

Department of Agricultural Economics & Business Management  
List of Course Curriculum (CBCS)  
(Master of Agribusiness Management)

S.No.		CODE	TITLE OF THE COURSE	Cr	Marks			
<b>I Semester</b>					Sessional /Assignment	Mid Semester	End Semester	Max Marks
1	Core	ABM-7007	Problems of Indian Agriculture	4	10	30	60	100
2	Core	ABM-7008	Agricultural & Rural Marketing	4	10	30	60	100
3	Core	ABM-7009	Foundation of Management	3	10	30	60	100
4	Core	ABM-7010	Business Environment	2	10	30	60	100
5	Core	ABM-7011	Managerial Economics-I	4	10	30	60	100
6	Core	ABM-7012	Management Accounting	4	10	30	60	100
<b>II Semester</b>								
7	Core	ABM-8007	Fundamentals of Information Technologies	4	10	30	60	100
8	Core	ABM-8008	Financial Management	4	10	30	60	100
9	Core	ABM-8009	Research in Agri business	2	10	30	60	100
10	Core	ABM-8010	Managerial Economics-II	4	10	30	60	100
11	Core	ABM-8011	Agri Human Resource Development	4	10	30	60	100
12	Core	ABM-8012	Quantitative Techniques	3	10	30	60	100
13	Core	ABM-8013	Marketing Management	2	10	30	60	100
<b>III-Semester</b>								
14	Elective	ABM-9005	Agricultural Policy & Planning	2	10	30	60	100
15	Core	ABM-9006	Global Marketing	2	10	30	60	100
16	Elective	ABM-9007	Agricultural and Micro Finance	4	10	30	60	100
17	Elective	ABM-9008	WTO and Indian Agriculture	2	10	30	60	100
18	Core	ABM-9009	Select Computer Application Packages	4	10	30	60	100
19	Core	ABM-9010	Agricultural Investment Management	2	10	30	60	100
20	Elective	E-I	Consumer Behaviour	4	10	30	60	100
21	Elective	E-I	WTO and Intellectual Property Rights	4	10	30	60	100
22	Core	ABM-ST-1	Summer Training Report	2				100
<b>IV-Semester</b>								
23	Elective	ABM-X006	Agricultural Production Economics	4	10	30	60	100
24	Elective	ABM-X007	Management of Agricultural Cooperatives	4	10	30	60	100
25	Core	ABM-X008	Strategic Management	4	10	30	60	100
26	Elective	ABM-X009	Theory of Economic Development	4	10	30	60	100
27	Core	ABM-X010	O.B. & Communication	4	10	30	60	100
28	Core	ABM-X011	Export Import Management	2	10	30	60	100
29	Elective	E-2	International Trade in Agri Business	4	10	30	60	100
30	Elective	E-2	Agricultural Derivatives & Risk Management	4	10	30	60	100
31	Elective	E-2	Retail Management	4	10	30	60	100
32	Elective	E-2	Agriculture Biotechnology	4	10	30	60	1100
33	Open	E-2	Biostatistics & Bioinformatics	4	10	30	60	100

	Elective							
34	Ability enhancement	ABM-X0P1	Project/ Dissertation Report	4	-	-	-	100
35	Ability enhancement	ABM-X0V1	Viva-Voce	4	-	-	-	100
36	Ability enhancement	ABM-X0V2	Project/ Dissertation Viva	4	-	-	-	100

## **Semester: I**

### **AEM-7007                      Problems of Indian Agriculture**

#### **Course Objective:**

Basic objective of this course is to impart knowledge about current Indian agriculture, policies and changes which have taken place in the post independence period with a special focus upon problems being faced in the light of challenges of food security and sustainable agriculture.

**Credits:                      4**

#### **Unit-I**

Role and importance of Agriculture in Economic Development, Features of Indian Agriculture, Causes of low productivity, Socio-cultural and Institutional constraints, Suggestive measures for improving Agricultural Productivity, Brief review of agricultural development under the Five year plans, Problems of Indian Agriculture

#### **Unit-II**

Land reforms: Meaning, Need and objectives, Measures contemplated to achieve the objectives of land reforms, Abolition of Intermediaries, Tenancy Reforms, Reorganisation of Agriculture, Rural Development Programmes and its impact on Rural Development and Agricultural development, MNREGA, Bharat Nirman

#### **Unit-III**

Agricultural Labour: Definition, causes of growth, conditions and problems, measures for improvement, Farm size and Efficiency, Food Security and Public Distribution System, Food Security System Act 2013

#### **Unit-IV**

Modern Technology Vs Institutional Reforms. New agricultural technology and Farm Mechanisation, Choice of appropriate technology in agriculture. Green Revolution-concept, impact and scope, Agriculture and economic reforms.

#### **Suggested Reading:**

1. Mishra and Puri: Indian Economy, (Latest Edition) Himalaya Publishing House, New Delhi
2. RuddarDutt and K.P.M. Sundaram: Indian Economy, (Latest Edition) S. Chand & Co., New Delhi
3. Ministry of Finance, Govt. of Indian: Economic Survey, various issues
4. Economic and Political Weekly, Selected Articles
6. Ministry of Agriculture, Govt. of India, "Indian Agriculture at a Glance 2012"

**AEM- 7008**

**Agricultural & Rural Marketing**

**Objective:**

To familiarize the students with the system, regulation, problems, issues and the emerging phenomena in the area of agricultural and rural marketing

**Credits: 4**

**Unit-I**

Agricultural Marketing in India: nature, structure and system, Regulated Marketing, Legislation & Machinery, Marketable Surplus; Grading & standardization

**Unit-II**

Agricultural Diversification, Agri-business Marketing, Rural and Agri-business Entrepreneurship, Cooperative Marketing, Support Policies for Agricultural and Rural Development

**Unit-III**

Rural Markets \_ patterns, problems and strategies, Agri Marketing Channels, Infrastructure of Agricultural Marketing \_ Storage, Transport and Financing, Managerial Efficiency in Agricultural Marketing

**Unit-IV**

Commodity Futures Marketing, External Trade, Agricultural Exports, Globalization of Agriculture, Marketing education, research, Statistics and Information Management

**Suggested Readings**

Acharya S.S. Agricultural Marketing in India (Oxford & IBH)

Prasad J. Indian Agricultural Marketing (Mittal)

Ricketts C. & Rawlins O. Introduction to Agribusiness (Delmar)

Kashyap P. & Raut S. Rural Marketing (Dreamtech Press)

Badi R.V. & Badi N.V. Rural Marketing (Himalaya Publishing House)

## **ABM-7009      Foundation of Management**

### **Objectives:**

To familiarize students of diverse background with the generic concepts of Business Management and gradually orient and enable them to appreciate the application of the very concepts in the core functional areas of management

### **Credits: 3**

#### **Unit-1 Fundamentals of Management**

Management; de jure and de facto systems

Systems and process based definitions

Levels, functions, types of managers; specific and generic roles and skills

Schools of Management Thought; Scientific School, HR School

Behavioural, Systems and contemporary schools; Contingency approach

#### **Unit-2 Planning**

Process and steps; objectives setting, identifying business definitions Evaluating business objectives; establishing verifiable and realistic objectives

SWOT analysis; Introduction to ETOP and SAP analysis

Plan alternatives and strategic choice; Tactical planning and related concepts

#### **Unit-3 Decision Making & Organizing**

Concept of decision making; process, models, typologies, select tools and techniques

Concept of organizational structure; functional division; rationale and process

Co-ordination; functional and cross functional; rationale and techniques

Structural variants; prototypes, functional, process, product, customer and geography based structures; SBU's

and product/matrix structures; Issues in centralized vs. decentralized structures.

### **Suggested Readings:**

Stoner, J.A.F. and Freeman, R.E., Management, PHI, New Delhi 2000 (revised edn.) Hampton, David R., Management, TMH, New Delhi, 1997

**AEM- 7010**

**Business Environment**

**Objective:**To sensitize the students with the changing environment of agribusiness with which the managers have always to cope up with special reference to India.

**Credits: 2**

**Unit-I**

Types of Environment, Environmental Analysis and its Techniques, Business & Society: Consumer Rights, Consumerism, Corporate Governance, Business Ethics in India

**Unit-II**

Features of Indian Economy, Trends in Industrial Production in India, India's Industrial Policy, Fiscal and Monetary Policy in India, Economic Reforms in India

**Suggested Readings:**

Francis Cherunilam : Business Environment (HPH)

Raj Agarwal&ParagDiwan : Business Environment (Excel Books)

A C Fernando : Business Environment (Pearson Education)

M Adhikary : Economic Environment of Business (Sultan Chand)

Mishra and Puri : Indian Economy (HPH)

Dutt, Ruddar and K.P.M. Sundaram, : Indian Economy (S Chand)

## **ABM-7011 Managerial Economics- I**

### **Objective:**

This course is intended to provide an overview of managerial economic theories and its applications. It intends to provide fundamental concepts and models in the theory of production and costs and sets out to provide a basic understanding of price and output determination under different types of market structures.

### **Credits 4**

#### **Unit-I**

Demand analysis and elasticity of demand. Theory of consumer's behavior: utility analysis, Indifference curve technique. Revealed preference theory.

#### **Unit-II**

Cost theory and estimation: Cost concepts, determinants of cost, cost-output relationship in the short run and long run, short run vs. long run costs, average cost curves, Overall Cost leadership, Cost and revenue Functions.

#### **Unit-III**

Market conditions. Equilibriums of Firm and Industry. Price-Output determination in Perfect competition, Monopoly, Monopolistic competition and Oligopoly.

#### **Unit-IV**

Theory of production Function, Laws of returns to scale and law of variable proportions. Cobb-Douglas production Function. Theory of marginal productivity. Modern theory of distribution. Rent, wages, interest and profit.

-----

### **Suggested Readings:**

Managerial Economic Principles and worldwide applications: Dominick Solvatore, Ravikesh Srivastava

Managerial Economics; An Economic Foundation for Business Decision: Barry Keating and J. Holton Wilson.

Microeconomic Theories: Whinston Green David M Kreps 1990. A Course in Microeconomic Theory. Princeton University Press.

Dewitt KK. 2002. Modern Economic Theory. Sultan Chand & Co.

Henderson JM & Quandt RE. 2000. Microeconomic Theory: A Mathematical Approach. McGraw-Hill

Koutsoyiannis A. 2003. Modern Microeconomics. The Macmillan Press.

Silberberg E & Suen W. 2001. The Structure of Economics – A Mathematical Analysis. McGraw-Hill.

Varian Hal R. 1999. Intermediate Microeconomics. Affiliated East-West Press.

## **AEM-7012 Management Accounting**

The objective of this course is to familiarize students with financial accounting and equip them with the tools and techniques of management accounting

**Credits: 4**

### **Unit-I**

Meaning Scope and need of accounting in Business decisions  
Forms of accounting and users of accounting information  
Framework of accounting conventions, principles, concepts and procedures etc.  
Accounting equations and types of accounts, rules of recording business transactions

### **Unit II**

Preparation of journal and classification of journal etc. ledger  
Preparation of Trial Balance and Income Statement  
Preparation of Balance sheet and adjustment entries  
Practice of Farm Accounting in India

### **Unit III**

Ratio analysis its meaning and uses  
Study of liquidity ratios and leverage ratios  
Study of profitability ratios and activity ratios  
Meaning, uses and preparation of fund flow statements  
Meaning uses and preparation of cash flow statement

### **Unit IV**

Costing as an aid to management presentation of various costs in proper format. Cost Sheet  
Marginal costing and absorption costing  
Cost- Volume profit analysis  
Break Even analysis  
Budgeting: Objectives and Functions of a budget. Essentials of Budgeting Budgeting and Budgeting Control

### **Suggested Reading:**

1. Accounting for Management MN Arora, Himalaya Publishing House
2. Williams, Haka ,Bettner, Financial and Managerial Accounting Tata McGrawhill
3. Accounting for Management., S.N. Maheshwari, Sultanchand& Sons
4. Advance Management Accounting Text and Cases, JawaharLal, S. Chand
5. Accounting for Management, S.K. Bhattacharyya, JohDeardenVikasPulishing House Pvt. Ltd.
6. Management Accounting - M.Y. Khan, P.K. Jain, Tata McGraw Hill
7. Cost Accounting (A Managerial Emphasis) Horngren, Dater, Foster Prentice Hall of India



## **Semester:II**

### **AEM-8007 Fundamental of Information Technologies**

#### **Objectives:**

The student should be able to Gain an understanding of the hardware structures that make computers possible. Know the different devices and components of a computer system, know how these components interact and work together. Understand computer organization concepts and how they apply to systems development. Use e-mail and search the web using browsers.

**Credits: 4**

#### **Unit-I**

Basics of Computer: The evolution of Information Age, Introduction to computer, Hardware, computing, Storing & Computing. Input, Output processing, Storage devices. Peripherals. Types of Computer and their use. Networking principles & devices. Basic Computer Organization: Input unit Output unit, storage unit. Arithmetic logic unit, Control unit, Central processing unit. The system concept.

#### **Unit-II**

Basics of Software: Computer software: What is software, relationship between Hardware & software, types of software, acquiring software, Firmware. Primary Storage: Storage location and Addresses why more bits, Fixed and variable word length storage, RAM, ROM, PROM and EPROM, cache memory, Registers memory, Address Register (mar) memory buffer Register (mbr), program control Register (per). Accumulator Register, Intervention Register (IR), Input Output Register (I/Or), Function of various Register.

#### **Unit-III**

Operating System: Operating System Components, Main Functions, Types of Operating System: Single Program OS, Batch Operating System, Multi-Programming Environment, Timesharing, Real Time Operating System

#### **Unit-IV**

Networks: Communication and computer networks, classification components, technologies advantages. Internet: Introduction to the Internet, How was the Internet born. An overview of Internet application, the world wide web, file transfer protocol, E-mail. The internet as a postman.

#### **Suggested Readings:**

- 1-Introduction to Information Technology. PHI: Rajaraman, V. (2004).
2. Introduction to information technology. Turban, Rainer and Potter .John Wiley and sons.
- 3- Foundation of computing: Sinha, P.K., Priti Sinha BPB Publications.
- 4- Computer Fundamentals. Ram, B. , New Age Publications
- 5-Information to Information Technology: Sunjay Saxena
- 5-Introduction to Computer: Pete Nortons, TaTa McGraw-Hill Edition
- 6-Information and Communication Technology: Abdul Mannan
- 7-Fundamentals of Information Technology: Alexis Leon , Mathews Leon

- 8-Information communication Technology: DebashreeMukharjee
- 9-Fundamentals of Computers: V Rajaraman
- 10-The Internet (A user's guide):K.L. James.
- 11-Introduction To Information Technology:SanjaySaxena
- 12-A First Course in Computer Based in windows XP and Office XP: Sanjay Saxena

## **AEM-8008 FINANCIAL MANAGEMENT**

Objective: To familiarize the student with tools and techniques used in testing financial decisions. The course is divided into four units:

**Credits: 4**

### **Unit-I:**

Financial Management nature, Scope, Evolution and Functions, Objectives of Financial Management Profit Maximization versus Wealth Maximization, Financial Manager: Role and Responsibilities. Basic Valuation Method in Financial Management (Concept of present values). Need to study Financial System, Functions of Financial system and Financial Markets.

### **Unit-II:**

Short Term Financing Decisions: Working Capital Management Components and Determinants of Working Capital. Working Capital Policy and Decisions: Computation of Working Capital Requirements: Management of Cash, Receivables and Inventory, Sources of Working capital Finance.

### **Unit-III:**

Cost of capital and capital Structure: Cost of capital, Concept, definition, basic aspects of specific cost of capital, cost of equity, Retained Earnings, Preference Shares, Debt, Weighted average cost of capital. Determinants of capital Structure, Capital Structure Theories: Net Income Approach. Net Operating Income Approach, Classical Theory, Modigliani Hypothesis. Capital Structure and Leverages, Concept of Leverage (Financial & Operating), Long Term sources of Finance

### **Unit IV:**

Capital Budgeting: Techniques of Project Appraisal and Ranking; Pay Back period, Accounting Rate of Return (ARR). Dividend Decision Concept; Dividend Policy; Overview of Dividend Policy, Factors influencing Dividend Decision; Issue of Bonus Shares, SEBI Guidelines for issue of Bonus Shares, Stock splits (shares) and Buy back of shares, SEBI guidelines for Buyback of shares.

### **Suggested Readings:**

1. Pande I.M, Financial Management, Vikas Publishing House Pvt. Ltd
2. Chandra Prasanna, Financial Management: Theory and Practice, Tata McGrew- Hill, New Delhi.
3. Khan and Jain, Financial Management, Tata McGrew- Hill, New Delhi
4. Van Horn James C, Financial Management and Policy, PHI, New Delhi
5. Btealey Myers, Principles of Corporate Finance, Tata McGrew- Hill, New Delhi

**AEM-8009**

**Research in Agri Business**

**Objective:** To make the students capable of undertaking research activity in a decision making situation

**Credits:** 2

**Unit-I**

Research in Decision Making: Nature, types and Research Process, Research Designs, Data Sources, Cross sectional and Longitudinal Research, Survey, Case-studies, Field Experiments & Test marketing.

**Unit-II**

Measurement, Questionnaire Design, Attitude Scales, Sampling, Field work, Tabulation & Analysis, Report writing. Assignment of Conducting a Mini Research.

**Suggested Reading**

G.B. Beri, Marketing Research (PHI)

Boyd and others, Marketing Research (R. Irwin)

Churchill, Marketing Research (Dryden)

Tull& Hawkins, Marketing Research (PHI)

**Course Objective**

This course aims at making students familiar with the working of economic system with the help of standard macroeconomic theories. Students will be taught how overall level of income, employment, output, prices etc. are determined in the economy with special focus on the role of state, market and economic policies.

**Credits: 4**

**Unit I**

Circular Flow of Economic Activities, National Income: Concept and Measurement, National Income and Economic Welfare

Classical Theory of Income and Employment

Say's Law of Market, Wage-Price Flexibility

Determination of Income & Employment

**Unit-II**

Keynsian Model of Income and Employment: Aggregate Demand, Aggregate Supply and Income Determination,

Consumption Function

Investment Function

Determination of Rate of Interest

**Unit III**

Equilibrium in the Real Sector- IS Curve

Equilibrium – in the Monetary Sector – LM curve

Simultaneous equilibrium of Real and Monetary Sectors

Fiscal Policy Effects on Demand

Monetary Policy Effects on Demand

The interaction of Monetary and Fiscal Policies

**Unit-iV**

IS-LM in an open economy

Mundel Fleming Model

Small open economy under Floating Exchange Rates

Small open economy under Floating Exchange Rates

Interest Rate Differential

Business Cycles, Inflation, Inflation and Interest Rates, Costs of Inflation

**Suggested Readings:**

1. Edward Shapiro: "Macroeconomic Analysis"
2. G. Ackley: "Macroeconomics"
3. Greg Mankiw: "Macroeconomics"
4. Dornbusch, Rudiger and Fischer, Stanley " Macroeconomics" Sixth Edition, McGraw, Hill New Delhi
5. William H. Branson "Macroeconomics: Theory and Policy"

## **ABM-8011 Agri-Human Resource Development**

### **Objectives:**

To induct students into the core concepts and approach of HRD. It also aims at giving a conceptual exposure into the mechanism and processes of designing and implementing HRD sub-systems within a strategic framework

### **Credits: 4**

#### **Unit-1 HRD: an Overview**

HRD defined; comparison with conventional notions of HRM and Personnel management. Objectives and key tasks of HRD. Issues and factors in designing and executing HRD systems.

#### **Unit-2 HRD Systems; part-one**

Job/ Role analysis; KPA's; Role specifications and job standards. Role description, Recruitment and Selection systems.

#### **Unit-3 HRD Systems; part-two**

Designing training strategy, systems and sub-systems. Performance appraisal systems; 360 degree system. Counselling and mentoring approach to HR

#### **Unit-4 HRD Systems; part-three**

Potential appraisal, Career planning and Career development systems. Effective compensation systems; factors that affect compensation structure, job evaluation methods, and 3P system

Job redesign systems; Job enrichment, MBO, Socio technical systems, Dual Career and Flexi-systems.

### **Suggested Readings:**

Monappa, Arun and Saiyadain, Mirza S., Personnel Management, TMH, New Delhi, 1996  
Saiyadain, Mirza S., Human Resource Management, TMH, New Delhi, 2000 (revised edn)  
Rao, T, V., HRD Missionary, TMH, New Delhi, 1990

Pareek, Udai & Rao, T, V., Designing and Managing Human Resource Systems, Oxford IBH, New Delhi, 1995

## **AEM-8012- Quantitative Techniques**

### **Objectives:**

To provide a fundamental exposure to students of diverse background into Descriptive and Inferential Statistics so as to enable them to apply these concepts & tools in quantifying their respective academic constructs and variables

### **Credits: 3**

#### **Unit-1**

Correlation and Regression: Karl Pearson's Correlation- coefficient and Rank Correlation: Regression analysis-Estimation of regression line in a bivariate distribution, Least-square method. Time series and Index Numbers: Time Series analysis-Components of time series. Determination of trend.

#### **Unit-2**

Sampling theory and sampling techniques, probability & non-probability sampling techniques, Kinds of sample. Quota convenience and judgement sampling simple random samples and selected complex Random samples. Tests of hypothesis and types of error.

#### **Unit-3**

Measures of tests of statistic: t test, Z test & F tests. Chi-square ASNOVA & Cluster analysis Select quantitative techniques from operations and Investment management for decision taking

### **Suggested Readings:**

1. Kothari C. R, Research Methodology, New Age International (p) Ltd , New Delhi, 2008 (revised edn)
2. Levine D. M, Stephan, D.F, Krehbiel T.C and Berenson, M.L., Statistics for Managers, 3. PHI Learning Priv. Ltd, New Delhi, 2011

**AEM- 8013**

**Marketing Management**

**Objective:**To make the students aware with marketing philosophy, process, issues and problems

**Credits:** 2

**Unit-I**

Marketing Management: Definition, Philosophies and Process; Marketing Tasks, Market segmentation and Targeting, Product Mix Decision

**Unit-II**

Product Development & Product Life Cycle; Pricing, Distribution and Promotion Decisions; Promotion Mix; Emerging Issues in Marketing Management

**Suggested Reading**

Kotler, P. Marketing Management APIC (PHI)  
Gandhi, J. C. Marketing\_ A Managerial Introduction  
Jha&Singh Marketing Management in Indian Perspective

## **Semester: III**

### **AEM-9005      Agricultural Policy and Planning**

#### **Objective:**

Agricultural policies and planning course is intended to expose the students to macroeconomic concepts and theory, the application of the agricultural economic theory, and implication of the policies.

**Credits:      2**

#### **Unit-I**

Policy meaning Policy under Economic s Development.Historic and Economic Pattern of Initial Policy for Development of Agriculture, Agricultural Developmental Policies. Complimentarily n Early Development Policy, Second Stage in Agricultural Development Policy. Agricultural Compensation Policies. Critical Assessment of Planning for Agricultural development in India under Five Year Plans.

#### **Unit-II**

Policy, unemployment, Govt. approaches to eradication f poverty ad unemployment Agricultural Polices regarding Farm prices and Farm incomes, Credit and Finance in India. Agriculture taxation. Sustainable Agricultural Development: Dimensions and Components, Food Security in India. Child malnourishment.Agricultural Biotechnology and Food security in India.Livestock Revolution and Govt. Policy.

#### **Suggested Readings:**

- 1-Indian Economy: Mishra and Puri
- 2-Agricultural Development policy:Roger,D. Norton
- 3-Liberalizing Food Grain Markets by Ganesh Kumar,Devesh Roy and Ashok Gulati
- 4-Agricultural Food Security:Kumar and Raza
- 5-Poverty and Human Rights:PollyVizard
- 6-Poverty in India,Myth and reality,Definition and Identification,CriticalEvaluation:Ratnabar Gedam
- 7-Poverty and Economic reforms,The social concerns :G.S.Aurora
- 8-Ahuja HL. 2007. Macroeconomics: Theory and Policy. S. Chand & Co.
- 9-Eugene ADiulio 2006.Macroeconomics.4th Ed. Schaums' Outlines.
- 10- Gardner Ackely 1987. Macro Economic: Theory and Policy. Collier Macmillan.
- 11-Dornbusch. 2006. Macroeconomics. McGraw Hill Publication



**AEM- 9006**

**Global Marketing**

**Objective:**To familiarize the students with basic principles, policies and applied issues in global marketing with emphasis on agribusiness

**Credits: 2**

**Unit-I**

International Marketing: terminology, concepts, coverage and scope; Globalization and its dimensions, Methods of Entry, Foreign Market Identification

**Unit-II**

Product Decisions, Price and non-price factors, International Promotion, Trade Fares and Exhibitions, Distribution Channels

**Suggested Readings:**

Keegan- Global Marketing Management (PHI)

Varshney&Bhattacharya- International Marketing management (Sultan)

Vern Terpstra- International Marketing (Dryden)

Onkvisit& Shaw-International Marketing (Prentice Hall of India)

## **AEM-9007 Agricultural and Micro-Finance**

**Objective:** To familiarize students with the Agricultural Financial System, Microfinance System and tools and techniques used for better management decisions

**Credits:** 4

### **Unit-I**

Need and Importance of Agriculture Finance, Essential Features of Agriculture credit system, Agricultural credit Structure in India. Non-institutional financing for Agriculture, Merits and Demerits. Management of Agri-Finance: View point of Borrower and lender. Economic feasibility Tests of Farm credit proposal (Three R's of credit & Four C's of Credit).

### **Unit-II**

Methods and mechanics of Lending to Agriculture, Role and functions of NABARD for Agriculture Finance Role of Commercial Bank and Agricultural Finance, Regional Rural Banks and Rural Finance, Its viability, Problems and challenges

### **Unit-III**

Multi-agency Approach to agricultural Finance, Problems of Over dues of Agricultural loans. Measures to overcome the Problem of over dues.

Public Farm Financing Schemes: Financing of Bio-Gas Plant, Financing of Poultry Development, Financing of Dairy Development, Financing of Customs Services Units, Financing of Minor Irrigation Schemes

### **Unit-IV**

Microfinance: Concept and Revolution, Grameen experiment. Growth and development of Micro-finance in Bangladesh, World without poverty-Views of Muhammad Yunus.

Microfinance and SHGs in India and its importance for socio- economic development of poor families. Microfinance and women empowerment. Role of NABARD in linking SHGs with Banks, Growth and Development.SGSY and SHGs. Role of MFIs (Non-Banking Financial Institutions) in expanding micro-credit facilities for the poorest of poor in the country. These MFIs include SKS microfinance, SHARE, BASIX, etc.

Some case studies on microfinance and Agriculture Finance.

### **Suggested Readings:**

1. S.S.M. Desai: Agriculture & Rural Banking in India, HPH
2. SrivastavaR.M.:Financial Management. Principles and Problems, HPH
3. Pension: Agricultural Finance, Tata Mc Grow Hill
4. Bauman. I Dieslam& EC: Capital and Credit Needs in Changing Agriculture,PHI
5. Rais Ahmed: Micro- Finance and Women Empowerment.Mittal Pub. New Delhi
6. Malcolm Harper: Practical Micro-Finance- A Training Guide for South Asia
7. Muhammad Yunus: Creating a World without Poverty- Social business and the Future of capitalism, BBS Pub. New York
8. Thomas Fisher, M.S. Sriram: Beyond Micro Credit- Putting Development Back into Micro- Finance.
9. K.G. Karmakar, Rural and Self Help Groups Microfinance Needs and concepts in India, SAGA Pub.
10. What is Wran with Microfinance, Edited by Thomas, dictheradnMulcom Harper

## **AEM – 9008 WTO and Indian Agriculture**

### **Objectives:**

To make a comparative analysis of the role played by WTO in overall economic development. To see the trend in agriculture trade and identify the key agricultural export & import items. To examine the domestic support policies, To assess the tariff and non-tariff barriers in developed nations, which is main concern for the developing nations, especially India.

**Credits: 2**

### **Unit-I**

Free Trade and Globalization: Background of GATT and WTO

Important Agreements under WTO

- TRIPS
- TRIMS
- GATS
- SPS & TBT
- Anti - dumping
- Genetically Modified Foods

The Agreement on Agriculture: Experiences with the Implementation Related Issues and Concerns

- Gulati, Ashok (2003), “ India “ in Merlinda D. Ingco (Ed.) Agriculture. Trade and WTO and South Washington D.C., The World Bank. Chapter 5.
- “Effective Participation in Negotiations” Implications for Trade Policy Administration”; Defending Trade Interests”; “Identifying & Exploiting Trade Opportunities”, “Policy Framework for Trade”.
- Textiles and Multi-Fiber Arrangements

Textiles and Multi-Fiber Arrangement to Agreement on Textiles and Clothing (ATC)

Antidumping Measures, Subsidies, Countervailing Duties and Government Procurement

- Michael J. Trebilcock and Robert Hawse. “The Regulation of International Trade” – 2<sup>nd</sup> ed. London: Rutledge, Chapter 8.

### **UNIT-II**

TRIPS AND Indian Agriculture

- OECD (2003), “The Impact of Trade Related Intellectual Property Rights on Trade and Foreign Direct Investment in Developing Countries”.
- Carlos A. Primo Baraga and Cars ten Fink (2001), “Trade Related Intellectual Property Rights: From Marrakech to Seattle”, in “ The World Trade Organisation Millennium Round: Free Trade in the Twenty-first Century” (Eds.) Klaus Gunter Deutsch and Bernhard Spryer, London: Rutledge,

Dispute Settlement Mechanism under the WTO

Notes on Dispute Settlement Mechanism

Time to Stop Dumping on the World’s poor. Developing countries and the WTO negotiations

**Suggested Readings:**

- 1-WTO and development Opportunities: S.B.Verma
- 2-WTO and Developing countries: SurendraBhandari
- 3-Trade liberalization and Indian Agriculture: SeemaBathla
- 4-Indian Economy and the WTO New Challenges and Strategies: VibhaMathur
- 5-WTO, India and emerging areas of Trade challenges and strategies: R Renehan
- 6-Trade liberalization and Poverty in India: VeenaJha, Sarika Gupta, JamesNedumpara,KailasKarthikeyan
- 7- WTO, Globalization and Indian Agriculture: MohdIqbal Ali, and G .Bhaskar
- 8-Economics and the global Environment: CharlsS.Pearson

**AEM-9009                    Select Computer Application Packages****Objective:**

To develop among the students the skills to use computer applications for word processing, data analysis and presentation and database handling.

**3+1 Credits****Unit-I    Word Processing:**

An introduction to different word processing packages, utility, preparation of documents, editing, corrections and printing.

**Unit-II    Spreadsheet:**

Excel and its uses in agriculture and data manipulation.  
Practice sessions on above

**Unit-III    Database Management**

Access and its utility maintenance and manipulation of Databases.Use of Internet and E-mail.  
Practice sessions on above

**Unit- IV    Problems,Exercises and Practicals (on Above topics)****Suggested Readings:**

1.     Peter Norton, Guide to MS Office, (TMH)
2.     Mastering Office professional by Moseley &Boodey (BPB)
3.     Using the World Wide Web by Wall, (PHI)

## **ABM-9010 Agricultural Investment Management Objectives:**

To impart knowledge of investment decision making and familiarize students with the existing and growing financial and investment markets in India in the post globalization era

**Credits: 2**

### **Unit-1 Investment; Meaning and Scope**

Investment; meaning, objectives and principles of investment. Investment media and their relative merits. Portfolio Management; meaning, rationale and analysis

### **Unit-2 Investment Markets in India**

Structure of financial market; treasury bills market, call money market, market for financial guarantees, market for mortgage, forex market, Govt. securities market, industrial securities market- New Issue market and Stock exchange market.

### **Suggested Readings:**

Donald E. Fischer, and Ronald J. Jordan, Security Analysis and Portfolio Management, PHI, New Delhi 1996 (revised edn.)

Bhole, L. M., Financial Institutions & Markets, TMH Education, New Delhi, 2009

**Elective: Consumer Behaviour**

**Objectives:**

To train students in the relevant concepts of consumer behaviour, its processes and key applications in business management.

**Credits: 4**

**Unit**

Meaning and scope of consumer behavior; applications of C.B; Study of consumer demographics, geographics, sociographics and psychographics and its impact on consumer's needs & desires and pre purchase ,purchase and post purchase behavior. Cluster formations: data metrics & analytics. Cohorts Study (Schuman and Scott, 1989).

**Unit II**

Perception theory; process.Factors that affect perception; throughput and outputs. Consumer rationalities and irrationalities; influences on consumer perception. Prospect theory and Decoy effect.Attitudes and their characteristics; models of attitudes; attitude measurement.

**Unit III**

Motivation; key factor and process theories.key applications and measurement. Personality; major theoretical and pragmatic approaches. Applications in C.B. Communication; definition, process, model and elements; T.A. and behavioral communication

**Unit IV**

Black Box Model of C.B (Wiley,1969) ; Buying Decision Process; Problem recognition, Information search, Alternative evaluation , Purchase decision, Post purchase behaviour; Buyer's Response.

**Suggested Readings:**

1. Schiffman L.G and Keslie, L.Kam K. Consumer Behaviour
2. Robbins, Stephen P, Organizational Behaviour, Prentice Hall Inc, NJ, 1979
3. Mowen John consumer behaviour
4. Kahneman, D. and Amos T., Prospect Theory (1979) quoted in 1981 *science* paper "the Framing of Decisions and the Psychology of Choice"
5. J. Huber et al (Decoy Effect) "Adding Asymmetrically Dominated Alternatives: Violations of
- 6.Regularity and the Similarity Hypothesis".*The Journal of Consumer Research*9 (1): 90ff: June 1982

## **Elective WTO And Intellectual Property Rights**

### **Objectives:**

To sensitize the student about the importance of WTO and intellectual property in the global economy.

**Credits: 4**

### **UNIT-I**

**GATT and WTO:** GATT and evolution of world trade organization (WTO) , role of WTO in International Trade , Main Features of WTO , new issues in WTO : Environment , Investment , Competition Policy , Government Procurement , Trade Facilitation , Electronic Commerce , Social Clause , Labor Standards : Implementation And Implication .

### **UNIT-II**

**General Introduction In The Intellectual Property Law:** The Notion Of Intellectual Property , Historical Background , The Main Field Of Intellectual Property , Industries Property Law : Inventions, Industries Creations Characterized By Relative Novelty (Innovation) , Know –How , Industries Circuits (Semiconductors Chip), Plants Varieties , Trademarks , Geographical Indication , Trade Names , Emblems , Other Distinctive Signs; Scientific Discoveries , Neighboring Rights.

### **UNIT-III**

**Intellectual Property: IPR** and Economic Development, Copyright Law (“Right of Authors”), Correlation of Intellectual Property Law with Unfair Competition, Common Intellectual Property Law in the Legal System.

**Trademarks :** The International Convention For The Protection Of New Varieties Of Plants , The Budapest Treaty On The International Recognition Of The Deposit Of Microorganisms , The Madrid Agreement Concerning The International Registration Of Trademarks And The Protocol Relating To The Madrid Agreement The Trademarks Law Treaty.

### **UNIT-IV**

**International Protection Of Intellectual Property :** The World Intellectual Property Organization , The Agreement On Trade – Related Aspects Of Intellectual Property Rights (“TRIPS”), The Paris Convention For The Protection Of Industries Property , The Patent Cooperation Treaty ,The Hague Agreement Concerning The Deposit Of Industries Designs, The Berne Convention For The Protection Of Literary And Artistic Works , The Rome International Convention For The Protection Of Performers , Producers Of Phonograms And Broadcasting

Organization , The Geneva Convention For The Protection Of Producers Of Phonograms Against Unauthorized Duplication Of Their Phonograms .

### **Learning resources**

Text books

Das Bhagirath Lal (2003) . The Wto And The Multilateral Trading System : Past , Present And Future , Third World Network And Zen Books. David Rainbridge (2003) . Intellectual Property, Pearson Education.

### **Reference books**

Ganguli, Prabudha (2001) . IPR- Unleashing The Knowledge Economy, Tata Mcgraw – Hill Publishing Co. Ltd . Ramappa, T. (2000) . Intellectual Property Rights Under WTO: Task Before India , Wheeler Publishing .

### **Supplementary reading material**

Maskus Keith E. (2000). Intellectual Property Right In The Global Economy, Institute For International Economics, Washington.

### **Websites**

[www.wipo.int/](http://www.wipo.int/)

[www.wto.org/english/tratop\\_e/trips\\_etrips\\_e.htm](http://www.wto.org/english/tratop_e/trips_etrips_e.htm)

[www.wipo.int/pct/en/texts/articles/atoc.htm](http://www.wipo.int/pct/en/texts/articles/atoc.htm)

[www.wipo.int/treaties/en/ip/wct/](http://www.wipo.int/treaties/en/ip/wct/)

[www.ipmatters.net/features/000707\\_gibbs.html](http://www.ipmatters.net/features/000707_gibbs.html)

[www.iptoday.com](http://www.iptoday.com)

### **Journal**

Journal of Intellectual Property Rights

Indian Journal of Intellectual Property Law

Journal of Intellectual Property Law & Practice

IDEA- The Intellectual Property Law Reviews



## **Semester: IV**

### **ABM-X006 Agricultural Production Economics**

#### **Objective**

To expose the students to the concept, significance and uses of agricultural production economics.

**Credits: 4**

#### **Unit-I**

Production functions: The concept of production Function. General Theory of production. Rational and irrational stages of production effects of advances in technology: Production innovations, law of Comparative advantage, Use of Cobb-Gough-Las type Functions in Agriculture.

#### **Unit-II**

Production Cost: Opportunity return, variable cost and fixed cost. The total cost Function. Effects of price changes. The long and short run time period, some applications of cost functions in production and processing of agricultural products: On Farm grain drying and storage. Frying processing plants. Cotton mechanization peach hydrocooling.

#### **Unit-III**

Production possibilities joint products, competitive products complementary products, supplementary products choosing the optimum product combination. Optimum combinations of many products. Specialization and diversification. Farm planning and budgeting supply response and Cob-Web theorem, elements of risk and uncertainty in planning and decision making.

#### **Unit-IV**

Production principles: elements of production process, General differences between Farming and Industrial production. Production cost and supply, effect of technology on costs, principles of profit maximization. Profits with unlimited inputs (Factor-product). Profits with limited inputs (Factor-product). Selecting and combining enterprises (product-product), input combinations to achieve least cost (Factor-Factor),

#### **Suggested Readings:**

- 1-Agricultural production Function: Earl o Heady, John L Dillen
- 2-Principal of Microeconomics I :S.K.Mishra and V.K.puri
- 3-Micro Economics Theory and Applications: AnindyaSen
- 4-Economics; An Analytical introduction by Amos Witztum
- 5-Beattie BR & Taylor CR.The Economics of Production.John Wiley & Sons.
- 6-Doll JP & Frank O.Production Economics - Theory and Applications.JohnWiley& Sons.
- 7-Gardner BL &RausserGC.Handbook of Agricultural Economics.Vol. I.Agricultural Production.Elsevier.
- 8-Heady EO.Economics of Agricultural Production and Resource Use.Prentice-Hall.
- 9-Sankayan PL. Introduction to Farm Management. Tata McGraw Hill.

## **ABM- X007 Management of Agricultural Cooperatives**

**Objective:** To make the students understand the principles and practice of cooperation as they are applicable to the Agricultural Sector of India.

**Credits: 4**

### **Unit-I**

Cooperation ideology-origin growth and development Principles of Agriculture Co-operation. Raiffeisen and Schulze concept of Agricultural Cooperatives Cooperation and other forms of Enterprise Cooperative Management- Nature and Function. Professionalized Management for Cooperatives.

### **Unit-II**

Theory and practice of Agricultural Cooperative credit system critical study of organization and financial structure, operation and Management of selected cooperative credit institutions-Central Cooperative Banks. State Cooperative Banks. Land Dev. Banks and NABARD

### **Unit-III**

Formation and Management in Agriculture Cooperative Societies; Re-organization of Agricultural Credit Societies, Multipurpose cooperative Societies; Large-Sized Cooperative Societies, Service Cooperatives. Cooperative farming in India

### **Unit-IV**

Cooperative Processing; Management of Cooperative Sugar Factories; Cooperative Agricultural marketing; Growth and Development Problems and challenges Cooperative Education and Training Management in India; Role of State in the progress Indian Cooperative Movement.

Dairy Cooperatives, Growth and Development, Problems, Measures to overcome these problems Indian Cooperatives in this era of Globalisation

### **Suggested Readings:**

1. B.S. Mathur Cooperation in India, Sahitya Bhawan, Agra
2. Kamat, G.S. Cooperative Management, HPH
3. Bedi R.D. Theory, History and Practical of Cooperation
4. Fay, C.R. Cooperation in India and Abroad
5. Raj Krutia Cooperative Farming some Critical Reflection
6. Sami-uddin & M. Rechmans Cooperative Sector in India, S. Chand
7. Rais Ahmad Cooperative Development and Management Text and Cases, Mittal Pub. House

## **ABM-X008 Strategic Management**

### **Objectives:**

To impart conceptual knowledge about the scientific framework, methods and processes of functioning of professionally managed systems in contemporary and emerging business environments; enabling students to appreciate the roles managers play as a strategist in the later years of their career

### **Credits: 4**

#### **Unit-1 Overview and SWOT analysis (12 hours)**

Concept of strategy, Strategic decision making process

Vision, mission, values, corporate ethics, business objectives and definition

SWOT analysis; environmental and organizational appraisal

#### **Unit-2 Strategy Formulation (20 hours)**

Corporate and business level strategies; growth, diversification, retrenchment

and combination strategies. Benchmarking strategic options; related and unrelated diversification,

Takeovers, mergers, consolidation, joint ventures/strategic alliances and turnaround, restructuring

strategies. Strategic analysis; corporate portfolio techniques and related quantitative and lateral techniques. Contingency strategies.

#### **Unit-3 Issues in strategy implementation (part-i)**

Functional and operational plan aspects. Procedural, budget and project aspects.

#### **Unit-3 Issues in strategy implementation (part-ii)**

Structural, behavioural and cultural aspects. Strategic evaluation and control

### **Suggested Readings:**

Kazmi, Azhar, Business Policy, TMH, New Delhi, 2001(revised edn)

Thompson, A.Jr.and Strickland III A.J.,Strategic management-Concepts and Cases. Plano, Texas: Business Publications, 1990 (revised edn)

## **AEM-X009 Theory of Economic Development**

### **Course Objective**

Paper focuses upon problems of economic development of developing countries in the light of theories of development. Special attention is paid on agricultural and rural development issues.

**Credits: 4**

### **Unit-I:**

Concept of Economic Growth & Economic Development, Factors in Economic Development, Obstacles in Economic Development.

Early supply Side models of growth and distribution: Adam Smith's and Richardo's model, Demand side models of growth: Malthusian model, Post-Keynsian growth models: Harrod, Domar and Solow's Growth Models, Rostow's stages of economic growth, Lewis two sector model.

### **Unit-II:**

Imperatives of Agricultural progress and rural development, Structure of Third World Agrarian system, Designing an Agricultural strategy, Unimodel and bimodel agricultural strategies, Multiple objectives of agricultural strategy, Agricultural transformation from subsistence to commercial farming, Strategy of Agricultural and Rural Development.

### **Unit-III:**

Trade Policy Debate: Export promotion Vs Import Substitution, Theory of Protection and seeing trade barriers. Foreign Exchange Rates, Exchange controls, and the Devaluation Decision. Trade policy of Developed Countries.

### **Unit-IV:**

Debt Vs Investment flows: Foreign aid. Why Donors Give Aid? Why LDCs Accept Aid? The effects of Aid, Towards a New View of Foreign Aid

The International Flow of Financial Resources, FIIs, Direct Foreign Investment and Multinational Corporation, Global Economic Issues in the Twenty First Century; Global Environmental Threat. Interdependence and growth of Third World Markets, Globalisation and International Financial Reform., Global Financial Crisis 2008.

### **Suggested Readings:**

1. Todaro, P. Michael and Smith C. Stephen, Economic Development IIth Edition, Pearson Education Ltd; (Indian Ed.) Dorling Kindersley India, Pvt. Ltd; 2013
2. MeiereGenerald M. and Rauch, E. James Leading Issues in Economic Dvelopment , OUP NewDelhi
3. Jones, An Introduction to Modern Theories of Economic Growth"
4. Mishra &Puri, Economics of Development and Planning, HPH, New Delhi

## **ABM-X010 Organizational Behavior & Communication**

### **Objectives:**

To train students into the relevant concepts of individual and group dynamics including organizational communication processes so as to help them cultivate requisite interpersonal skills (IPS) at work place

### **Credits: 4**

### **Unit-1**

#### **Organization Behaviour: an Overview and Individual Dynamics (part-i)**

The discipline of OB; rationale and scope; individual and group dynamics  
Perception theory; process, factors that affect perception. throughput and outputs. Distorted perceptions; diagnosis and therapy.

#### **Unit-2 Individual Dynamics (part-ii)**

Motivation; key factor and process theories. Integrative approach.  
Learning theory; features and process; intrinsic and extrinsic factors that affect learning; recent approaches and insights.  
Personality; major theoretical and pragmatic approaches.  
Transaction Analysis; relevant usages.

#### **Unit-3 Group Dynamics**

Group formation; types, theories and processes.  
Group conflicts; process and typology. positive and negative conflicts.  
Process of change; resistance to change and its management

#### **Unit-4 Communication: Concept and Application**

Need and roles of communication at work place. Definition, process, model and elements of communication; communication protocols. Barriers to communication and management.  
Key applications of communication: letter and report writings. Presentation skills.

### **Suggested Readings:**

Robbins, Stephen P, Organizational Behaviour, Prentice Hall Inc, NJ, 1979  
Luthans, Fred, Organizational Behaviour, McGraw Hill, New York, 1995

## **AEM- X011 Export Import Management**

**Objective:**To develop an understanding of the export import policies, procedures and documentations for an agribusiness

**Credits:** 2

### **Unit-I**

Export Import Policy and Export Assistance, Export Finance, Export Infrastructure & Service agencies, Export Procedure and Formalities, Important Documents in Export

### **Unit-II**

Import Procedure, Import Licensing, Warehousing and Custom Duties, Important Documents in Import, Exchange Provisions and Regulations for Export and Import

### **Suggested Readings**

Nabhi K. Jain- Export Manual & Documentation (Jain Book Depot.)  
Nabhi K. Jain- How to Export? (Jain Book Depot.)  
Nabhi K. Jain- How to Import? (Jain Book Depot.)  
GOI (Min. of Commerce) Exim Policy Document (latest)  
Jain Khushapt S. Export Import Proced.&Docum. (Himalaya Publishing House)  
Rathor&Rathor Export Marketing (Himalaya Publishing House)

## **ELECTIVE International Trade in Agri Business**

### **Objective:**

This course make students familiar with basic theories of international trade, and how does trade can be beneficials for nations. It also helps student understand the basic concepts, policy issues related to trade and its application in agriculture.

**Credits: 04**

### **Unit-I**

Mercantilist views on trade, Theories of Absolute Cost and Comparative Cost Advantage, Opportunity Cost theory, Community Indifference Cures, Offer Curves. Heckscher- Ohin theory; Factor Price Equalization Theorem, Stolper Samuelsson Theorem, Leontief-Paradox.

### **Unit-II**

Concepts Balance of Payment, Balance of Trade, Balance of Current and Capital Account, J Disequilibrium in Balance of Payments, Methods to Correct disequilibrium, Expenditure-Changing and Expenditure Switching policies Devaluation and its impact

### **Unit-III**

Foreign Exchange Rate Fixed vs. Flexible Exchange Rate; Demand for and Supply of Foreign Exchange, Determination of Exchange Rate, Spot and Forward Rates, Foreign Exchange Futures and options, Foreign Exchange Risk, Hedging and Speculation, Interest Arbitrage,. Trade restrictions, Tariff, Quota and Exchange Control.

### **Unit-IV**

Internal and External Balance with Expenditure Changing and Expenditure Switching Policies, Fiscal and Monetary Policies for Internal and External Balance.

### **Unit-V**

India's Foreign Trade: Direction and Composition; Agricultural trade in India, India's Foreign Trade Policy, Capital Account Convertibility in India; FDI in retail

### **Suggested Readings**

1. Bo Soderston: International Economic
2. Salvatore, D. (1997), International Economics, Prentice Hall, Upper Saddle River, N.J. New Yoork
3. Soderstorn, B.O. (1994), International Economics, The Macmillan Press Ltd. London
4. Chacholiades; M. (1990), International Trade: Theory and Policy, McGraw hill, Kogakusha, Japan
5. Kenen, P.B. (1994), The International Economy, Cambridge University Press, London
6. Kindlberger, C.P. (1973), International Economics R.D. Irwin, Homewood
7. Krugman. P.R. and M. Obstgled (1994), International Economics: Theory and Policy, Glenview Foresman
8. Yeager, L.B. (1976), International Monetary Relations: Theory, History and Policy, Harper and Row, New York
9. Tew, B. (1985), The Evolution of the International Monetary System 1945-85, Hutchinson

## **Elective    Agricultural Derivatives & Risk Management**

### **Objective:**

To expose the students to various tools and techniques of Financial Risk Management and Insurance Policies in Agri-Business.

### **UNIT- I Introduction:**

Meaning and purpose of derivatives; Forward contracts, future contracts, options, swaps and other derivatives; Type of traders; Trading future contracts; Specification of the future contracts; Operations of margins; Settlement and regulations.

### **UNIT- II Options:**

Types of options; Option trading; Margins; Valuation of options; **Futures** : Hedgers and speculators; Future contracts; Future markets- margins, trading, future positions and taxation **Swaps**: Mechanics of interest rate swaps, valuation of interest rate swaps; Currency swaps and its valuation

### **UNIT- III**

**Sources of Financial Risk:** Credit vs market, default risk, foreign exchange risk, foreign exchange risk, interest rate risk, purchasing power risk etc.; Systematic and non-systematic risk.

### **UNIT-IV Risk Management through Agricultural Insurance:**

Agricultural Insurance, National Agricultural Insurance Scheme (NAIS), Crop Insurance Types, Crop Insurance – Benefits and Constraints, Crop Insurance as Risk Mitigation Tool, Weather Insurance, Farm Income Insurance, Livestock Insurance, Package Insurance.

### **REFERENCES:**

1. Chance, Don M: An Introduction to Derivatives, Dryden Press, International Edition.
2. Acharya and Agrawal (1992), Agricultural Marketing in India, Oxford and IBH Publishing Co. Pvt. Ltd.
3. Ramaswami, Bharat ; Shamika Ravi And S.D. Chopra (2004), Risk Management, State of the Indian Farmer- A Millennium Study, Volume 22, Academic Foundation, New Delhi.
4. International Financial Management by V Sharma
5. International Finance by P.G. Apte
6. Chew, Lilian: Managing Derivative Risk, John Wiley, New Jersey.
7. Das, Satyajit: Swap & Derivative Financing, Probus.
8. Hull, J., Options: Futures and other Derivatives, Prentice Hall, New Delhi.
9. GOI (2007), Report of The Working Group on Risk Management in Agriculture for the Eleventh Five Year Plan (2007-2012), GOI, New Delhi



## **Elective      Agriculture Biotechnology**

### **Unit – 1 Introduction to Agricultural Biotechnology**

Agricultural biotechnology – Background of Biotechnology, Procedure of Genetic Modification in Plant, conventional breeding, genetic engineering, conventional breeding vs genetic engineering, Advantage and disadvantage of GM crops, Need of GM Crops in the World, Need of GM crops in India, Food Security And GM crops, Global and Indian status of GM crops, Public Perceptions towards GM crop.

### **Unit – 2 Safety aspects and Comparative Status of GM Crops:**

Approaches to Safety Evaluation: Substantial Equivalence and Non-Substantial Equivalence, Horizontal Gene Transfer, Animal Feeding Studies, Human Studies and Obstacles, The Pusztai Affair, The Monarch Butterfly Controversy, Labeling of GM food, Country wise Distribution of GM Crops, Crop wise Distribution of GM Crops, Trait wise Distribution of GM Crops, Dominant GM Crops by Trait, The Global Value of GM Crop Market, Status of Approved Events for GM Crops, Indian Prospects: Status of GM Crops, Growth in Area and BT Cotton Farmers, Saving of Pesticide Due to BT Cotton, Cotton Production and Yield, Export of Cotton

### **Unit – 3 Food Safety Aspects of Agricultural Biotechnology**

Food safety- Concept and Meaning of food safety, Issues of food safety, Concept and principle of safety assessment of foods derived from GMOs. Issues of GMOs and food safety- allergenicity, toxicity, antibiotic resistance, horizontal gene transfer, Composition analysis of GM foods, Food safety regulation of GMOs and GM food in India, Safety Protocol in India for GM Crops, National policy reaction to GMOs.

### **Unit – 4 Environmental Aspects and Agricultural Biotechnology**

Impact of GMOs on environment: biodiversity, ecological system, sustainability (pesticides, herbicides, carbon emission etc.), impact on Food security, Environmental benefits and risk of GM crops, environmental protection act 1986, Role of GM Crops in Sustainable Agriculture, Food Security Benefits of Transgenic Crops

#### **Suggested reading:**

1. Handbook On Agriculture, Biotechnology And Development; Edited by Stuart J. Smyth, Peter W.B. Phillips, and David Castle.
2. Plant Biotechnology and Agriculture: Prospects for the 21st Century; Edited by Arie Altman & Paul Hasegawa.
3. Agricultural Biotechnology by H. D. Kumar.
4. Introduction to Agricultural Biotechnology: Challenges and Prospects by William P. Ridley.
5. Agricultural Biotechnology by Ashok Kumar.
6. Food Safety of Proteins in Agricultural Biotechnology (Food Science and Technology) by Bruce G. Hammond.
7. Food Biotechnology: Current Issues and Perspectives by Sarah Elderidge.
8. Engineering the Farm: The Social And Ethical Aspects Of Agricultural Biotechnology, Edited by Marc Lappe and Britt Bailey
9. Economic and Social Issues in Agricultural Biotechnology, Edited by R Evenson, V Santaniello & D Zilberman.

## **Open Elective:        Biostatistics And Bioinformatics**

### **Objectives :**

Basic knowledge of statistics and bioinformatics and its use are essential aspect of academic learning in the field of Microbiology. The course is designed is provide to introductory knowledge to the students so that they can make effective use of statistical and bioinformatics tools in their studies and project work.

**Sessional/Assignment:10 Marks**

**Mid Semester:30 Marks**

**End Semester: 60 Marks**

**M.Marks: 100**

**Credits: 04**

### **Unit-I**

Measures of central tendency and dispersion, standard distribution: binomial distribution and normal curve, Poisson multiple, regression. Test of significance, t, f and Chi square test, Design of experiment, basic principles, completely randomized, block, latin square and split plot design, Principal component analysis (PCA)

### **Unit-II**

Introduction to sequence analysis, Basic of biocontrol data basis, Tools for sequence alignment, Phylogenetic analysis, Gene prediction methods, Visualization and prediction of protein synthesis. Searching literature on pubmed.

### **Unit-III**

Similarity searching by BLAST, Different data bases including gene bank. sequence formatting, Multiple sequence alignment (e.g. CLUSTALW), Detecting functional sites in DNA; Promoters, exons, PolyA sites. Introducing gene finders, Identification of open reading frames (ORF) and repeats in DNA. Restriction enzyme mapping,

### **Unit-IV**

Internet tools for DNA sequence translation, Protease digestion mapping, Prediction of signal peptide, MW, PI, secondary structure, tertiary structure, transmembrane domains and post-translational modifications including phosphorylation, glycosylation, acetylation, signal peptide cleavage site.

### **Suggested Readings :**

Biostatistics, PnArora and PK Mulhan, Himalaya Pub. House (2010)

Bioinformatics (Secind edition), M.M.Rangs, Agrobios India,(2007)

Bioinformatics ( sequence and genome analysis ) by David W. Mount, CBS Publisher and Distributors (2005)

Basic Statistical Methods with Application by H.L. Sharma, Agrotech Pub. Academy, Udaipur (2005)

Molecular Biology of the Gene” (2000) by J. Watson, N.H. Hopkin, J.W. Roberts, J.P. Stertz, A.M. Weiner, Freeman Pub., San Francisco.

Genes” (VIII) Benjamin Lewin, Oxford University Press, London.

Introduction to Bioinformatics” (2002) by S.A. Krawetz and D.D. Womble, Humana Press, New Jersey, USA.