sales department's relations with other departments
- UNIT 2 : Salesmanship  
Meaning, scope, importance and limitations; prospecting; process of selling; focus on customer satisfaction and building seller customer relationship
- UNIT 3 : Sales Force Management

- Quantitative and qualitative planning of sales force; recruitment and selection; training, motivation, compensation; appraisal of performance and promotion; direction and control of sales force
- UNIT 4: Sales Territories and Quotas  
Establishing territories; assigning territories; reasons for selling and using quotas; types of quotas and quota selling procedures; administering the quota system  
Sales Promotion Techniques:  
Consumer oriented techniques; salesman oriented techniques; dealer oriented techniques, government department oriented techniques
  - UNIT 5: Direct marketing definition scope and importance of direct marketing, direct marketing mode, tele marketing, catalogue marketing, network marketing, data base marketing, changing face of direct marketing.  
Industrial Selling  
Nature and characteristic of industrial goods; procedures in buying industrial goods; role of service in industrial selling.  
Sales Policies and Procedures Terms and conditions of sale; handling complaints.
  - Case studies on above mentioned topics

<b>ABM-539</b>	<b>Consumer Behaviour</b>	<b>CREDIT 2+0</b>
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## **CONTENTS**

### UNIT 1

Introduction to Consumer Behaviour- Consumer Behaviour and Marketing Strategy, Understanding consumers and market segments. Evolution of Consumer Behaviour, Consumer analysis and business strategy. Social and Cultural Environment Economic, Demographic, Cross Cultural and Socio-Cultural Influences, Social Stratification, Reference Groups and Family Influences, Personal influence.

### UNIT 2

Psychological Foundations of Consumer Behaviour - Consumer Motivation, Consumer Perception, Personality and Consumer Behaviour, Learning and Behaviour Modification, Information Processing, Memory Organisation and Function, Attitude Formation and Attitude Change.

### UNIT 3

Communication and Consumer Behaviour - Components of communications process, designing persuasive communication and Diffusion of Innovations.Consumer Decision Processes - High and Low Involvement, Pre-purchase Processes, Purchase, Post Purchase processes, Consumption and evaluation, Brand Loyalty and Repeat Purchase Behaviour.

### UNIT 4

Models of Buyer Behavior, Howard Model, Howard-Sheth Model, EKB Model, Webster and Wind Model and Sheth Industrial Buyer Behaviour Model.Consumerism: The roots of consumerism, consumer safety, consumer information, environmental concerns, consumer privacy, legislative responses to consumerism and marketer responses to consumer issues.

### UNIT 5

Consumer Protection : Consumer Protection Act 1986, Central consumer protection council, state consumer protection councils, consumer disputes redressal agencies, consumer disputes redressal forum, National Consumer Disputes Redressal Commission.

## **Suggested Readings**

- Hawkins, Best, Coney, Consumer Behaviour, 8/e, TMH, New Delhi, 2002.
- Kumar: Conceptual Issues in Consumer Behavior : The Indian Context, Pearson Education, New Delhi, 2003
- Jay D Lindquist and M Joseph Sirgy, Shopper, Buyer and Consumer Behaviour, Second Edition, Bizttantra, New Delhi, 2003.
- David L Loudon and Albert J Della Bitta, Consumer Behaviour, 4/e, TMH, New Delhi, 2002.
- Schiffman, L.G and Kanuk L.LConsumer Behaviour, 8/e, Pearson Education, New Delhi, 2003.
- Roger D. Black Well et al, Consumer Behaviour, 9/e Thomson, New Delhi, 2002
- K.K.Srivastava, Consumer Behaviour, Galgotia Publishing Co.New Delhi,2003.
- Henry Assael, Consumer Behaviour,6/e,Thomson,New Delhi,2001
- Michael R.Solomon, Consumer Behaviour,5/e,PHI,New Delhi,2003

<b>ABM-540</b>	<b>Contract Farming</b>	<b>CREDIT 2+0</b>
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Contract farming-need for contract farming and its definition; contract farming framework, contract farming arrangement-centralized model, nucleus estate model, multipartite model, informal model, intermediary model. Project formulation and management-coordination, crop husbandry, human resource. Advantages of contract farming for farmers and sponsors and the problems faced by them. Contract farming and WTO agreement. Policies for promoting contract farming: agreement for contract farming-parties, duration, produce and quality specification, delivery arrangements pricing, insurance, support services etc. Prospects of contract farming in India in view of interest for commercialization of agriculture. Active organizations in contract farming and their success stories.

### **Sub Group 1.2(Agribusiness Finance)**

<b>ABM-528</b>	<b>Agribusiness Financial Management</b>	<b>CREDIT 2+0</b>
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#### **Objective**

To impart trainings to the students regarding various aspects of financial management for agribusiness.

#### **Contents**

- UNIT I  
Importance, need and scope of financial management; classification and credit need in changing agriculture scenario; finance functions, investment financing; balance sheet, income statement, cash flow statement for agribusiness.
- UNIT II  
Financial planning and control – assessment of financial requirement of a agribusiness unit; leverage – concept of leverage, financial and operating leverage; factor affecting capital structure, features of an optimal capital structure.
- UNIT III  
Working capital management – concept and components of working capital, need for working capital in agribusiness, management of cash and accounts receivables, and inventory for agribusiness.
- UNIT IV  
Capital budgeting - steps and concept of capital budgeting, appraisal criteria – payback period, average rate of return, net present value, benefitcost ratio and internal rate of return.
- UNIT V  
Agri-business financing system in India - functioning of cooperative credit institutions, commercial banks, regional rural banks, NABARD, Agro-Industries Corporation, etc in agribusiness financing.

#### **Suggested Readings**

- Chandra P. 2000. *Financial Management*. Tata McGraw Hill.
- Khan MY & Jain PK. 2004. *Management Accounting*. Tata McGraw Hill.
- Nelson AG & Murrey WG. 1988. *Agricultural Finance*. Kalyani Publ.
- Pandey IM. 1997. *Financial Management*. Vikas Publ. House.

<b>ABM-537</b>	<b>Commodity Futures, Markets and Derivatives</b>	<b>CREDIT 2+0</b>
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#### **Objective**

This course is aimed at providing the basic understanding and the mechanics and value of futures markets for speculators and hedgers who in turn will serve as price risk management activities of agribusiness firms.

## Contents

- UNIT I  
History and Evolution of commodity markets – Terms and concepts: spot, forward and futures Markets – factors influencing spot and future markets. Speculatory mechanism in commodity futures.
- UNIT II  
Transaction and settlement – delivery mechanism - role of different agents trading strategies - potential impact of interest rate, Foreign Exchange, FDI in Commodity Markets.
- UNIT III  
Risk in commodity trading, importance and need for risk management measures - managing market price risk: hedging, speculation, arbitrage, swaps - pricing and their features.
- UNIT IV  
Important global and Indian commodity exchanges - contracts traded – special features - Regulation of Indian commodity exchanges - FMC and its role.
- UNIT V  
Fundamental Vs Technical analysis – construction and interpretation of charts and chart patterns for analyzing the market trend – Market indicators back testing. Introduction to technical analysis software – analyzing trading pattern of different commodity groups.

## Suggested Readings

- Kaufman PJ. 1986. *The Concise Handbook of Futures Markets*. John Wiley & Sons.
- Leuthold RM, Junkus JC & Cordier JE. 1989. *The Theory and Practice of Futures Markets*. Lexington Books.
- Lofton T. 1993. *Getting Started in Futures*. 3rd Ed. John Wiley & Sons, 1993.
- Purcell WD. 1991. *Agricultural Futures and Options: Principles and Strategies*. Macmillan Publ.
- Wasendorf RR & McCafferty 1993. *All about Commodities from the Inside Out*. McGraw-Hill.

<b>ABM-541</b>	<b>Microfinance for Agribusiness</b>	<b>CREDIT 2+0</b>
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Micro-finance: An overview of the fast growing industry; status and trends. Portfolio and delinquency management. Pricing of micro-finance products; applicable interest rates and sustainability, Important aspects and strategic issues for developing a business plan. Project formulation related to a micro enterprise for financial support, its economic feasibility and repayment plan. Need for micro saving services, micro insurance, micro credit and self-help groups. Overview of micro financing agencies in India and role of RBI, NABARD, commercial banks in providing financial support for small scale projects related to agribusiness and rural development. Micro-finance standards, subsidy dependence and sustainability, legal aspects of microfinance. MIS for micro-finance. Contemporary issues and case studies.

<b>ABM- 542</b>	<b>Agricultural Risk Management</b>	<b>CREDIT 2+0</b>
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Concept and meaning of agricultural risk; Variate and non-covariate risk; Risk Management for farmers: Types of risks-price risk, yield risk, climate and weather risk, asset risk, health risk, etc. Impact of climate change and weather aberrations on crop yield and socio-economic status with special reference to arid regions; Strategies for agricultural risk management; Designing, products and programmes for combating risk,

Estimation of losses. Risk avoidance and mitigation; Agricultural insurance, compensation, legislative and regulatory mechanism.

<b>ABM-543</b>	<b>Working Capital Management</b>	<b>CREDIT 2+0</b>
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This course is designed to provide advanced study in the financial-management area through detailed analysis and understanding of issues related to working capital. Meaning and Concept of Working Capital; Importance of Adequate Working Capital; Components of Working capital, Factors affecting working capital, Characteristics of working capital of different businesses, Approaches and methods of estimating working capital, optimum working capital, Management of Working Capital, Working Capital Control; Planning Working Capital; Regulation of Bank Finance for Working Capital in India; Quantitative tools in management of working capital, Inventory management and control, Cash management and control

<b>ABM-521</b>	<b>Farm Business Management</b>	<b>CREDIT 2+0</b>
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**Objective**

To acquaint the students with the basic principles of farm management dealing with the analysis of farm resources having alternatives within the framework of resource restrictions.

**Contents**

- UNIT I  
Nature, scope, characteristics and role of farm business management; farm management decisions; farm management problems.
- UNIT II  
Principles of farm management decisions – principle of variable proportion, cost principle, principle of factor substitution, law of equi-marginal returns, opportunity cost principle, etc.
- UNIT III  
Tools of farm management and farm business analysis - farm planning and budgeting; Farm records and accounts, types and problems in farm records and accounts, net worth statement, farm efficiency measures.
- UNIT IV  
Management of farm resources – Land, Labour, Farm machinery, Farm building, etc.
- UNIT V  
Risk and uncertainty in farming -sources of uncertainty in farming, management strategy to counteract uncertainty and decision making process in farm business management under risks and uncertainty.

**Suggested Readings**

- Heady EO & Jensen H. 1960. *Farm Management Economics*. Prentice Hall.
- Johl SS & Kapoor TR. 1973. *Fundamentals of Farm Business Management*. Kalyani Publ.
- Kahlon AS & Singh K. 1992. *Economics of Farm Management in India*. Allied Publ.
- Panda SC. 2007. *Farm Management & Agricultural Marketing*. Kalyani Publ.

### **Sub Group 1.3( IT in Agribusiness )**

<b>ABM-544</b>	<b>Agricultural Information Systems</b>	<b>CREDIT 1+1</b>
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#### **Objective**

The course aims to educate the students about the use and interrelationship of various information systems like crop production, market information, food processing, and weather forecasting.

#### **Contents**

- UNIT I  
Scope of ICT in indian agriculture; village knowledge centers. Fundamentals of analysis, design, testing, implementation and maintenance for developing agricultural information systems.
- UNIT II  
Different Types of information systems. Overview of database management; data collection, data editing, data manipulating, and data storing. Overview of data analysis tools.
- UNIT III  
Fundamentals of Unified Modeling Language (UML) for constructing models. Identification of actors, use cases, activity diagram, identification of classes and object, relationships, members and their behaviour and scope, inheritance, polymorphism, etc.
- UNIT IV  
Designing the system architecture, domain specific model to enable rapid implementation of new industry-specific applications over different platforms.
- UNIT V  
Agricultural information systems: current situation, challenges and opportunities in India.

<b>ABM-545</b>	<b>Problem solving methodologies</b>	<b>CREDIT 1+1</b>
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#### **Contents**

- UNIT I  
To introduce basic problem solving methodologies for agricultural problems. To learn systematic problem solving skills, to develop good programming skills.
- UNIT II  
Overview of GUI Programming language to help student in developing programs using latest programming language VB.NET or JAVA.
- UNIT III  
Fundamental concepts of programming language like Problem solving, algorithm, flowcharts, variables, control structure, classes and objects, inheritance, polymorphism, thread, exceptional handling etc.
- UNIT IV  
Application development for the betterment of agriculture and to solve the agricultural problems.

<b>ABM-546</b>	<b>Web design</b>	<b>CREDIT 1+1</b>
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**Contents**

- UNIT I  
Principles and fundamentals of computers, networks, and peripherals as tools to understand the application and limitation of computer technology.
- UNIT II  
Introduction to various aspects like downloading, uploading, networking and troubleshooting with regards to Web application development
- UNIT III  
Multimedia content development for websites using latest tools like JSP or ASP.
- UNIT IV  
Web Application development for the betterment of agriculture and to solve the agricultural problems.

<b>ABM-547</b>	<b>Remote Sensing, GIS and GPS</b>	<b>CREDIT 1+1</b>
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**Objective**

To introduce the fundamentals and basic concepts of remote sensing, satellite imaging and geographic information systems and apply them to solve agricultural problems.

**Contents**

Remote Sensing and Image Processing, GPS, GIS Data Modeling, GIS – spatial database management, GIS based DSS, Web GIS, Participatory GIS, Issues and Concerns in Land and Water Management, The GIS Approach, Application of GIS.

<b>ABM-548</b>	<b>Information delivery systems and models for agriculture</b>	<b>CREDIT 1+1</b>
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**Objective**

To introduce methods and techniques related to the lifecycle of information and data from collection, storage, retrieval, analysis, report generation to develop effective systems.

**Contents**

- UNIT I  
Introduction to different techniques for collecting data and information of socio-economic, land & soil, map scanning other GIS data, climate
- UNIT II  
Techniques for storage and retrieval of information and data. Preparation of the SRS document for formulating requirement.
- UNIT III  
Concept of normalization. Designing of relational model to represent the data. Review model and normalized tables against requirements.
- UNIT V  
Understanding of existing tools like SPSS to interpret the results and to generate useful reports.
- UNIT IV  
Publishing information and data and reports on the web, web portals, etc.



<b>ABM-549</b>	<b>Data mining and knowledge management</b>	<b>CREDIT 1+1</b>
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**Contents**

- UNIT I  
Introduction to machine learning and Data Mining concepts and tools.
- UNIT II  
Preparing data; data collection, data cleaning, data enrichment, etc.
- UNIT III  
Machine learning, data warehousing, pattern analysis and classification using methods like association rule, clustering, decision tree, etc.
- UNIT IV  
More methods and knowledge management tools.
- UNIT V  
Applications in agriculture

**Group 2 Industrial Specialization (Total 8 credits)**

**(Select only One sub group and 4 courses)**

**Sub Group 2.1 AGRI INPUTS**

<b>ABM-519</b>	<b>Fertilizer Technology and Management</b>	<b>CREDIT 2+0</b>
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**Contents**

- UNIT I  
Fertilizer development – concept, scope, need, resource availability; import and export avenues for fertilizer; types of fertilizers, grading and chemical constituents, role of fertilizers in agricultural production, production and consumption of fertilizer in India.
- UNIT II  
Raw material needed and principles of manufacturing of nitrogenous, phosphatic and potassic fertilizers, secondary nutrient sources and micronutrient formulations.
- UNIT III  
Production efficiency and capacity utilization; quality control and legal aspects- fertilizer control order.
- UNIT IV  
Testing facilities; constraints in fertilizer use and emerging scenario of fertilizer use; assessment of demand and supply of different fertilizers, fertilizer distribution, fertilizer storage.
- UNIT V  
Field trials and demonstration, fertilizer pricing policy; scope of biofertilizer; environmental pollution due to fertilizer use.

<b>ABM-520</b>	<b>Management of Agrochemical Industry</b>	<b>CREDIT 2+0</b>
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**Objective**

To familiarize the students with the agrochemicals, their structure, classification and development and also how to manage the agro-chemical industries.

**Contents**

- UNIT I  
Agro-chemicals: Definition and classification; Basic knowledge of agrochemicals; role and status of agro-chemical industry in India; Pesticides – Classification and Introduction, knowledge of different pesticides.
- UNIT II

Insecticides – Definition and classification based on (a) Mode of Entry (b) Mode of Action and (c) Chemical Structure with example; Insecticidal formulation; preliminary knowledge of mode of action of insecticides; knowledge of plant protection equipments.

- UNIT III  
Fungicides – Classification and preliminary knowledge of commonly used fungicides; Biomagnifications of pesticides and pesticidal pollution.
- UNIT IV  
Introductory knowledge about development of agro-chemicals; Insecticidal poisoning, symptoms and treatment; Main features of Insecticide Act.
- UNIT V  
Directorate of Plant Protection, Quarantine and Storage – A brief account of its organizational set up and functions; IPM Concept – Bio-pesticides – Plant products.

<b>ABM-522</b>	<b><i>Seed Production Technology Management</i></b>	<b>CREDIT 2+0</b>
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**Contents**

- UNIT I  
Seed Technology – Role of Seed Technology, its Course Objective and goal, Seed Industry in India, National Seed Corporation – Tarai Seed Development Corporation, State Seed Corporations, National Seed Project and State Farms and their role.
- UNIT II  
Development and Management of Seed Programmes – Seed Village Concept, Basic Strategy of Seed Production and Planning and Organization of Seed Programme; Types of Seed Programme – Nucleus seed, Breeders seed, Foundation seed and Certified seed etc.
- UNIT III  
Maintenance of genetic purity – Minimum seed certification standard and Management of breeders & Nucleus seed; Management of seed testing laboratory and research and development.
- UNIT IV  
Management of seed processing plant, seed storage management; seed packaging and handling.
- UNIT V  
Seed Marketing; GM Crop seed, IPR, PBR, Patents and related issues and their impact on developing countries; Statutory intervention in the seed industry; Seed legislation and seed law enforcement, Seed act; Orientation and visit to seed production farms, seed processing Units, NSC, RSSC, RSSCA and seed testing laboratories.

<b>ABM-530</b>	<b><i>Management of Agricultural Input Marketing</i></b>	<b>CREDIT 2+0</b>
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**Objective**

The objective of this course is to give the students an understanding of different marketing concept and marketing system in context of agricultural inputs.

**Contents**

- UNIT I  
Agricultural input marketing – meaning and importance; Management of distribution channels for agricultural input marketing; Agricultural Inputs and their types – farm and non-farm, role of cooperative, public and private sectors in agri- input marketing.
- UNIT II

Seed- Importance of seed input; Types of seeds- hybrid, high yielding and quality seeds; Demand and supply of seeds; Seed marketing channels, pricing, export-import of seeds; Role of NSC and State Seed Corporation.

- UNIT III  
Chemical Fertilizers- Production, export-import, supply of chemical fertilizers, Demand/consumption, Prices and pricing policy; subsidy on fertilizers; marketing system – marketing channels, problems in distribution; Role of IFFCO and KRIBCO in fertilizer marketing.
- UNIT IV  
Plant Protection Chemicals- Production, export/import, consumption, marketing system – marketing channels; Electricity/Diesel Oil- marketing and distribution system; pricing of electricity for agriculture use; subsidy on electricity.
- UNIT V  
Farm Machinery- Production, supply, demand, Marketing and distribution channels of farm machines; Agro-industries Corporation and marketing of farm machines / implements/Equipments.

### Suggested Readings

- Acharya SS & Agarwal NL. 2004. *Agricultural Marketing in India*. 4th Ed. Oxford & IBH.
- Broadway AC & Broadway Arif A. 2003. *A Text Book of Agri-Business Management*. Kalyani.
- Singh AK & Pandey S. 2005. *Rural Marketing*. New Age.
- Singh Sukhpal 2004. *Rural Marketing- Focus on Agricultural Inputs*. Vikas Publ. House.

<b>ABM-532</b>	<b>Agri-supply Chain management</b>	<b>CREDIT 2+0</b>
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### Objective

The course introduces students to the concepts and processes of agricultural supply chain management, framework for structuring supply chain drivers; network designs, demand forecasting, inventory planning, sourcing decisions and IT enablement of supply chain.

### Contents

- UNIT I  
Supply Chain: Changing Business Environment; SCM: Present Need; Conceptual Model of Supply Chain Management; Evolution of SCM; SCM Approach; Traditional Agri. Supply Chain Management Approach; Modern Supply Chain Management Approach; Elements in SCM.
- UNIT II  
Demand Management in Supply Chain: Types of Demand, Demand Planning and Forecasting; Operations Management in Supply Chain, Basic Principles of Manufacturing Management.
- UNIT III  
Procurement Management in Agri. Supply chain: Purchasing Cycle, Types of Purchases, Contract/Corporate Farming, Classification of Purchases Goods or Services, Traditional Inventory Management, Material Requirements Planning, Just in Time (JIT), Vendor Managed Inventory
- UNIT IV  
Logistics Management: History and Evolution of Logistics; Elements of Logistics; Management; Distribution Management, Distribution Strategies; Pool Distribution;

Transportation Management; Fleet Management; Service Innovation; Warehousing; Packaging for Logistics, Third-Party Logistics (TPL/3PL); GPS Technology.

- UNIT V  
Concept of Information Technology: IT Application in SCM; Advanced Planning and Scheduling; SCM in Electronic Business; Role of Knowledge in SCM; Performance Measurement and Controls in Agri. Supply Chain Management- Benchmarking: introduction, concept and forms of Benchmarking.

### Suggested Readings

- Altekar RV. 2006. *Supply Chain Management: Concepts and Cases*. Prentice Hall of India.
- Monczka R, Trent R & Handfield R. 2002. *Purchasing and Supply Chain Management*. Thomson Asia.
- van Weele AJ. 2000. *Purchasing and Supply Chain Management Analysis, Planning and Practice*. Vikas Publ. House

<b>ABM- 550</b>	<b><i>Management of Watershed Development Project and Irrigation equipments</i></b>	<b>CREDIT 2+0</b>
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### Contents

- UNIT I  
Land capability classification; land use concepts; soil and water conservation measures; design methods and standards; water harvesting, watershed gauging and instrumentation; hydrological data generation; data reduction; estimation of water yield; runoff peak flow and soil loss of small watersheds;
- UNIT II  
Surface and ground water resources. Present Irrigation and water requirement and projected demand. Different water resources for irrigation-water and irrigation requirement of various crops under different agro climatic zones.
- UNIT III  
Soil water-plant relationship, irrigation scheduling, conveyance and management of irrigation water. Selection, installation and operation of irrigation pumps-centrifugal, propeller, airjet, turbine and submersible pump. Present status and future demand of irrigation pumps.
- UNIT IV  
Methods of irrigation-check basin, furrow, border and surface irrigation. Pressurized irrigation systems- sprinklers, drip, micro sprinklers and sub surface drip irrigation. Fertigation and application of pesticides through pressurized irrigation system.
- UNIT V  
Sustainable management of water resources through pressurized irrigation systems and its economics.

### **Subgroup 2.2 HORTICULTURE**

<b>ABM-524</b>	<b><i>Fruit Production and Post-Harvest Management</i></b>	<b>CREDIT 2+0</b>
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### Contents

- UNIT I  
World production and horticulture in India; present status of fruit industry in India and emerging scenario.
- UNIT II

Management of horticultural crops – establishing an orchard, basic cultural practices, regulation of flowering, fruiting and thinning, protection against insect-pest, weeds: pre and post-harvest management for quality and shelf life.

- UNIT III  
Post-harvest management in horticulture- procurement management, important factors for marketing, standardization and quality control, packaging.
- UNIT IV  
Post-harvest management in horticulture- development of fruit-based carbonated drinks, development of dehydrated products from some important fruits, storage of pulp in pouches, essential oils from fruit waste, dehydrated fruits. Market structure and export potential of fruits.
- UNIT V  
Problems in marketing of fruits, and government policy; quality standards for domestic and international trade

<b>ABM-532</b>	<b>Agri-supply Chain Management</b>	<b>CREDIT 2+0</b>
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As Mentioned above

<b>ABM-535</b>	<b>Management of Floriculture and Landscaping</b>	<b>CREDIT 2+0</b>
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**Contents**

- UNIT I  
Introduction, importance and scope of floriculture industry; Recent advances in floriculture industry.
- UNIT II  
Evolution of new cultivars; and production technology of ornamental plants; special techniques for forcing of flowers for export.
- UNIT III  
Drying and dehydration of flowers; response of flowers to environmental conditions; importance and scope of landscape gardening.
- UNIT IV  
Style of gardening, Anesthetic and Socio-aesthetic planning of old and newly developed towns and cities; commercial cultivation of flower crops (rose, jasmine gladiolus, tuberose, marigold, aster, carnation, gerbera, cilium chrysanthemum; use of plant regulators in flower production.
- UNIT V  
Extraction, purification and storage of essential oils and perfumes; post harvest changes in cut flowers, storage and packing of cut flowers; determining optimum time of harvesting of flowers for export and home use.

<b>ABM-551</b>	<b>Vegetable Production and Post Harvest Management</b>	<b>CREDIT 2+0</b>
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Vegetable production technology; Bio-technological approaches in vegetable improvement; Water management in vegetable crops; Protected cultivation in Vegetable production management, Vegetable production for export purpose, potential and constraints. Private sector initiative in vegetable production management Micro irrigation in vegetable production. Vegetable production based industries. Hi-tech horticulture-precision farming, greenhouse and polyhouse production strategies for commercial

vegetable production and making a mark in international market. Post harvest management of vegetable- storage, processing, packaging and marketing of vegetable based products.

<b>ABM-552</b>	<b><i>Organic Food Production Technology and Management</i></b>	<b><i>CREDIT 2+0</i></b>
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Impact of hi-tech agriculture on crop production and environment. Alternate agriculture, sustainable agriculture and sustainable livelihood. Organic farming-concept, definition, principles and components. Status of organic farming in India and in other countries. Organic certification system. National programme on organic production in India. Organic livestock and crops. Organic horticulture. Conversion to organic production. Organic farming project development. Marketing of organic produce. Agri entrepreneurship in organic agriculture. Economics, environmental feasibility and sustainability of organic production system. Bio village concept. Organic food industry and trade of organic products.

<b>ABM-518</b>	<b><i>Food Technology and Processing Management</i></b>	<b><i>CREDIT 2+0</i></b>
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### **Objective**

The objective of this course is to acquaint the students with different food processing techniques and their management.

### **Contents**

- UNIT I  
Present status of food industry in India; Organization in food industry; Introduction to operations of food industry; Deteriorative factors and hazards during processing, storage, handling and distribution.
- UNIT II  
Basic principles of food processing and food preservation by manipulation of parameters and factors and application of energy, radiations, chemicals and biotechnological agents; Packaging of foods.
- UNIT III  
Analysis of costs in food organization; Risk management; Laws and regulations related to food industry and food production and marketing; Quality management – quality standards, PFA, ISO, etc.
- UNIT IV  
Case studies on project formulation in various types of food industries –milk and dairy products, cereal milling, oil-seed and pulse milling, sugarcane milling, honey production, baking, confectionery, oil and fat processing, fruits and vegetable storage and handling, processing of fruits and vegetables, egg, poultry, fish and meat handling and processing, etc.

### **Suggested Readings**

- Acharya SS & Aggarwal NL. 2004. *Agricultural Marketing in India*. Oxford & IBH.
- Early R. 1995. *Guide to Quality Management Systems for Food Industries*. Blackie.
- Jelen P. 1985. *Introduction to Food Processing*. Reston Publishing.
- Potly VH & Mulky MJ. 1993. *Food Processing*. Oxford & IBH.

### Sub Group 2.3 LIVESTOCK PRODUCTS

<b>ABM-523</b>	<b>Technology Management for livestock products</b>	<b>CREDIT 2+0</b>
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#### Objective

To impart knowledge about management of livestock products, product development, quality control, preservation and marketing strategies for livestock products.

#### Contents

- UNIT I  
Present status of livestock products industry in India – dairy, meat poultry, skin, hides, wool, etc; Dairy Products- Manufacturing technologies of various dairy products and by-product utilization.
- UNIT II  
Meat and Poultry Products- Manufacturing technologies of meat and meat products, egg and poultry products; production processing and utilization of wool and animal by-products.
- UNIT III  
Plant Management- Production planning and control needs and techniques of production control, packaging, preservation and storage system for livestock products; transportation system for domestic markets and international markets.
- UNIT IV  
Quality control measures during storage and transit; extent of losses during storage and transport, management measures to minimize the loss.
- UNIT V  
Marketing and distribution of animal products; quality standard for various products; environmental and legal issues involved.

#### Suggested Readings

- Forrest JC. 1975. *Principles of Meat Science*. Freeman Publ.
- Gracey 1999. *Thorntons Meat Hygiene*. WB Saunders.
- Mountney GJ. *Poultry Products Technology*. 2nd Ed. AVI Publ.
- Ockerman & Hansen. 2002. *Animal Byproducts Processing and Utilization*. CRC Publ.
- Pearson AM & Gillett TA. 1996. *Processed Meat*. 3rd Ed. Chapman & Hall.
- Robertson GL. 1993. *Food Packaging Principles and Practices*. Marcel Dekker.
- Stadelman W & Cotterill OJ. 2002. *Eggs Science and Technology*. 4th Ed. CBS.
- Sukumar De 1980. *Outlines of Dairy Technology*. Oxford Univ. Press.
- Walstra et al. 2006. *Dairy Science and Technology*. 2nd Ed. Taylor & Francis.
- Yadav 1993. *Comprehensive Dairy Microbiology*. Metropolitan Publ.

<b>ABM-534</b>	<b>Poultry and Hatchery Management</b>	<b>CREDIT 2+0</b>
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#### Contents

- UNIT I  
Poultry and hatchery industry; role of management in poultry industry.
- UNIT II  
Planning and establishing a poultry and hatchery unit- location, size and construction; farm and hatchery equipments and physical facilities; organizing and managing a poultry farm and hatchery.
- UNIT III

Incubation and hatching; production of quality chicks and eggs; factors affecting hatchability; bio-security and hatchery sanitation; handling of hatching eggs; maintaining chick quality-chick grading, sexing, packing, dispatch , transportation and chick delivery.

- UNIT IV  
Franchise hatcheries; custom hatching; brooding; growing and laying management; crisis management; industrial breeding, feeding, housing and disease management; waste management; Record management; cost accounting and budgetary control.
- UNIT V  
Risks and insurance; personal management- labour relations including wages and salaries, job evaluation and employee appraisal; marketing management-direct sale and sale through franchisees/ agents, advertisement, sale and after sale services, other innovative sales strategies.

<b>ABM-531</b>	<b><i>Feed Business Management</i></b>	<b><i>CREDIT 2+0</i></b>
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**Contents**

- UNIT I  
Present status of feed resources; gap between demand and availability of nutrients; status of feed industry in India and world, constraints in the development of Indian feed industry.
- UNIT II  
Nutrients requirements of livestock and poultry; feed stuff and their origin; scientific storage of feeds and feed ingredients; protection of protein and fat.
- UNIT III  
Processing of feeds, layout and design of feed plants, feed plant management; feed preparation for fish and pet animals, specialty feeds.
- UNIT IV  
Importance and preparation of mineral mixture; feed additives and supplements, feed mixing, principles of mixing and compounding of feeds; improving the feeding value of poor quality roughages.
- UNIT V  
Distribution channels, regulations relating to manufacture and sale of feed stuffs.

<b>ABM-532</b>	<b><i>Agri-supply chain management</i></b>	<b><i>CREDIT 2+0</i></b>
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As Mentioned above

<b>ABM-533</b>	<b><i>Management of Veterinary Hospitals</i></b>	<b><i>CREDIT 2+0</i></b>
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**Objective**

The objective of this course is to acquaint the students about the designing, planning, organizing, and controlling the veterinary hospitals for optimizing the use of space, capital, skill and other resources.

**Contents**

- UNIT I  
Needs, aims and objectives of Veterinary hospitals; the existing and simulated situations under which veterinary hospitals work or are to work.
- UNIT II  
Designing and planning an ideal hospital; optimizing the use of resources - human, space, equipment, drugs, time, capital, etc.; Materials management and problems Normal purchase procedure. Receipt; storage and distribution of materials Cost



reduction & scientific inventory control. Information system and materials management performance. Equipment maintenance, condemnation & disposal.

- UNIT III  
Defining authority, responsibility and accountability of management for optimizing the use of skill, developing and upgrading skills and technology; efficient system of record keeping and accounting; Concept of quality & Total quality management (T.Q.M) Introduction to Veterinary audit, Statistical quality control (S.Q.C.), Quality control Circle (Q.C.C.).
- UNIT IV  
Hospital information system as an aid to efficient controlling and monitoring; need for financial resources - investment and working capital; Records: Types & Methodology, Reports and Reporting system. Contemporary and need-based methods of accounting; General consideration. Need based information system. Applicability in surveillance & monitoring; planning & policy making; cost control.
- UNIT V  
Economic functions and quality control system; Animal health Economics:  
An introduction Need for financial resources (type and need). Investment planning and working capital; Budgeting and cost cutting (cost control).legal aspects in the functioning of the hospital.

<b>ABM-553</b>	<b><i>Dairy Products Management</i></b>	<b><i>CREDIT 2+0</i></b>
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Dairy development and business in India: An overview; Operation Flood, Milk Cooperatives and other initiatives. Milk and dairy products as food; Dairy processes; Marketing and processing of dairy products. Quality standards applicable to production and marketing of dairy products. Feed management; dairy product trade.

**SECOND YEAR ----Semester-IV**

<b>ABM-599</b>	<b><i>Management Traineeship Project</i></b>	<b><i>CREDIT 10</i></b>
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The traineeship is designed to provide the students with an opportunity to work closely with experienced managers in an organizational setting. Every student will select a research project in his / her field of specialization in consultation with the advisor / head of the department and will submit a written project report. The report will be evaluated jointly by the external and internal examiners who will also conduct viva-voce based on the project report.