

Regulations and Curriculum

M. B. A. in Agri-Business management (ABM)

(Effective from Academic Session 2025-26 onwards)

Offered by

**Department of Agricultural Economics
& Agribusiness Management**

FACULTY OF AGRICULTURE



**MAHARAJA SUHEL DEV STATE UNIVERSITY
AZAMGARH (U.P.)**

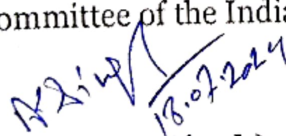
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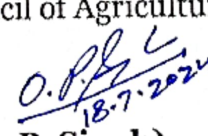
The meeting of the Board of Studies (BoS) of Agricultural Economics was held on July 18, 2024 at Maharaja Suhel Dev State University (Camp Office, DAV College), Azamgarh to consider and approve the *regulations* and *curriculum* for **M. B. A. in Agri-Business Management** developed in accordance to the BSMA Committee of the Indian Council of Agricultural Research, New Delhi.

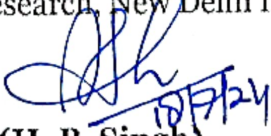
The following were present in the aforementioned meeting:

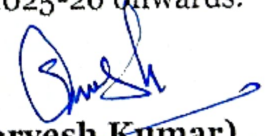
S. No.	Name	Designation/Address	Capacity
1.	Dr. Santosh Kumar Singh	Professor S.D.J. P.G. College Chandeshwar, Azamgarh, U. P.	Dean, Faculty of Agriculture
2.	Dr. Sarvesh Kumar	Asstt. Professor S.D.J. P.G. College Chandeshwar, Azamgarh, U. P.	Convenor
3.	Dr. H. P. Singh	Professor & Head Dept. of Agril. Economics B. H. U. Varanasi, U. P.	External Member
4.	Dr. O. P. Singh	Professor Dept. of Agril. Economics B. H. U. Varanasi, U. P.	External Member
5.	Dr. Anil Kumar Singh	Asstt. Professor Dept. of Agril. Economics College of Agriculture (ANDUAT), Kotwa, Azamgarh	External Member

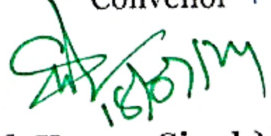
After a detailed discussion, the BoS of Agricultural Economics unanimously approved the proposed *regulations* and *curriculum* for **M. B. A. in Agri-Business Management (ABM)**. It is further recommended that it may be implemented as per the guidelines of the BSMA Committee of the Indian Council of Agricultural Research, New Delhi from 2025-26 onwards.


(Anil Kumar Singh)
External Member


(O. P. Singh)
External Member


(H. P. Singh)
External Member


(Sarvesh Kumar)
Convenor


(Santosh Kumar Singh)
Dean

MAHARAJA SUHEL DEV STATE UNIVERSITY

POSTGRADUATE DEGREE PROGRAMME

M. B. A. in Agri-Business Management

CREDIT BASED SEMESTER SYSTEM (Regulations)

**[On the recommendations of Broad Subject Matter Area (BSMA)
Committee for Social Sciences constituted by the ICAR]**

1. SYSTEM OF EDUCATION

1.1 The rules and regulations provided herein shall govern Master degree programme in **M. B. A. in Agri-Business Management** offered by the Department of Agricultural Economics & Agri-Business Management, Faculty of Agriculture at **Maharaja Suhel Dev State University, Azamgarh.**

1.2 The duration of Master's programme is two academic years (4 semesters). The first academic year of study shall be the first and second semesters after admission. The second academic year of study shall be the third and fourth semesters.

2. COMMENCEMENT

These regulations shall come into force from the academic year **2025-26 onwards.**

3. DEFINITIONS & ACADEMIC TERMS

Chairperson means a teacher of the major discipline proposed by the Head of Department through the Dean of the College and duly approved by the Director of Education/ Dean Post Graduate Studies (or as per the procedure laid down in the concerned University regulations) to act as the Chairperson of the Advisory Committee and also to guide the student on academic issues.



Course means a unit of instruction in a discipline carrying a specific number and credits to be covered in a semester as laid down in detail in the syllabus of a degree programme.

Credit means the unit of work load per week for a particular course in theory and/ or practical. One credit of theory means one class of one clock hour duration and one credit practical means one class of minimum two clock hours of laboratory work per week.

Credit load of a student refers to the total number of credits of all the courses he/ she registers during a particular semester.

Grade Point (GP) of a course is a measure of performance. It is obtained by dividing the per cent mark secured by a student in a particular course by 10, expressed and rounded off to second decimal place.

Credit Point (CP) refers to the Grade point multiplied by the number of credits of the course, expressed and rounded off to second decimal place.

Grade Point Average (GPA) means the total credit point earned by a student divided by total number of credits of all the courses registered in a semester, expressed and rounded off to second decimal place.

Cumulative Grade Point Average (CGPA) means the total credit points earned by a student divided by the total number of credits registered by the student until the end of a semester (all completed semesters), expressed and rounded off to second decimal place.

Overall Grade Point Average (OGPA) means the total credit points earned by a student in the entire degree programme divided by the total number of credits required for the P.G. degree, expressed and rounded off to second decimal place.

4. **NAME OF PROGRAMME**

The Postgraduate programme offered in the Discipline of Agriculture is

M. B. A. in Agri-Business Management



5. RESIDENTIAL REQUIREMENTS

The minimum and maximum duration of residential requirement for Masters' Programme shall be as follows:

P.G. Degree Programme	Duration of Residential Requirement	
	Minimum	Maximum
M. B. A. in Agri-Business Management	2 Academic Years (4 Semesters)	5 Academic Years (10 Semesters)

In case a student fails to complete the degree programme within the maximum duration of residential requirement, his/ her admission shall stand cancelled.

6. ADMISSION

6.1 Eligibility for admission

Bachelor's degree (FOUR years) in Agriculture or allied disciplines of Agriculture, Agril. Engg. /Dairy Science / Dairy Technology /Fisheries / Food Science / Food Technology/ Forestry/ Horticulture /Veterinary Science with credit-based course programme.

OR

Master's degree in Agriculture or allied disciplines of Agriculture, Agril. Engg. /Dairy Science / Dairy Technology /Fisheries / Food Science / Food Technology/ Forestry/ Horticulture /Veterinary Science with credit-based course programme.

6.2 Mode of admission: As per the University rules.

7. EVALUATION AND GRADING SYSTEM

- There will be a 10-point grading system of evaluation.
- The candidates are required to obtain minimum 33 per cent (17 marks) of marks assigned (50 marks) for theory examinations (external) conducted by the University.
- In case of courses with theory and practical, minimum of 33 per cent marks in theory and practical separately (17 marks each) are essential.



- iv. To pass in a course/paper (major/minor/supportive/common/ internship/project courses), it is required to obtain 50 per cent (50 marks) of total marks (100 marks) assigned cumulatively (mid-term and external examinations) with minimum 33 per cent of marks assigned for external examinations (theory and/or practical) conducted by the University. Hence, Grade Point, GP, of 5.00 to pass in a course and an Overall Grade Point Average, OGPA, of 5.00 to award the M. B. A. in Agri-Business Management shall be required mandatorily. A candidate failing to secure minimum OGPA 5.00 will not be considered for the award of degree and shall be declared as 'failed'.
- v. There is no minimum passing marks in internal examinations (Mid-term/assignment).
- vi. To attain the final degree a student has to pass all the courses of each semester.
- vii. The minimum Semester Grade Point Average (G.P.A.) and Overall Grade Point Average (O.G.P.A.) for passing / promotion of a particular semester as well as degree course should not less than 5.00.
- viii. If a student fails in course(s), he/she will get opportunities to pass the course(s) in consecutive academic years of that semester (course of odd semester in consecutive odd semester similarly course of even semester in consecutive even semester).
- ix. In special case or cases Vice-Chancellor will have to right to allow the separate examination schedule to clear the repeated course/courses for individual or group of individuals.



x. Grading Scale:

Degree	Percentage of Marks Obtained	Conversion into Points
All	100	10 Points
	90 to <100	9 to <10
	80 to <90	8 to <9
	70 to <80	7 to <8
	60 to <70	6 to <7
	50 to <60	5 to <6
	<50 (Fail)	<5
	Eg. 80.76	8.076
	43.60	4.360
	72.50 (but shortage in attendance)	Fail (1 point)

OGPA	Division
5.000 – 5.999	Pass
6.000 – 6.999	II division
7.000 – 7.999	I division
8.000 and above	I division with distinction

GPA = Total points scored / Total credits (for 1 semester)

CGPA = Σ Total points scored / Course credits

OGPA = Σ Total points scored (after excluding failure points) / Course credits

% of Marks = OGPA \times 100/10

8. REMOVAL OF DIFFICULTIES:

- If any difficulty arises in giving effect to the provisions of these regulations, the Vice- Chancellor may issue necessary orders which appear to him to be necessary or expedient for removing the difficulty.
- Every order issued by the Vice-Chancellor under this provision shall be laid before the Academic Council of the University in the next meeting after the issuance.
- Notwithstanding anything contained in the regulations, the Board of Studies or Academic Council reserve the right to make changes whenever necessary.

M. B. A. in Agri-Business Management

Framework of the courses

Courses	Credit Hrs.
(i) Course work	40 + 16
Major courses	20
Minor courses	08
Supporting courses	06
Common courses	05
Seminar	01
Sub-total	40
Basic courses mandatory for Summer Internship	06
Basic courses mandatory for Project	10
Sub-total	16
(ii) Summer internship (3 to 4 weeks)	04
(iii) Research Project (8 to 12 weeks)	10
Grand Total	70



Categorical break-up of the courses with credit load

S. No	Course code	Course title	Credits
Major Courses			
1	ABM 501	Principles of Management and Organisational Behaviour	3(3+0)
2	ABM 502	Managerial Accounting and Control	3(3+0)
3	ABM 503	Applied Agribusiness Economics	2(2+0)
4	ABM 504	Human Resource Management for Agricultural Organizations	2(2+0)
5	ABM 505	Production and Operations Management	2(2+0)
6	ABM 506	Agricultural and Food Marketing Management- I	2(2+0)
7	ABM 507	Agricultural and Food Marketing Management-II	2(2+0)
8	ABM 508	Agri Supply Chain Management	2(2+0)
9	ABM 509	International Trade for Agricultural Products	2(2+0)
		Sub-total	20
Minor Courses			
1	ABM 510	Food Technology and Processing Management	3(3+0)
2	ABM 516	Fruit Production & Post Harvest Management	
3	ABM 511	Rural Marketing	3(3+0)
4	ABM 515	Technology Management for Livestock Products	
5	ABM 518	Food Retail Management	2(2+0)
6	ABM 519	Management of Agricultural Input Marketing	
		Sub-total	8
Supportive Courses			
1	ABM 536	Strategic Management for Agri Business Enterprises	2(2+0)
2	ABM 537	Operations Research	2(2+0)
3	ABM 538	Financial Management in Agri Business	2(2+0)
		Sub-total	6
Internship & Its Basic Courses			
1	ABM 539	Communication for Management and Agri Business	3(3+0)
2	ABM 540	Research Methodology for Agri Business Management	3(3+0)
3	PGIA 501	Summer Internship/ Industrial Attachment	4(0+4)
		Sub-total	10
Research Project & Its Basic courses			
1	ABM 541	Computer Applications for Agri Business	3(3+0)
2	ABM 542	Project Management and Agri Business Entrepreneurship	3(2+1)
3	ABM 543	Agribusiness Environment and Policy	2(2+0)
4	ABM 544	Agri Business Laws and Ethics	2(2+0)
5	PGR-501	Research Project	10 (0+10)
		Sub-total	20
1	PGSE-501	Master's Seminar	1
Common Courses			
1	PGS-501	Library and information services	1(0+1)
2	PGS-502	Technical Writing and Communications Skills	1(0+1)
3	PGS-503	Intellectual property and its management in agriculture	1(1+0)
4	PGS-504	Basic Concepts in Laboratory Techniques	1(0+1)
5	PGS-505	Agricultural Research, Research Ethics and Rural Development Programmes	1(1+0)
		Sub-total	5
		Grand Total	70



M. B. A. in Agri-Business Management
Semester-wise (I to II) detailed course structure

Sem	Course Code	Course Title	Type of course	Credit Hrs.	Evaluation pattern				
					Internal		External		Total
					MT	AS	TH	P	
I	ABM 501	Principles of Management and Organisational Behaviour	Major	3(3+0)	30	20	50	-	100
	ABM 502	Managerial Accounting and Control	Major	3(3+0)	30	20	50	-	100
	ABM 503	Applied Agribusiness Economics	Major	2(2+0)	30	20	50	-	100
	ABM 510	Food Technology and Processing Management	Minor	3(3+0)	30	20	50	-	100
	ABM 516	Fruit Production & Post Harvest Management							
	ABM 536	Strategic Management for Agri Business Enterprises	Supportive	2(2+0)	30	20	50	-	100
	PGS 501	Library and Information Services	Common	1(0+1)	-	-	-	100	100
	PGS 502	Technical Writing and Communications Skills		1(0+1)	-	-	-	100	100
	ABM 539	Communication for Management and Agri Business	Internship Course	3(3+0)	30	20	50	-	100
Sub-total				18					
II	ABM 504	Human Resource Management for Agricultural Organizations	Major	2(2+0)	30	20	50	-	100
	ABM 506	Agricultural and Food Marketing Management- I	Major	2(2+0)	30	20	50	-	100
	ABM 511	Rural Marketing	Minor	3(3+0)	30	20	50	-	100
	ABM 515	Technology Management for Livestock Products							
	ABM 537	Operations Research	Supportive	2(2+0)	30	20	50	-	100
	PGS 503	Intellectual property and its management in agriculture	Common	1(1+0)	30	20	50	-	100
	PGS-504	Basic Concepts in Laboratory Techniques		1(0+1)	-	-	-	100	100
	ABM 540	Research Methodology for Agri Business Management	Internship Course	3(3+0)	30	20	50	-	100
	PGIA 501	Summer Internship/ Industrial Attachment	Internship*	4(0+4)	-	-	-	100	100
Sub-total				18					

*To be conducted in summer between 2nd & 3rd Sem.; MT: Mid-term; AS: Assignment; TH: Theory; P: Practical

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M. B. A. in Agri-Business Management
Semester-wise (III to IV) detailed course structure

Sem	Course Code	Course Title	Type of course	Credit Hrs.	Evaluation pattern				
					Internal		External		Total
					MT	AS	TH	P	
III	ABM 505	Production and Operations Management	Major	2(2+0)	30	20	50	-	100
	ABM 507	Agricultural and Food Marketing Management-II	Major	2(2+0)	30	20	50	-	100
	ABM 508	Agri Supply Chain Management	Major	2(2+0)	30	20	50	-	100
	ABM 509	International Trade for Agricultural Products	Major	2(2+0)	30	20	50	-	100
	ABM 518	Food Retail Management	Minor	2(2+0)	30	20	50	-	100
	ABM 519	Management of Agricultural Input Marketing							
	ABM 538	Financial Management in Agri Business	Supportive	2(2+0)	30	20	50	-	100
	PGS-505	Agricultural Research, Research Ethics and Rural Development Programmes	Common	1(1+0)	30	20	50	-	100
Sub-total				13					
IV	ABM 541	Computer Applications for Agri Business	Basic courses for Research project	3(3+0)	30	20	50	-	100
	ABM 542	Project Management and Agri Business Entrepreneurship		3(2+1)	30	-	50	20	100
	ABM 543	Agribusiness Environment and Policy		2(2+0)	30	20	50	-	100
	ABM 544	Agri Business Laws and Ethics		2(2+0)	30	20	50	-	100
	PGR-501	Research Project	Project work	10 (0+10)	-		-	100	100
	PGSE-501	Seminar	Seminar	1	-		-	-	100
Sub-total				21					
Grand-total (18 + 18 + 13 + 21)				70					

MT: Mid-term; AS: Assignment; TH: Theory; P: Practical

COURSE CONTENTS

M.B.A. in Agri-Business Management

MAJOR COURSES

Course Title : Principles of Management and Organizational Behaviour

Course Code : ABM 501

Credit Hours : 3+0

Theory

Block 1: Basic Concepts of Management

Unit-I: Introduction to Management: Nature, Scope and Significance of Management, Evolution of Management Thought, Approaches to Management, functions and skills of a manager

Unit-II: Management functions: Planning – Types, Steps, Objective, Process, Strategies, Policies, MBO, Organizing – Structure & Process, Line, Staff, Authority & Responsibility, Staffing – Recruitment and Selection, Directing – Training, Communication & Motivation, Controlling- Significance, Process, Techniques, Standards & Benchmarks, Management Audit

Block 2: Insights About Organizational Behavior

Unit III: Nature, Scope and Significance of Organizational Behavior; Foundations of Individual behaviour – Emotions, Personality, Values, Attitudes, Perception, Learning and individual decision making, Motivation- Types of motivation, theories of motivation, motivational practices at workplace, managing stress and work life balance

Unit IV: Group dynamics- types of groups, group formation, Group decision making, teambuilding and developing collaboration, leadership styles and influence process; leadership theories, leadership styles and effective leader

Block 3: Organisational Dynamics

Unit V: Understanding and managing organisational culture, power and political behavior in organisations, conflict Management, negotiation, managing organizational change, concept of organisational development

Suggested Reading

- Robbins SP, Coulter M and Vohra N. 2010. *Management*. Pearson Edu.
- Weihrich H, Cannice MV and Koontz H. 2015, *Management, A Global, Innovative and Entrepreneurial Perspective*, 14th Edition, McGraw Hill Education Pvt Ltd.



- Beierlein JG, Schneeberger KC, Osburn DD. 2014. *Principles of Agribusiness Management*. Fifth edition. Waveland Press
- Neck CP, Houghton JD and Murray EL. 2017, *Organizational behavior*, Sage Publication India Private Limited.
- Greenberg J. 2013, *Behavior in Organisations*, PHI Learning Private Limited, New Delhi.
- John A, Wagner III JA and Hollenbeck JR. 2015. *Organizational Behaviour*, Routledge Taylor & Francis Group, New York.
- Koontz H and Weighrich K. 2010. *Essentials of Management*. Tata McGraw Hill

Course Title : Managerial Accounting and Control

Course Code : ABM 502

Credit Hours : 3+0

Theory

Block 1: Financial Accounting

Unit I: Financial Accounting- Meaning, Need, Accounting principles: Accounting Concepts and Conventions; Branches of Accounting, Users of Accounting information, 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, Use of Accounting Software

Block 2: Managerial Accounting

Unit III: Management Accounting-Meaning, Functions, Scope, Utility, Limitations and Tools of Management Accounting, Analysis of Financial Statements- Ratio, time series, common size and Du pont Analysis, Comparative and Common Size Statements, Cash Flow and Fund Flow Analysis

Block 3: Cost Accounting

Unit IV: Cost Accounting-Nature, Course, 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: Budget and Budgetary Control- 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. Mergers and Acquisition, Tax System- GST

Suggested Reading

- Jain SP and Narang KL. 2014. *Financial Accounting*. 12th Edition. Kalyani publisher
- Sharma and Gupta. 2018. *Management Accounting* 13th Edition, Kalyani Publisher
- Maheshwari SN and Maheshwari SK. 2018. *Financial Accounting*. 6th Ed. Vikas Publ. House

Course Title : Applied Agribusiness Economics

Course Code : ABM-503

Credit Hours : 2+0

Theory

Block 1: Overview of Managerial Economics

Unit I: Scope of managerial economics, objective of the firm and basic economic principles; mathematical concepts used in managerial economics. Introduction to behavioral economics

Unit II: Indifference curves and budget sets - Demand analysis - meaning, types and determinants of demand; demand function; demand elasticity; demand forecasting-need and techniques.

Block 2: Production, Cost and Supply Analysis

Unit III: Production, cost and supply analysis- production function, Multi period production and cost 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. Price discrimination (First, Second and Third level)

Block 3: Macroeconomics

Unit V: The national income; circular flow of income: consumption, investment and saving; money-functions, factors influencing demand for money & supply of money; inflation; economic growth; business cycles and business policies; business decisions under certain and uncertain situations



Suggested Reading

- Dwivedi DN. 2015. *Managerial Economics*. 8th Edition, Vikash Publishing
- Gupta GS. 2015. *Managerial Economics*. Tata McGraw Hill
- Savatore D. Srivastav R. 2012. *Managerial Economics*. 7th Edition, Oxford University Press
- Suma Damodaran. 2010. *Managerial Economics*. Oxford

Course Title : Human Resource Management for Agricultural Organisations

Course Code : ABM 504

Credit Hours : 2+0

Theory**Block 1: Introduction to Human Resource Management**

Unit I: Strategic Human Resource Management, Human Resource Planning-Nature and Significance, Job Analysis and talent management process, Job Description, job Specification, Job enlargement, Job enrichment, Job rotation

Unit II: Recruitment and Selection Process, Induction, Training and Human Resource Development-Nature, Significance, Process and Techniques, e- recruitment, use of Big Data for recruitment, use of Artificial Intelligence and machine learning tools in recruitment practices Career planning and Development Internal mobility including Transfers, Promotions, employee separation.

Unit III: Performance Appraisal-Significance and methods, Compensation management, Strategic pay plans, Job Evaluation, Wage and Salary Administration; Wage Fixation; Fringe Benefits, Incentive Payment, bonus, and Profit Sharing

Block 2: Industrial Relations

Unit IV: Role and Status of Trade Unions; Collective Bargaining; Worker's Participation in Management, employee retention. Quality of work life, employee welfare measure, work life balance, Disputes and Grievance Handling Procedures; Arbitration and Adjudication; Health and Safety of Human Resources;

Block 3: Ethical And Global Issues in HRM

Unit V: Ethical issues in HRM, Managing Global Human Resources, Managing Human Resources in Small and Entrepreneurial firms, Human Resources accounting, Human Resources outsourcing. HR Information



System, Human Resource Metrics and Workforce Analytics, Future trends in workforce technologies.

Suggested Reading

- Gary Dessler & Biju Varkkey 2016, *Human Resource Management*, XIV Edition, Pearson India
- VSP Rao. 2010, *Human Resource Management, Text and Cases*, 3rd Edition, Excel Books
- Ashwathapa K. 2016. *Human Resource Management, Text and Cases*. Tata McGraw Hill
- Michael J. Kavanagh, Mohan Thite & Richard D. Johnson. 2016, *Human Resource Information Systems*, Sage Publications
- Subba Rao P. 2004. *Essentials of Human Resource Management and Industrial Relations*. Himalaya Publ. House.

Course Title : Production and Operations Management

Course Code : ABM 505

Credit Hours : 2+0

Theory

Block 1: Introduction to Production and Operations Management

Unit I: Nature Concept and Scope of Production and Operations Management; Factors Affecting System; Facility location, Types of Manufacturing Systems and Layouts, Process Selection and Facility Layout, Layout Planning and Analysis, Forecasting

Unit II: Operations Strategy: Operations Strategy, Competitive Capabilities and Core Competencies, Operations Strategy as a Competitive Weapon, Linkage Between Corporate, Business, and Operations Strategy, Developing Operations Strategy, Elements or Components of Operations Strategy, Competitive Priorities, Manufacturing Strategies, Service Strategies, Global Strategies and Role of Operations Strategy.

Unit III: 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.

Block 2: Inventory Management

Unit IV: An Overview of Inventory Management Fundamentals, Determination of Material Requirement, Safety Management Scheduling, Maintenance Management Concepts, Work Study, Method Study, Work Measurement, Work Sampling, Work Environment,



Production Planning and Control (PPC) Industrial Safety, human-machine interface, types of interface designs. Cloud operations management.

Block 3: Quality Management

Unit V: Quality Assurance, Accepting Sampling, Statistical Process Control, Total Quality Management, ISO standards and their Importance, Introduction to re-engineering, value engineering, check sheets, Pareto charts, Ishikawa charts, JIT Pre-requisites for implementation Six Sigma, Lean Management, Reliability Engineering, Safety Engineering, Fault Tree Analysis.

Suggested Reading

- William J. Stevenson. 2014. *Operations Management*, 12th Edition, McGraw-Hill
- Panneerselvam K. 2012. *Production and Operations Management* 3rd Edition, Prentice Hall India Learning Private Limited
- S. N Chary, 2017. *Production and Operations Management*, McGraw Hill Education; 5 edition

Course Title: Agricultural And Food Marketing Management-I

Course Code: ABM 506

Credit Hours: 2+0

Theory

Block 1: Overview Of Marketing Management

Unit 1: Introduction and Concept/ philosophies of Marketing Management; Product

Management: The product, The product mix, Product line extensions, Product line deletions, Branding products, The advantages and disadvantages of branding, Branding decisions Brand loyalty models, Homogenous first-order *Markov* models, Higher-order Markov models Packaging, The functions of packaging, Packaging technology, Recent developments in packaging

Block 2: Pricing Decisions

Unit 2: Pricing objectives, The laws of supply and demand, Elasticity of demand Cross-price elasticity of demand, Practical problems of price theory, Cost - revenue

- supply relationships, The meaning of price to consumers, Price as an indicator of quality, Pricing strategies, Cost-plus methods of price determination, Breakeven analysis, Market-oriented pricing,



Psychological pricing, Geographical pricing, Administered pricing

Block 3: Channel Management and Physical Distribution

Unit 3: Channel decisions in relation to marketing strategy, The value of middlemen, Key decisions in channel management, Types of distribution system, Marketing to middlemen, Power and conflict in distribution channels, Physical distribution, Customer service levels, Developing a customer service policy, The total distribution concept, Warehouse management, Inventory management, Calculating the economic order quantity, Transport management, Technological advances in physical distribution, Vehicle scheduling and routing, Fixed and variable routing systems, Vehicle scheduling tools, Vehicle scheduling models, Computer-based vehicle scheduling

Block 4: Marketing Communications

Unit 4: The nature of marketing communications, Setting marketing communication objectives, Factors influencing the communications mix, The marketing communications mix, Advertising, Sales promotion, Public relations, Personal selling, Digital Marketing, Mobile Marketing, Social Marketing and Social Media Marketing, Training the sales force, Change agents, Selecting the media, Establishing the promotional budget, Monitoring the effectiveness of marketing communications

Unit 5: Marketing Costs And Margins: Assessing the performance of a marketing system, Marketing efficiency and effectiveness, Operational efficiency, Pricing efficiency, Identifying marketing costs and margins, The reference products concept, Handling costs, Packaging costs, Transport costs, Storage costs, Processing costs, Capital costs.

Suggested Reading

- Kotler P, Keller K, Koshy A and Jha M. 2013. *Marketing Management – Analysis, Planning, Implementation and Control*. Pearson Education.
- Ramaswamy VS. 2017. *Marketing Management: A Strategic Decision Making Approach*
- McGraw Hill Education
- Saxena R. 2009. *Marketing Management*. Mc Graw Hill. 4th Edition
- William Perreault Jr., McCarthy E. Jerome., 2006, *Basic Marketing: A Global Marketing Approach*, Tata McGraw Hill
- Gay R, Charlesworth A, Esen R. 2014, *Online Marketing*, Oxford University Press
- Mohammed, Fisher, Jaworski and Cahill: *Internet Marketing – Building Advantage in a networked economy* Tata McGraw-Hill



- Strauss J and Frost R. 2013. *E-Marketing*, Prentice-Hall
- Roberts M. 2018. *Internet Marketing*, Cengage Learning
- Vassos: *Strategic Internet Marketing – Practical e-commerce and branding Tactics*, Que Books
- Chaffey, Meyer, Johnston and Ellis – Chadwick. 2009. *Internet Marketing*, Prentice-Hall/ Financial Times

Course Title : Agricultural and Food Marketing Management-II

Course Code : ABM 507

Credit Hours : 2+0

Theory

Block 1: Agricultural and Food Marketing

Unit 1:

The importance of agricultural and food marketing to developing countries, the marketing concept and marketing systems, Marketing sub-systems Marketing functions, Links between agriculture and the food industry, Agricultural and food marketing enterprises, Marketing boards in developing countries, Co-operatives in the agriculture and food sectors, Control and management of secondary co-operatives, The weaknesses of co-operatives, Selling arrangements between co-operatives and their members

Unit 2: Market Liberalization:

Economic structural adjustment programmes, Macro-economic stabilization, The role of the state in liberalised markets, Strategies for reforming agricultural marketing, Obstacles to be overcome in commercialisation and Privatisation of agricultural marketing, Dealing with accumulated deficits, Encouraging private sector involvement in agricultural marketing, Impediments to private sector participation in agricultural markets, impact of the macro-economic environment on private traders, Government action to improve private sector performance

Block 2: Marketing Strategy, Planning and Control

Unit 3: Marketing Strategy, Planning and Control

Strategy, policy and planning, Strategic business units, the need for marketing planning, The process of marketing planning, Contents of the marketing plan, Monitoring, evaluating and controlling the

marketing planning, Marketing controls, Marketing plan control, Efficiency control

Unit 4: New Product Development:

The impetus to innovation, New product development process. The adoption process, The effect of products characteristics on the rate of adoption, Buyer behavior: The influences on buyer behaviour, Exogenous influences on buyer behaviour Endogenous influences on buyer behaviour, The consumer buying decision process, Buyer behaviour and market segmentation, Lifestyle segmentation, Organisational markets Industrial markets, Industrial buyer characteristics

Block 3: Commodity Marketing

Unit 5: Stages in a commodity marketing system, Grain marketing, Challenges for grain marketing systems, fruits and vegetables, Livestock and meat marketing, Poultry and eggs marketing, marketing of fresh milk-International markets

Suggested Reading

- Acharya SS and Agarwal NL. 2011. *Agricultural Marketing in India*. 4th Ed. Oxford and IBH.
- Kohls RL and Uhj JN. 2005. *Marketing of Agricultural Products*. 9th Ed. Prentice Hall.
- Mohan J. *Agri-Marketing Strategies in India*, NIPA
- Sharma Premjit. 2010. *Agri-Marketing Management*, Daya Publishing House

Course Title : Agri Supply Chain Management

Course Code : ABM 508

Credit Hours : 2+0

Theory

Block 1: Overview Of Supply Chain Management

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. Innovations in Global Agri-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. SCM Metrics/Drivers and Obstacles.

Block 2: Procurement Management in Agri. Supply Chain



Unit III: 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 (VMI).

Block 3: Logistics Management

Unit IV: 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. Case Studies on the following: (a) Green Supply Chains (b) Global Supply Chains (c) Coordination in a SC. Value of and distortion of information: Bullwhip effect (d) Sourcing and contracts in SC (e) Product availability with uncertain demand (f) Inventory planning with known/unknown demand (g) Cases from FAO/IFPRI, etc.

Suggested Reading

- Acharya SS and Agarwal NL. 2011. *Agricultural marketing in India*. Oxford and IBH.
- Altekar RV. 2006, *Supply Chain Management: Concepts and Cases*. PHI
- Chopra S, Meindl P and Kalra DV. 2016. *Supply chain management: Strategy, Planning, and Operation*, Pearson Education India
- Mohanty RP. 2010. *Indian Case studies in Supply Chain Management & other Learning Resources*. Oxford.
- Chandrasekaran N. 2010. *Supply Chain Management: Process, system & Practice* Oxford.
- Singh S. 2004. *Organic Produce Supply Chains in India-Organisation and governance*. Allied Publ.



Course Title : International Trade in Agricultural Products

Course Code : ABM 509

Credit Hours : 2+0

Theory

Block 1: Introduction To International Trade

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. Cases on agri business commodity trade practices

Block 2: Regulations and Policy Measures for International trade

Unit IV: 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, procedures & documentations.

Suggested Reading

- Study materials by the Center for WTO Studies, ITPO, New Delhi, *The Future of Indian Agriculture*
- Brouwer F and Joshi PK. 2016. *International Trade and Food Security*, LEI - Wageningen UR, The Netherlands.



MINOR COURSES

Course Title : Food Technology and Processing Management

Course Code : ABM 510

Credit Hours : 3+0

Theory

Block 1: Food Technology

Unit 1: Food Industry in India: 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.

Block 2: Processing Management

Unit 2: Basics of Food Processing: Basic principles of food processing and food preservation through technology interventions; Application of energy, radiations, chemicals and other agents for food preservation; aseptic modes of processing- freezing, quick, cryogenic, high pressure, membrane technology; Packaging of foods, labelling techniques, advanced technologies for packaging.

Unit 3: Food Safety and Costs Analysis: Analysis of costs; risk management; Laws and regulations w.r.t to food industry including production, processing and marketing; Food Safety and Quality Standards- AGMARK, BIS/ISO, FPO, FSSAI, TQM, HACCP etc.

Unit 4: Case studies on project formulation in various types of food industries: Discussion sessions and analysis of Case studies related to dairy, cereal milling, sugarcane production; baking/confectionary, vegetable storage, handling, egg processing, fish and meat products; Cases related HACCP.

Suggested Reading

- Acharya SS and Aggarwal NL. 2004. *Agricultural Marketing in India*. Oxford & IBH.
- Early R. 1995. *Guide to Quality Management Systems for Food Industries*. Springer
- Jelen P. 1985. *Introduction to Food Processing*. Reston Publishing.
- Potly VH and Mulky MJ. 1993. *Food Processing*. Oxford & IBH
- Fellows PJ. 2016. *Food Processing Technology Principles and Practice*, Woodhead Publishing, 4th Edition
- Potter NN. 2018. *Food science*. McGraw-Hill Education, 6th Edition
- Singh RP, Heldman DR. 2013. *Introduction to Food Engineering*.

- Elsevier Inc., 5th Edition
- Smith JS, Hui YH. 2013. *Food Processing: Principles and Applications*, Wiley

Course Title : Rural Marketing

Course Code : ABM 511

Credit Hours : 3+0

Theory

Block 1: Rural Marketing Environment

Unit 1: Rural Market Concept & Scope: Concept, Definition and Scope of rural marketing, nature and characteristics of rural markets, potential of rural markets in India, rural V/S urban market.

Unit 2: Environmental factors: Socio-cultural, economic, demographic, technological and other environmental factors affecting rural marketing.

Unit 3: Rural finance: Concept, demand, banking model; Finance Schemes of NABARD, Other Schemes of State Govt, Central Govt.

Unit 4: Rural consumer's behavior: Behavior of rural consumers and farmers; buyer characteristics and buying behavior; customer relationship management, rural market research.

Block 2: Rural Marketing Strategy

Unit 1: Rural Product strategy: Marketing of consumer durable and non-durable goods and services in the rural markets with special reference to product planning; marketing mix, product mix.

Unit 2: Pricing for rural markets: Pricing policy and pricing strategy, distribution strategy, Rural retailing and modern store formats in rural areas.

Unit 3: Promotion and communication strategy: Media Planning, Distribution channels, personal selling strategies in rural markets, innovations in rural marketing

Suggested Reading

- Krishnamacharyulu and Ramakrishnan. 2010. *Rural Marketing: Text and Cases*: Pearson Education. 2nd edition
- Singh S. 2004. *Rural Marketing: Focus on Agricultural Inputs*, Vikas Publishing
- Kashyap P. 2011. *Rural Marketing*. Pearson Education
- Kumar D and Gupta P. 2017. *Rural Marketing: Challenges and Opportunities*. Sage Publications.



Course Title : Technology Management for Livestock Products

Course code : ABM 515

Credit Hours : 3+0

Theory

Block 1: Livestock Product and Technology

Unit 1: Present status of livestock products industry in India: Dairy, meat, skin and hides, wool, etc.; SWOT analysis of livestock product industry, importance of value addition of livestock products, Concept of organic milk and meat. New techniques of biotechnology for improving food value.

Unit 2: Manufacturing technologies: Dairy-Manufacturing technologies of various dairy products and byproduct utilization. Meat-Manufacturing technologies of meat and its products, industrial processing and utilization of wool and animal by-products, value added egg product development.

Unit 3: Milk and meat processing plant: Layout and designing of milk and meat processing plant, abattoir design, sanitation and basic slaughterhouse practices, Plant Management- Production, planning and control, packaging, preservation and storage system for livestock products; transportation system for domestic markets and international markets.

Block 2: TQM and Marketing of Livestock Products

Unit 1: Total quality management in processing Total quality management in processing of milk and its byproduct, meat and byproduct, value added egg duct and wool, Quality control measures during storage transit; extent of losses during storage and transport, management measures to minimize the loss.

Unit 2: Marketing livestock products

Milk, meat, wool, fish etc. and its byproduct, Marketing and distribution system of animal products; National and international specifications and quality standards for various products; environmental and legal issues involved.

Suggested Reading

- Mandal PK and Biswas AK. 2014. *Animal Products Technology*, Studium Press India Pvt. Ltd.; 1st Edition



- Bishwas AK and Mandal PK. 2014. *Textbook of Poultry, Egg and Fish Processing Technology*, Studium Press (India) Pvt. Ltd.

Course Title : Fruit Production and Post-Harvest Management

Course Code : ABM 516

Credit Hours : 3+0

Theory

Block 1: Fruit Production

Unit 1: Introduction: Global and National Status of Horticultural production in India and emerging scenario

Unit 2: Management of horticultural crops: Establishing an orchard, basic cultural practices, regulation of flowering, fruiting and thinning, protection against insect-pest, weeds: Maturity indices, Harvesting and its relationship with quality, sorting and grading, pre-harvest crop management practices and their influence on quality during storage and marketing.

Block 2: Post-Harvest Management

Unit 1: Post-harvest management in horticulture-procurement: Procurement management, important factors for marketing, standardization and quality control, packaging. Physiology of ripening and senescence. Storage system: on-farm storage-evaporatively cooled stores, ventilated storage, pit storage etc. Refrigerated storage refrigeration cycle, controlled/modified atmosphere, hypobaric storage.

Unit 2: Post harvest management in horticulture process: Application of growth regulators for quality assurance, post-harvest treatments: pre cooling, heat treatments (hot water, hot air and vapor heat), fungicides & biologically safe chemicals, irradiation, curing, pulsing etc. Packing line operations, packaging of horticultural produce. Transportation rail, road, sea, air. Codex norms for export of perishables. 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 3: Marketing of fruits: Problems in marketing of fruits, and government policy; quality standards for domestic and international trade.



Suggested Reading

- Rathore NS, Mathur GK and Chasta SS. 2013. *Post-Harvest Management and Processing of Fruits and Vegetables*, ICAR.
- Chadha KL and Pareek OP. 1993. *Advances in Horticulture*. Vols. I-IV. Malhotra Publ. House.
- Kader AA. 1992. *Post-harvest Technology of Horticultural Crops*. Univ. of California. Div. of Agri. & Natural Resources.
- Jacob JP. 2012. *Handbook on Post Harvest Management of Fruits and Vegetables*, ASTRAL Publishing.
- NIIR Board of Consultants & Engineers. 2016. *The Complete Technology Book on Processing, Dehydration, Canning, Preservation of Fruits & Vegetables*, NIIR PROJECT CONSULTANCY SERVICES; 3rd Revised Edition
- Thompson K. 2003. *Fruit and Vegetables: Harvesting, Handling and Storage*, Wiley- Blackwell; 2nd Edition

Course Title : Food Retail Management

Course Code : ABM 518

Credit Hours : 2+0

Theory

Block 1: Introduction

Unit 1: Introduction to Food market: 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 2: Value Chain in Food Retailing: Value chain and value additions across the chain in food retail, Principal trends in food wholesaling and retailing, Competition and pricing in food retailing, various retailing formats, the changing nature of food stores, market implications of new retail developments, food service marketing.

Block 2: Retail Marketing Strategy

Unit 1: Marketing Mix in Food Retail Management: Merchandise Management, Pricing Strategies used in conventional and non-conventional food retailing, Public distribution system, Promotion mix for food retailing, Management of sales promotion and Publicity,



Advertisement Strategies for food retailers & Brand Management in Retailing.

Unit 2: Managing Retail Operations: Managing Retailers' Finances, Merchandise buying and handling, Logistics, procurement of Food products and Handling Transportation of Food Products.

Unit 3: 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:

- Singh S. 2011. *Fresh food retails in India: Organisation and impacts*, Allied publishers Pvt. Ltd., New Delhi
- Mahapatra. S, *Food Retail Management*, Kalyani Publishers
- Zentes, Joachim, Morschett, Dirk, Schramm-Klein, Hanna 2017. *Strategic Retail Management: Text and International Cases*, Springer Gabler.
- Agrawal N and Smith SA. 2015. *Retail Supply chain Management: Quantitative Models and Empirical Studies*, Springer; 2nd edition.

Course Title : Management of Agricultural Input Marketing

Course Code : ABM 519

Credit Hours : 2+0

Theory

Block 1: Introduction

Unit 1: Market for agricultural inputs: Nature of demand, promotional media, nature of competition, a framework for understanding the markets for inputs, agronomic potential, agro economic potential, effective demand, actual consumption.

Block 2: Marketing of Agricultural Inputs

Unit 1: Marketing of seeds: Government policy, product, trade practices in seed production, seed pricing, input costs, distribution system, management of seed distribution. proper storage of seeds, promotion, problems faced by seed industry, strategy for a seed enterprise, source of seeds, terms of transaction for seed procurements.

Unit 2: Marketing of fertilizers: Nature of Indian fertilizer market, product, fertilizer distribution, marketing cost and margins, credit, dealer selection and management, fertilizer promotion and extension, promotional program, advertising in fertilizers, emerging marketing mix in fertilizer, extension strategy for the future, marketing of biofertilizers,



strategies for fertilizer marketing.

Unit 3: Marketing of pesticides: Market profile, structure of industry, farmer behaviour, problems of farmers in pesticide purchase and usage, marketing mix, bio pesticides market development and promotion activities, problems in marketing of bio pesticides. Integrated pest management.

Unit 4: Marketing of tractors: Segments in tractor market, market share, nature of demand, buyer behaviour, role of distribution, promotion, MNC's. Marketing of credit-Nature of market, market segment, market players, marketing mix, marketing options. Strategies for input marketing-Client and location specific promotion, joint promotion, interdependence of input markets, management of demands, developmental marketing, usp, extension services, ethics in business, sustainability.

Suggested Reading

- Mahapatra. S. *Management of Agricultural Inputs*, NIPA Publishers
- Seetharaman SP.: *Agricultural Input Marketing*, Oxford & IBH Pub. Co.
- Krishnamacharyulu CSG. : *Rural Marketing: Text and Cases*, Pearson Education India Venugopal P. 2014. *Agri-input Marketing in India*, SAGE Publication; 1st Edition.



SUPPORTIVE COURSES

Course Title : Strategic Management for Agri Business Enterprises

Course Code : ABM 536

Credit Hours : 2+0

Theory

Block 1: Overview Of Strategic Management

Unit I: Introduction - Concepts in Strategic Management, Strategic Management Process; Corporate Governance, Social Responsibility and Ethics in strategic management, Environment Scanning and Industry analysis

Block 2: Strategy Formulation and Choice

Unit II: Organization appraisal and strategy formulation: organizational dynamics and structuring organizational appraisal, business models and Value chain analysis, Strategy formulation- corporate level strategies and business strategies, Generic Strategies- Types of Strategies, tools and techniques for strategic analysis.

Unit III: Turnaround and Diversification Strategies: Turnaround strategy - Management of Strategic Change, Strategies for Mergers, Acquisitions, Takeovers and Joint Ventures - Diversification Strategy

Block 3: Strategy Implementation and Control

Unit IV: Strategy implementation and control: aspects, structures, design and change: behavioural implementation-leadership, culture, value and ethics, strategic evaluation and control-an overview and techniques of strategic evaluation and control.

Unit V: Strategic issues in managing technology & innovation, entrepreneurial ventures and small businesses, Cases in strategic management

Suggested Reading

- Wheelen TL and Hunger JD. 2012. *Strategic Management & Business Policy, towards Global Sustainability*, Pearson India Edn. Thirteenth Edition
- David FR and David FR. 2016. *Strategic Management, Concept and Cases*, Pearson India Edn, Fifteenth Edition
- Thompson Jr. AA, Peteraf M and Gamble JE. 2015. *Crafting and Executing Strategy*. McGraw Hill, Irwin.
- Stead JG and Stead EW. 2014, *Sustainable Strategic Management*.



Routledge Taylor & Francis Group.

- Kazmi Azhar. 2015. Strategic Management. Mcgraw Higher Ed. 4th Edition
- Srinivasan R. 2014. Strategic Management. PHI Learning 5th Edition

Course Title : Operations Management

Course Code : ABM 537

Credit Hours : 2+0

Theory

Block 1: Introduction to Linear Programming

Unit I: Linear Programming: Objective, Assumptions, Formulation of Linear Programming Problem, Data Envelopment Analysis, Graphic Method, Simplex method, Introduction to Dynamic Programming, Transportation and Assignment Problems.

Block 2: Inventory Control and Waiting Line Models

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, and Hybrid System.

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.

Block 3: Decision making Under Risk and Uncertainty

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, stochastic models, neural networks, Markov process.

Unit V: Game Theory - Two -Person Zero-Sum Game, Simulation, Network analysis- PERT & CPM. Financial Engineering

Suggested Reading

- Taha HA. 2007. *Operations Research - An Introduction*. Prentice Hall.
- Vohra ND. 2017. *Quantitative Techniques in Management*. 5th Edition McGraw Hill.
- Wagner HM. 2005. *Principles of Operation Research*. Prentice Hall.



Course Title : Financial Management in Agribusiness

Course Code : ABM 538

Credit Hours : 2+0

Theory

Block 1: Financial Management in India

Unit I: Meaning, importance, nature and scope of financing in India, agribusiness financing in India; classification and credit need in changing agriculture scenario; finance functions, investment financing, Risk and return concept & analysis

Unit –II: Business Financing System in India, Money and Capital Markets, Regional and All -India Financial Institutions; venture capital financing and its stages, International financial management.

Block 2: Capital Budgeting

Unit III: Features, types and Techniques of capital budgeting decision. Cost of Capital, Leverage analysis, Capital structure. Theory and Policy, Sources of Long and Short term finance, Dividend Theory, Dividend Policy.

Block 3: Current Assets Management

Unit IV: Management of Working Capital, Management of Receivables, Management of cash; Cash budget, Management of collections and disbursement, Investment of Surplus cash.

Unit V: Perspectives and operational aspects of Micro finance: Definition, Scope and importance of Micro Finance, Evolution of Micro Finance in India, Micro Finance credit lending models: - Association model, Community Banking model, Credit union model, Co-operative model, SHG model, Village Banking model.

Suggested Reading

- Nelson AG & Murrey WG. 1988. *Agricultural Finance*. Kalyani Publ.
- Gordon and Natarajan. 2016. *Financial Markets and Services*. Himalaya Publishing House; Tenth Edition
- Machiraju HR. 2010. *Indian Financial System*. Vikas Publishing House
- Pandey IM. 2015. *Essentials of Financial Management*, Vikas Publishing House
- Khan and Jain. 2014. *Financial Management*. McGraw Higher Education
- Srivastav and Misra. 2010. *Financial Management*, Oxford University Press; Second edition
- Reddy GS. 2010. *Financial Management*, Himalaya Publishing House



BASIC COURSES FOR INTERNSHIP

Course Title : Communication for Management and Business

Course Code : ABM 539

Credit Hours : 3+0

Theory

Block 1: Introduction to Business Communication

Unit I: Communication process, barriers to communication, methods of communication, effective communication, assertive communication, types of organisational communication. Listening skills, active listening, barriers to effective listening, Non Verbal Communication

Unit II: Reading comprehension and techniques, rules of good writing, business letter writing, e-mail writing, crafting messages for electronic media, social media, business blogs, podcasts, employment messages

Block 3: Oral, Visual Communication and Technical Writing

Unit III: Visual presentation, oral presentation skills, conducting business meetings, brainstorming sessions and presentations, public speaking skills, Communicating across cultures, Various forms of scientific writings, theses, technical papers, reviews, manuals, research work, various parts of thesis and research communication Title page, authorship, contents, preface, introduction, review of literature, material and methods, experimental results and discussion, Technical Writing Style and Editing, Writing Introductions & Conclusions, Editing and Proof reading, Writing a review article and book summary

Block 4: Team And Interpersonal Communication

Unit IV: Developing interpersonal skills (transactional analysis), Business Etiquettes, essentials of business conversations. Business meeting agenda and minutes, circulars and sales letters, notices, overview of business proposals

Unit V: Developing self awareness (Johari Window), solving problems analytically and creatively, introduction to case method of learning, case reading, approaches and analysis

Suggested Reading

- Cardon PW. 2015. *Business Communication, Developing leaders for a networked world* Mc Graw Hill Education
- Chaturvedi PD and Chaturvedi M. 2017. *Business Communication, Skills, Concepts, Cases*



and Applications, Pearson India Education

- Bovee CL, Thill JV and Chatterjee A. 2013. *Business Communication Today*, Pearson Education, Tenth Edition

Course Title: Research Methodology for Agri Business Management

Course Code : ABM 540

Credit Hours : 3+0

Theory

Block 1: Overview of Research

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, models, types of models, process of modeling.

Unit II: Scales of measurement - nominal, ordinal, interval, ratio, Likert scale and other scales; Primary and secondary data, sources of data, Questionnaire Designing, instruments of data collection, data editing, classification, coding, validation, tabulation, presentation, analysis, development process of scale, identification of variables, variable measurement, variable standardization and dummy variables.

Block 2: Use of Softwares for Statistical Analysis

Unit III: introduction to multivariate statistical analysis techniques, Multivariate linear regression models, principal component analysis, linear discriminant analysis, factor analysis, evaluation matrices and model diagnostics for regression models. **Unit IV:** Logistic regression, decision trees, cluster analysis, random forest, GARCH, CART models, support vector machines, Forecasting techniques (AR, MA, ARMA and ARIMA models)

Block 3: Introduction to Data Science

Unit V: Definition, scope and importance, machine learning, types of machine learning, linear and nonlinear models in machine learning, introduction to deep learning, basic differences in machine learning and deep learning, concept of cloud machine learning, Big data analysis.

Suggested Reading

- Cooper DR and Schindler PS. 2006. *Marketing Research Concepts and Cases*. TMH



- Kumar R. 2014. *Research Methodology*, Sage publications, 4th Edition
- Glenn JC. 2010. *Hand book of Research Methods*. OXFORD.
- Kothari CR. 2018. *Research Methodology- Methods and Techniques*. New Age International Publishers; Fourth edition



BASIC COURSES FOR RESEARCH PROJECT

Course Title : Computer Applications for Agri Business

Course Code : ABM 541

Credit Hours : 3+0

Theory

Block 1: Basics Of Computers

Unit I: Concept of Computers- Brief History of Computers, Generation and Its Evolution, Characteristics of Computers, Main Areas of Computers and their Applications; Classification of Computers, Input-Output Devices, Memory Types (Cache, RAM, ROM), Memory Units,

Unit-II: System Software and Application Software, Open source software, introduction to computer languages, Introduction to Operating Systems – Functions, Features and Types., MS Windows and LINUX. Data Base Management System, MS Office (MS Word, MS Power Point, MS Excel, MS Access and use of various management software Like SPSS, SAS etc.

Block 2: Business Value of Internet

Unit III: The business value of internet, Intranet, extranet and Internet, Introduction to Web page design using HTML, Cloud Computing, Security and ethical challenges: Computer crime – Hacking, cyber theft, unauthorized use at work. Piracy – software and intellectual property. Health and Social Issues, Ergonomics and cyber terrorism.

Block 3: Management Information System

Unit IV: The concept of MIS–Definition, importance, Course Objective, pre- requisites, advantages and challenges; Information Needs of organization, MIS and Decision – Making. Types/Classification of Information System for organizations; Introduction to Artificial Intelligence (AI), Neural Networks, Fuzzy logical control systems.

Unit V: e-business/ e-commerce: e-business models, e-commerce processes, electronic payment systems, e-commerce trends with special reference to agri business. Applications of MIS in the areas of Human Resource Management, Financial Management, Production/Operations Management, Materials Management, Marketing Management.

Suggested Reading

- Laudon KC and Laudon JP. 2016. *Management Information Systems- Managing the digital Firm*, 14th Edition, Pearson India



- Turban, Volonino, Woods. Wali OP. 2015. *Information Technology for Management, Advancing Sustainable, Profitable Business Growth*, Wiley
- Jaiswal M and Mittal M. 2005. *Management Information System*, Oxford.

Course Title : Project Management and Agribusiness Entrepreneurship

Course Code : ABM 542

Credit Hours : 2+1

Theory

Block 1: Concept of Project Management

Unit I: Concept, characteristics of projects, types of projects, project identification, and Project's life cycle. Project feasibility- market feasibility, technical feasibility, financial feasibility, and economic feasibility, social cost-benefit analysis, project risk analysis.

Unit II: Network Methods: Meaning, Network Analysis, Critical Path Method (CPM), Programme Evaluation and Review Technique (PERT), Project scheduling and resource allocation. 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, Payback period, Project implementation; Cost overrun, Project control and information system.

Block 2: Introduction to Agri Entrepreneurship

Unit III: Concept of Agri Entrepreneurship: Objective, Introduction to agri entrepreneurship, Entrepreneurial Development Models, Successful Models in Agro Entrepreneurship Intrapreneur, Development of women entrepreneurship with reference to SHGs, Social entrepreneurship

Unit IV: Creativity, Innovation and Agro Entrepreneur: Inventions and Innovation, The Environment and Process of Creativity, Creativity and the Entrepreneur, Innovative Approaches to Agro Entrepreneurship, Business Incubation, Steps and Procedure to start a new business, Business Opportunities in different field of Agriculture and Allied Sectors.

Block 3: Support System for Agri Entrepreneurship

Unit V: Sources of Financing, Structure and Government Policy Support: Estimating Financial Requirements, Preparation of Detail Project Report, Project Appraisal, Sources of Long-Term Financing, Working Capital Financing, Venture Capitalist, Finance from Banking Institutions,

Industrial Policy Resolutions in India, Incentives and Subsidies, Schemes for Incentives, Government Organizations like SIDO, DIC, KVIC, NSIC, SIDBI, NABARD and their role, Sick Industries and their Up gradation policy measures

Suggested Reading

- Arora R and Sood SK. *Fundamentals of Entrepreneurship and Small Business Management*. Kalyani Publishers, Ludhiana.
- Desai V. 2016. *Business Planning and Entrepreneurial Management*, Himalaya Publishing House, Mumbai.
- Ramachandaran K. *Managing a New Business Successfully*. Global Business Press, New Delhi.
- Shukla MB. *Entrepreneurship and Small Business Management*. Kitab Mahal, New Delhi.
- Dandekar VM and Sharma VK. 2016. *Agri-Business and Entrepreneurship Development*. Manglam Publications, New Delhi.
- Zimmerer TW, Scarborough NM. *Essentials of Entrepreneurship and small Business Management*, 5th Edition, PHI Learning Pvt Ltd
- Panigrahi SR and Singh B. 2017. *Agro Entrepreneurship*. Scientific Publishers(India)

Course Title : Agribusiness Environment and Policy

Course Code : ABM 543

Credit Hours : 2+0

Theory

Block 1: Agribusiness in India

Unit I: Role of agriculture in Indian economy; Problems of agriculture in India; Agribusiness–definition and nature, Structure of Agriculture and linkages among sub-sectors of the agribusiness.

Block 2: Economic Reforms Affecting Agri Business

Unit II: Economic reforms: liberalization, privatization and globalization specifically affecting Agri Business; WTO Agreement on Agriculture and its compliances; changes in policies and regulations related to the sub sectors of agribusiness and its impact on agribusiness in India.

Block 3: Emerging Trends in Agri Business

Unit III: Emerging trends in farm supplies, farm production, agricultural finance, agro processing, international trade etc.; reforms in agri output markets: private markets, contract farming, futures trading in agri commodities and e-NAM, etc. Pricing of agricultural



outputs, public distribution system, imports and exports. **Unit IV:** Importance of food safety and quality management in agri business; Environmental issues and including carbon markets and Clean Development Management etc.

Unit V: Other major issues: Intellectual property rights, importance of cooperative or collective actions in present scenario with examples of mergers and acquisitions, Farmers Producer Organisations, etc.

Suggested Reading

- Barnard FL, Akridge JT, Dooley FL, Foltz JC and Yeager EA. 2012. *Agribusiness Management*, Routledge, 4th Edition
- Aswathappa K. 2014. *Essentials of Business Environment*. Himalaya Publ.
- Francis Cherunilam 2003. *Business Environment*. Himalaya Publ.
- Kodekodi GK and Viswanathan B. 2009. *Agril. Development, Rural Institution & Economic Policy*, Oxford.

Course Title : Agri Business Laws and Ethics

Course Code : ABM 544

Credit Hours : 2+0

Theory

Block 1: Indian Legal System

Unit I: Introduction to Indian legal system, The Indian Contract Act-1872: Contract meaning, types of contract, essentials of a valid contract, offer and acceptance, capacity to contract, free consent, performance of contract.

Unit-II: Law of Negotiable Instruments: Promissory Notes, Bills of Exchange,

Cheques and Bank Drafts, Endorsements, Law of Sale of Goods, Sales of Goods Act-1930-: Sale and agreement to sale, types of goods, Transfer of property in goods, mode of delivery of goods, performance of contract of sales, rights of an unpaid seller.

Unit III: Companies Act-1956: incorporation, commencement of business, types of companies, management of company, Memorandum of Association and Articles of Association, prospectus, winding of companies.

Block 2: Regulatory Environment For Agri Business

Unit IV: Essential Commodities Act, Consumer Protection Act, RTI Act, MRTP Act- major provisions and implications. Competition Act-2002, Regulatory environment for International Business



Block 3: Business Ethics

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. implementing business ethics in a global economy

Suggested Readings

- Mathur SB. 2010. *Business Law*. Tata McGraw Hill Edn. Pvt Ltd.
- Gulshan SS and Kapoor GK. 2003. *Business Law including Company Law*. 10th Ed. NewAge Publ.
- Kapoor ND. 2005. *Business Law*. S. Chand & Sons.
- Tuteja SK. 2005. *Business Law for Managers*. S. Chand & Sons.
- Tulsian PC and Tulsian B. 2015. *Business Law*. TMH, New Delhi.
- Singh Avtar. 2017. *Contract and Specific Relief*, Eastern Book Company; Twelfth edition
- Pathak A. 2015. *Legal Aspects of Business*. McGraw Hill Education. 6th Edition



COMMON COURSES

Course Title : Library and information services

Course Code : PGS-501

Credit Hours: 0+1

Objective :

To equip the library users with skills to trace information from libraries efficiently, to apprise them of information and knowledge resources, to carry out literature survey, to formulate information search strategies, and to use modern tools (Internet, OPAC, search engines, etc.) of information search.

Practical :

Introduction to library and its services; Role of libraries in education, research and technology transfer; Classification systems and organization of library; Sources of information- Primary Sources, Secondary Sources and Tertiary Sources; Intricacies of abstracting and indexing services (Science Citation Index, Biological Abstracts, Chemical Abstracts, CABI Abstracts, etc.); Tracing information from reference sources; Literature survey; Citation techniques/ Preparation of bibliography; Use of CD-ROM Databases, Online Public Access Catalogue and other computerized library services; Use of Internet including search engines and its resources; e-resources access methods.

Course Title : Technical writing and communications skills

Course Code : PGS-502

Credit Hours: 0+1

Objective

To equip the students/ scholars with skills to write dissertations, research papers, etc. To equip the students/ scholars with skills to communicate and articulate in English (verbal as well as writing).

Practical (Technical Writing)

- Various forms of scientific writings- theses, technical papers, reviews, manuals, etc.;
- Various parts of thesis and research communications (title page, authorship contents page, preface, introduction, review of literature, material and methods, experimental results and discussion);
- Writing of abstracts, summaries, précis, citations, etc.;



- Commonly used abbreviations in the theses and research communications;
- Illustrations, photographs and drawings with suitable captions; pagination, numbering of tables and illustrations;
- Writing of numbers and dates in scientific write-ups;
- Editing and proof-reading;
- Writing of a review article;
- Communication Skills - Grammar (Tenses, parts of speech, clauses, punctuation marks);
- Error analysis (Common errors), Concord, Collocation, Phonetic symbols and transcription;
- Accentual pattern: Weak forms in connected speech;
- Participation in group discussion;
- Facing an interview;
- Presentation of scientific papers.

Suggested Readings

1. Barnes and Noble. Robert C. (Ed.). 2005. *Spoken English: Flourish Your Language*.
2. *Chicago Manual of Style*. 14th Ed. 1996. Prentice Hall of India.
3. *Collins' Cobuild English Dictionary*. 1995.
4. Harper Collins. Gordon HM and Walter JA. 1970. *Technical Writing*. 3rd Ed.
5. Holt, Rinehart and Winston. Hornby AS. 2000. *Comp. Oxford Advanced Learner's Dictionary of Current English*. 6th Ed. Oxford University Press.
6. James HS. 1994. *Handbook for Technical Writing*. NTC Business Books.
7. Joseph G. 2000. *MLA Handbook for Writers of Research Papers*. 5th Ed. Affiliated East-West Press.
8. Mohan K. 2005. *Speaking English Effectively*. MacMillan India.
9. Richard WS. 1969. *Technical Writing*.
10. Sethi J and Dhamija PV. 2004. *Course in Phonetics and Spoken English*. 2nd Ed. Prentice Hall of India.
11. Wren PC and Martin H. 2006. *High School English Grammar and Composition*. S. Chand & Co.

Course Title: Intellectual property and its management in agriculture

Course Code: PGS-503

Credit Hours: 1+0

Objective

The main objective of this course is to equip students and stakeholders with knowledge of Intellectual Property Rights (IPR) related protection systems,

their significance and use of IPR as a tool for wealth and value creation in a knowledge-based economy.

Theory

Historical perspectives and need for the introduction of Intellectual Property Rights; TRIPs and various provisions in TRIPS Agreement; Intellectual Property and Intellectual Property Rights (IPR), benefits of securing IPRs; Indian Legislations for the protection of various types of Intellectual Properties; Fundamentals of patents, copyrights, geographical indications, designs and layout, trade secrets and traditional knowledge, trademarks, protection of plant varieties and farmers' rights and biodiversity protection; Protectable subject matters, protection in biotechnology, protection of other biological materials, ownership and period of protection; National Biodiversity protection initiatives; Convention on Biological Diversity; International Treaty on Plant Genetic Resources for Food and Agriculture; Licensing of technologies, Material transfer agreements, Research collaboration Agreement, License Agreement.

Suggested Readings

1. Erbis FH and Maredia K. 1998. *Intellectual Property Rights in Agricultural Biotechnology*. CABI.
2. Ganguli P. 2001. *Intellectual Property Rights: Unleashing Knowledge Economy*. McGraw-Hill.
3. *Intellectual Property Rights: Key to New Wealth Generation*. 2001. NRDC and Aesthetic Technologies.
4. Ministry of Agriculture, Government of India. 2004. *State of Indian Farmer*. Vol. V. Technology Generation and IPR Issues. Academic Foundation.
5. Rothschild M and Scott N. (Ed.). 2003. *Intellectual Property Rights in Animal Breeding and Genetics*. CABI.
6. Saha R. (Ed.). 2006. *Intellectual Property Rights in NAM and Other Developing Countries: A Compendium on Law and Policies*. Daya Publ. House.
7. The Indian Acts - Patents Act, 1970 and amendments; Design Act, 2000; Trademarks Act, 1999; The Copyright Act, 1957 and amendments; Layout Design Act, 2000; PPV and FR Act 2001, and Rules 2003; The Biological Diversity Act, 2002.

Course Title: Basic Concepts in Laboratory Techniques

Course Code: PGS-504

Credits: (0+1)

Objective To acquaint the students about the basics of commonly used



techniques in laboratory.

Practical

- Safety measures while in Lab;
- Handling of chemical substances;
- Use of burettes, pipettes, measuring cylinders, flasks, separatory funnel, condensers, micropipettes and vascupets;
- Washing, drying and sterilization of glassware;
- Drying of solvents/ chemicals;
- Weighing and preparation of solutions of different strengths and their dilution;
- Handling techniques of solutions;
- Preparation of different agro-chemical doses in field and pot applications;
- Preparation of solutions of acids;
- Neutralisation of acid and bases;
- Preparation of buffers of different strengths and pH values;
- Use and handling of microscope, laminar flow, vacuum pumps, viscometer, thermometer, magnetic stirrer, micro-ovens, incubators, sand bath, water bath, oil bath;
- Electric wiring and earthing;
- Preparation of media and methods of sterilization;
- Seed viability testing, testing of pollen viability;
- Tissue culture of crop plants;
- Description of flowering plants in botanical terms in relation to taxonomy.

Suggested Readings

1. Furr AK. 2000. *CRC Hand Book of Laboratory Safety*. CRC Press.
2. Gabb MH and Latchem WE. 1968. *A Handbook of Laboratory Solutions*. Chemical Publ. Co

Course Title: Agricultural research, research ethics and rural development programmes

Course Code: PGS-505

Credit Hours: 1+0

Objective

To enlighten the students about the organization and functioning of agricultural research systems at national and international levels, research ethics, and rural development programmes and policies of Government.

Theory

UNIT I

History of agriculture in brief; Global agricultural research system: need, scope, opportunities; Role in promoting food security, reducing poverty and



protecting the environment; National Agricultural Research Systems (NARS) and Regional Agricultural Research Institutions; Consultative Group on International Agricultural Research (CGIAR); International Agricultural Research Centres (IARC), partnership with NARS, role as a partner in the global agricultural research system, strengthening capacities at national and regional levels; International fellowships for scientific mobility.

UNIT II

Research ethics: research integrity, research safety in laboratories, welfare of animals used in research, computer ethics, standards and problems in research ethics.

UNIT III

Concept and connotations of rural development, rural development policies and strategies. Rural development programmes: Community Development Programme, Intensive Agricultural District Programme, Special group – Area Specific Programme, Integrated Rural Development Programme (IRDP) Panchayati Raj Institutions, Co-operatives, Voluntary Agencies/ Non-Governmental Organisations. Critical evaluation of rural development policies and programmes. Constraints in implementation of rural policies and programmes.

Suggested Readings

1. Bhalla GS and Singh G. 2001. *Indian Agriculture - Four Decades of Development*. Sage Publ.
2. Punia MS. *Manual on International Research and Research Ethics*. CCS Haryana Agricultural University, Hisar.
3. Rao BSV. 2007. *Rural Development Strategies and Role of Institutions - Issues, Innovations and Initiatives*. Mittal Publ.
4. Singh K. 1998. *Rural Development - Principles, Policies and Management*. Sage Publ.



