

Syllabus for Doctoral & PG Courses
Faculty of Agri Business Management

Academic Year
2019-20



सत्यं कृत्वा कुर्वन्नेव

**INSTITUTE OF AGRI BUSINESS
MANAGEMENT**
**Swami Keshwanand Rajasthan Agricultural
University Bikaner**



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“Our duty is to encourage everyone in his struggle to live up to his own highest idea, and strive at the same time to make the ideal as near as possible to the Truth.”

1. COURSE STRUCTURE

This section covers course structure for MBA (Agri Business), PhD (Agri Business) and Post Graduate Diploma in Agri Input Management (PGDAIM)

1.1. Course Structure for MBA (Agri Business): 2019-20

Semester I

Course No.	Course Title	Credit Hours
Core Courses		
ABM 511	Principles of Management and Organizational Behavior	03(3+0)
ABM 512	Managerial Economics	03(3+0)
ABM 513	Managerial Accounting & Control	03(2+1)
ABM 514	Communication for Management & Business	03(2+1)
ABM 515	Research Methodology in Business Management	03(2+1)
ABM 516	Marketing Management	03(3+0)
Basic Supporting Courses		
ABM 517	Computer for Managers	02(1+1)
Non-Credit Course		
ABN 511	Library & Information Services	01(0+1)

Semester II

Course No.	Course Title	Credit Hours
Core Courses		
ABM 521	Agri Business Environment & Policy	02(2+0)
ABM 522	Rural Marketing	02(2+0)
ABM 523	Production & Operations Management	02(2+0)
ABM 524	Human Resource Management	02(2+0)
ABM 525	Financial Management	03(2+1)
ABM 526	Business Law and Ethics	02(2+0)
Basic supporting courses (Compulsory)		
ABM 527	Management Information System	02(2+0)
ABM 528	Operations Research	03(2+1)
Seminar & Summer Internship / Industrial Attachment		
ABM 591	Seminar	01(0+1)
D. Non-Credit Course		
ABN 521	Technical Writing & Communication Skills	01 (0+1)

Semester III

Course No.	Course Title	Credit Hours
Core Courses		
ABM 531	Agri Supply Chain Management	02(2+0)
ABM 532	Strategic Management	02(2+0)
ABM 595	Summer Project	03(0+3)
Industry Oriented Elective Courses		
ABM 533	Agricultural Marketing Management	02 (2+0)
ABM 534	Quality Management	02 (2+0)
ABM 535	Commodity Markets and Futures Trading	02 (1+1)
ABM 536	Banking & Insurance Management	02 (2+0)
ABM 537	Food Retail Management	02 (2+0)
ABM 538	Management of Agro Chemical Industry	02 (2+0)
ABM 539	Seed Production Technology & Management	02 (2+0)
ABM 540	Farm Power & Machinery Management	02 (2+0)

ABM 541	Fruit and Vegetable Production & Post Harvest Management	02 (2+0)
ABM 542	Human Resource Competence and Capacity Building Systems	02 (2+0)
ABM 543	Data Science in Agri Business	02 (1+1)
5-10 courses i.e. minimum 10 and maximum 20 credit hours		

Semester IV

Course No.	Course Title	Credit Hours
Core Courses		
ABM 544	International Trade & Sustainability Governance	02(2+0)
ABM 545	Project Management & Entrepreneurship Development	02(2+0)
Comprehensive and Project Work		
ABM 593	Comprehensive Examination	02
ABM 599	Project Work	10
Non-Credit Course		
ABN 541	Disaster Management	01 (0+1)

Summary

Course	Number	Credit hours
Core Courses	16	39
Basic Supporting	3	7
Non-Credit	3	3
Seminar	1	1
Elective Course	5-10	10-20
Summer internship / Industrial Attachment	1	3
Comprehensive Examination	1	2
Project Work	1	10
TOTAL	31-36	75-85

Note:

Summer Project Work: Project work will be assigned by the company guide allotted to the students. Project report will be prepared and submitted under the supervision of the company guide and faculty guide and will be evaluated by faculty members at the time of oral presentation.

Project Work: Project work will be approved by Advisory committee and student will work under the guidance of Advisory committee.

Non-Credit Courses: Students will be evaluated in the non-credit courses after completion of the course and performance will be judged as satisfactory / unsatisfactory.

SEMESTER-I

ABM 511: PRINCIPLES OF MANAGEMENT AND ORGANIZATIONAL BEHAVIOUR: 03 (3+0)

OBJECTIVE: To provide an insight to meaning and concepts of management and Organizational behavior

CONTENTS:

UNIT I: Nature, Scope and Significance of management, Evolution of management thought, Approaches to management, functions of a manager, Planning- types of plans, steps, Objective, Process, Strategies, Policies, MBO, Organising- Structure and Process, Line staff, Authority and responsibility

UNIT II: Staffing- Recruitment and selection, Directing- Training, Communication and Motivation, Controlling- Significance, Process, Techniques, Standards and Benchmarks, Management Audit

UNIT III: Nature, Scope and significance of Organizational Behavior, Evolution and historical background of OB; Models of OB, Micro Organizational Behavior; Personality, Perception, Learning, Emotions, Attitude, Johari Window, Self-leadership

UNIT IV: Motivation: Theories of Motivation, Motivational practices at workplace, Interpersonal relationships; Transactional analysis, Leadership; leadership theories, leadership styles and effective leader, Group Dynamics; Types of groups, Group Formation and Group Decision making and Team building

UNIT V: Understanding and managing Organisational Culture, Managing organizational change, power and Political Behaviour in Organisations, Conflict Management, Negotiation and Stress Management, Concept of Organisational Development

SUGGESTED READINGS:

1. Stephen P. Robbins, Mary Coulter & Neharika Vohra. 2010. *Management*. Pearson Education.
2. Heinz Weihrich, Mark V. Cannice & Harold Koontz. 2015. *Management, A Global, Innovative and Entrepreneurial Perspective*, 14th Edition, McGraw Hill Education Pvt Ltd.
3. James G. Beierlein, Kenneth C. Schneeberger, Donald D. Osburn. 2014. *Principles of Agribusiness Management*. Fifth edition. Waveland Press
4. Neck, C. P., Houghton, J.D. and Murray E.L., 2017. *Organizational behavior*, Sage Publication India Private Limited.

ABM 512: MANAGERIAL ECONOMICS: 03 (3+0)

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

CONTENTS:

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

UNIT II: Consumer theory. Demand analysis - meaning, types and determinants of demand; demand function; demand elasticity; demand forecasting-need and techniques.

UNIT III: Production, cost and supply analysis- production function, least-cost input combination, factor productivities and returns to scale, cost concepts, cost-output relationship, short and long-run supply functions.

UNIT IV: Pricing-determinants of price - pricing under different market structures, pricing of joint products, pricing methods in practice, government policies and pricing.

UNIT V: The national income; circular flow of income: consumption, investment and saving; money-functions, demand & supply; inflation; economic growth; business cycles and business policies; business decisions under uncertainty.

SUGGESTED READINGS:

1. Baumol WJ. 2015. *Economic Theory and Operations Analysis*. 4th Edition, Prentice Hall of India.
2. Craig PH & Chris LW. 1996. *Managerial Economics*. Prentice Hall of India.
3. Dernberg TF. 1985. *Macro Economics: Concepts, Theories and Policies*. 7th Edition, McGraw Hill.
4. Koutsoyiannis A. 2003. *Modern Micro Economics*. Mac Millan Press.
5. Dwivedi DN. 2015. *Managerial Economics*. 8th Edition, Vikash Publishing House.
6. Gupta GS. 2015. *Managerial Economics*. Tata McGraw Hill.
7. Salvatore D. Srivastav R. 2015. *Managerial Economics*. 8th Edition, Oxford University Press.

ABM 513: MANAGERIAL ACCOUNTING AND CONTROL: 03 (2+1)

OBJECTIVE: To expose the students to the concepts to the concept and methods of financial and management accounting for efficient business management.

CONTENTS:

UNIT I: Financial accounting- Meaning, Need, Concepts and Conventions; Branches of Accounting, Internal and External Users of Accounting, Advantages and Limitations of Financial Accounting, Accounting Standards.

UNIT II: The Double Entry System- Its Meaning and Scope, The Journal, Cash Book, Ledger, Trial Balance, Trading Account, Profit and Loss Account, Balance Sheet, Entries and Adjustments of different heads in different Books and Accounts, Introduction of Company Accounts. Accounting software.

UNIT III: Managing 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.

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; determinations of standard cost, variance analysis – material labour and overhead.

UNIT V: Budget and budgetary control- meaning uses and limitations, budgeting and profit planning, different type of budget and their preparations sales budget, purchase budget production budget cash budget, flexible budget and master budget and zero-base budgeting. Merger & acquisitions. Tax system – GST.

SUGGESTED READINGS:

1. Khatri D., 2017. *Accounting for Management*, Tata McGraw Hill. New Delhi.
2. Khan M.Y.& Jain P.K. 2004. *Management Accounting*. Tata McGraw Hill. New Delhi.
3. Maheshwari SN &Maheshwari SK. 2018. *Financial Accounting*. 6th Edition, Vikas Publ. House.
4. Agarwal M.L. & Gupta K.L. 2018. *Cost Accounting*, 46th Edition,Sahitya Bhawan Publications.
5. Grewal T.S., 2000. *Double Entry Book Keeping*, Sultan Chand & Sons, Educational Publishers New Delhi.
6. Lal J. and Shrivastav S. 2013. *Cost Accounting*, 5th Edition, Tata McGraw Hill, New Delhi.
7. Shim J.K. & Siegel J.G. 1999. *Financial Accounting*. 2nd Edition, Schaum's Outline.
8. Jain S P and Narang K L, 2014. *Financial Accounting*. 12th Edition, Kalyani publisher.
9. Sharma R.K. and Gupta S.K., 2018. *Management Accounting* 13th Edition, Kalyani Publisher.

ABM 514: COMMUNICATION FOR MANAGEMENT AND BUSINESS: 02 (1+1)

OBJECTIVE: The course aims to make students proficient in written as well as in oral communication with focus on business related communication.

CONTENTS:

UNIT I- Introduction to communication: Communication process, barriers to communication, methods of communication, effective communication, assertive communication, types of organisational communication.

UNIT II- Speaking, listening and nonverbal communication: Use of modern business language, Basic English grammatical rules, body language, self- concept and communication, telephonic conversation, essentials of business conversations.

UNIT III- Visual and Oral communication skills: Visual presentation, oral presentation skills, conducting business meetings, brain storming sessions and presentations, public speaking skills.

UNIT IV- Business Writing Communication: rules of good writing, business letter writing, memos, fax messages, e-mail writing, reports, business meeting agenda and minutes, circulars and sales letters, notices, overview of report writing.

UNIT V- Developing managerial skills: Developing self-awareness (Johari Window), managing personal stress, solving problems analytically and creatively, developing interpersonal skills (transactional analysis)

SUGGESTED READINGS:

1. Cardon Peter W., 2015. *Business Communication, Developing leaders for a networked world*, Mc Graw Hill Education.
2. Chaturvedi P. D & Chaturvedi M., 2017. *Business Communication, Skills, Concepts, Cases and Applications*, Pearson India Education.
3. Bovee Courtland L., Thill John V. & Chaterjee Abha, 2013. *Business Communication Today*, 10th Edition, Pearson Education.
4. Bovee. 2008. *Business Communication Today*. 7th Edition, Pearson Education.
5. Brown L. 2006. *Communication Facts and Ideas in Business*. Prentice Hall.
6. Lesikar. 2004. *Basic Business Communication*. McGraw Hill.
7. Ramchandran, Lakshmi & Karthik. 2007. *Business Communication*. Macmillan.

ABM 515: RESEARCH METHODOLOGY IN BUSINESS MANAGEMENT: 03 (2+1)

OBJECTIVE: To develop an understanding of research methodology related to efficient business management.

CONTENTS:

UNIT I: Meaning, Course Objective, types, and process of research; research methodology in management- exploratory, descriptive, experimental, diagnostic, Problem formulation, setting of Course Objective, formulation of hypotheses, 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.

UNIT III: Concept of Sampling, Probability and non-probability sampling techniques including Simple Random Sampling, Stratified Sampling, Multi-stage Sampling, Systematic Sampling, Purposive Sampling, Quota sampling, judgment sampling, and convenience sampling, sample size determination, sampling and non-sampling errors.

UNIT IV: Role and uses of quantitative techniques in business decision making, Frequency Distribution, Measures of Central Tendency, Measures of Variation, Skewness and Kurtosis, Probability Distribution, correlation, simple and multiple regression, Discriminant and dummy variable analysis.

UNIT V: Index Numbers, Hypothesis testing, ANOVA, Factor analysis, cluster analysis, conjoint analysis, multi-dimensional analysis etc., Report writing: Types of report, essentials and contents of good report writing, use of software for statistical analysis

SUGGESTED READINGS:

1. Malhotra N. K. & Das S., 2015. *Marketing Research- An Applied Orientation*, 7th Edition. Pearson Education.
2. Albright Christian S, Winston Wayne & Zappe Christopher. 2005. *Data Analysis and Decision Making Using Microsoft Excel*. South-Western College Publication.
3. Kumar Ranjit. 2014. *Research Methodology- A Step-by-Step Guide for Beginners* (4th ed.), SAGE Publications.
4. George Argyrous, 2005. *Statistics for research: With a guide to SPSS* (2nd ed.): Sage Publications London.
5. Panneerselvam R. *Research Methodology* 2nd Edition, 2014, PHI Learning, New Delhi.
6. Cooper DR & Schindler PS. 2014. *Business Research Methods*. 12th Edition, McGraw Hill International Edition.
7. Kothari C. R. & Garg G. 2019. *Research Methodology: Methods and Techniques*. 4th Edition, New Age International Publishers.
8. Glenn J.C. 2010. *Hand book of Research Methods*. Oxford Book Company.

ABM 516: MARKETING MANAGEMENT: 03 (3+0)

OBJECTIVE: To develop an understanding of the basic concepts, tools, and functions of marketing.

CONTENTS:

UNIT I: Introduction and Concept/ philosophies of Marketing Management; Marketing Environment; Strategic Marketing, Marketing Mix, Market Segmentation, Targeting and Positioning; Buyer Behavior, Marketing Organization and Control.

UNIT II: Marketing Research, Marketing potential and forecasting, Marketing Information System, Classification of Products, Product levels, New Product Development, Product Life Cycle; Product Line and Product Mix management

UNIT III: Factors affecting prices; Pricing Policies and Strategies; Pricing Methods, Dealing with competition.

UNIT IV: Types of Distribution Channels; Functions of Channel Members; Channel Management Decisions.

UNIT V: Promotion Mix; Introduction to Advertising, Personal Selling, Sales Promotion, Publicity and Public Relations and Direct marketing, Branding, Packaging and labeling managing integrated marketing promotion, Customer Relationship Management, Marketing in 21st Century: Implication of recent economic conditions.

SUGGESTED READINGS:

1. Kotler P. Keller K, Koshy A. & Jha M. 2013. *Marketing Management–Analysis, Planning, Implementation and Control*. Pearson Education.
2. McCarthy 2003. *Marketing Management*. Tata McGraw-Hill.
3. Saxena R. 2009. *Marketing Management*. 4th Edition, McGraw Hill.
4. William Perreault Jr., Mc Carthy E. Jerome., 2006. *Basic Marketing: A Global Marketing Approach*, Tata McGraw Hill.
5. Ramaswamy VS & Namakumari S. 2002. *Marketing Management*. 5th Edition, Mac Millan India.
6. Gandhi J.C. 1985. *Marketing: A management introduction*, Tata Mc-Graw-Hill Publishing Company Ltd., New Delhi.

ABM 517: COMPUTERS FOR MANAGERS: 02 (1+1)

OBJECTIVE: To acquaint the students with the knowledge and use of computers and application of computers in managerial decisions.

CONTENTS:

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

UNIT II: Communication, Media, Modems & Channels - LAN, MAN & WAN - Network Topologies, TCP/IP fundamentals, Internet, Intranet and Extranet, The World-Wide Web. Wireless technologies like Wi-Fi and Bluetooth. Client Server Systems, Introduction to DNS, DHCP, FTP, HTTP. Introduction to internet and search engines; Introduction to agri-portals like agriwatch.com, agmarknet.nic.in, echaupal.com.

UNIT III: Security and ethical challenges: Ethical responsibilities of Business Professionals. Computer crime – Hacking, cyber theft, unauthorized use at work. Piracy – software and intellectual property. Privacy – Issues and the Internet Privacy. Challenges – working condition, individuals. Health and Social Issues, Ergonomics and cyber terrorism.

UNIT IV: Software – 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, Objectives of Data Base, Advantages & Disadvantages of DBMS, Role of DBA. MS Office (MS Word, MS Power Point, MS Excel, MS-Access and use of various management software's Like SPSS, SAS etc.

UNIT V: Uses of Computer in Research e.g. Marketing research, financial research, operation research, etc.

SUGGESTED READINGS:

1. Lucas. 2004. *Information Technology for Management*. McGraw Hill.
2. Norton P. 1998. *Introduction to Computers*. 2nd Edition. Tata McGraw Hill.
3. Rajaraman V. 2006. *Introduction to Information Technology*. Prentice Hall of India.
4. George Argyrous, 2005. *Statistics for Research: With a guide to SPSS* (2nd ed.): Sage Publications London.

**ABN 511: LIBRARY AND INFORMATION SERVICES – Non-Credit :
(0+1)**

OBJECTIVE: To equip the students with necessary skills for efficient use of the library and information services.

CONTENTS:

UNIT I: Introduction to library and information services at different types of Libraries & Information Centres; Role of libraries in education, research and technology transfer;

UNIT II: Organizational Setup of different types of libraries; Subject Classification Systems; Kinds of Information Sources - Primary, Secondary and Tertiary;

UNIT III: Intricacies of Abstracting and Indexing Services (Science Citation Index, Biological Abstracts, Chemical Abstracts, CABI Abstracts, etc.); Textual & Non-Textual Reference Sources & Tracing information from these Sources; Literature Survey;

UNIT IV: Citation Techniques; Preparation of Standard Bibliography; Using CD-ROM Databases; Computerized/Automated Library Services, Online Public Access Catalogue (OPAC)

UNIT V: Exploring Internet including search engines, Web based Information Sources; E-Consortium based access.

SUGGESTED READINGS:

1. Sharma C.K. and Singh K., 2005. *Library Management*, Atlantic Publishers and Distributors, New Delhi.
2. Kaushik, S.K, *A Practice Approach*, Ess Publications, New Delhi.
3. Srivastava S.N and Veena S. C., *University Library in India*, Vikas Publications, New Delhi.

SEMESTER II

ABM 521: AGRIBUSINESS ENVIRONMENT AND POLICY: 03 (3+0)

OBJECTIVE: To expose the students to the environment in which the agri-business is conducted.

CONTENTS:

UNIT I: Role of agriculture in Indian economy; problems and policy changes relating to farm supplies, farm production, agro processing, agricultural marketing, agricultural finance etc. in the country.

UNIT II: Agribusiness – definition and nature, components of agribusiness management, changing dimensions of agricultural business. Structure of Agriculture - Linkages among sub-sectors of the Agribusiness sector; economic reforms and Indian agriculture; impact of liberalization, privatization and globalization on Agri business sector.

UNIT III: Emerging trends in production, processing, marketing and exports; policy controls and regulations relating to the industrial sector with specific reference to agro-industries.

UNIT IV: Agribusiness policies- concept and formulation; and new dimensions in Agri business environment and policy. Agricultural price and marketing policies; public distribution system and other policies.

UNIT V: Agribusiness and ecosystem management, organizational ethics, corporate governance and ethical leadership. Corporate and environment issues including carbon markets and Clean Development Management (CDM).

SUGGESTED READINGS:

1. Adhikary M, 2012. *Economic Environment of Business*. S. Chand & Sons.
2. Francis Cherunilam, 2011. *Business Environment*. Himalaya Publication.
3. Barnard FL, Akridge JT, Dooley FL, Foltz JC & Yeager EA, 2012. *Agribusiness Management*, 4th Edition, Routledge.
4. Aswathappa K., 2009. *Essentials of Business Environment*, Himalaya Publications.
5. Kodekodi G.K. and Viswanathan B., 2009. *Agricultural Development, Rural Institution & Economic Policy*, Oxford University Press.
6. Acharya SS & Aggarwal NL, 2017. *Agricultural Marketing in India*. 6th Edition, Oxford & IBH.

ABM 522: RURAL MARKETING: 02 (2+0)

OBJECTIVE: To develop understanding regarding issues in rural markets like marketing environment, consumer behaviour, distribution channels, marketing strategies, etc.

CONTENTS:

UNIT I: Concept and scope of rural marketing, nature and characteristics of rural markets, potential of rural markets in India, rural V/S urban market.

UNIT II: Environmental factors - socio-cultural, economic, demographic, technological and other environmental factors affecting rural marketing. Rural finance – concept, demand, banking model etc

UNIT III: Rural consumer's behaviour - behavior of rural consumers and farmers; buyer characteristics and buying behaviour; customer relationship management, rural market research.

UNIT IV: Rural marketing strategy - Marketing of consumer durable and non-durable goods and services in the rural markets with special reference to product planning; marketing mix, product mix, pricing Course Objective, pricing policy and pricing strategy, distribution strategy. Rural retailing and modern format stores

UNIT V: Promotion and communication strategy - Media planning, planning of distribution channels, and organizing personal selling in rural market in India, innovation in rural marketing.

SUGGESTED READINGS:

1. Kashyap P., 2011. *Rural Marketing*. Pearson Education, New Delhi.
2. Kotler P. Keller K, Koshy A. & Jha M. 2013. *Marketing Management–Analysis, Planning, Implementation and Control*. Pearson Education.
3. Ramaswamy VS & Nanakumari S., 2002. *Marketing Management*. 2nd Edition, Mac Millan India.
4. Krishnamacharyulu & Ramakrishnan, 2010. *Rural Marketing: Text and Cases*. 2nd Edition Pearson Education.
5. Singh S., 2004. *Rural Marketing: Focus on Agricultural Inputs*. Vikas Publishing House.
6. Kumar D. and Gupta P., 2017. *Rural Marketing: Challenges and Opportunities*. Sage Publications.

ABM 523: PRODUCTION & OPERATIONS MANAGEMENT: 02(2+0)

OBJECTIVE: This course aims towards imparting knowledge of the basic concepts, tools and functions of production and operations management.

CONTENTS:

UNIT I: Nature and Scope of Production and Operations Management; Its relationship with Other Systems in the Organization; Factors Affecting System and Concept of Production and Operation Management; Facility location, Types of Manufacturing Systems and Layouts, Layout Planning and Analysis.

UNIT II: Productivity Variables and Productivity Measurement, Production Planning and Control, Mass Production, Batch Production, Job Order Manufacturing, Product Selection, Product Design and Development, Process Selection, Capacity planning.

UNIT III: Scheduling, Maintenance Management Concepts, Work Study, Method Study, Work Measurement, Work Sampling, Work Environment, Industrial Safety, human-machine interface, types of interface designs. Cloud operations management.

UNIT IV: An Overview of Material Management, Determination of Material Requirement, Purchase Management, Store Management, Logistics management, Material Planning and Inventory management, JIT, Safety Management.

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

SUGGESTED READINGS:

1. Bedi K., 2013. *Production and Operation Management*. 3rd Edition, Oxford University Press.
2. Panneerselvam K, 2012. *Production and Operations Management*. 3rd Edition, Prentice Hall India Learning Private Limited.
3. Chary S. N, 2017. *Production and Operations Management*. 5th Edition, McGraw Hill Education.
4. Adam & Ebert, 2006. *Production and Operations Management: Concepts, Models and Behaviour*. 5th Edition, Prentice Hall of India.
5. Buffa E.S., 2008. *Modern Production Operations Management*. 6th Edition, Wiley India.
6. Stevenson W.J., 2014, *Operations Management*, 12th Edition, McGraw-Hill.

ABM 524: HUMAN RESOURCE MANAGEMENT: 02 (2+0)

OBJECTIVE: To expose the students to the human resource management practices and their utility for managers.

CONTENTS:

UNIT I: Introduction to Human Resources Management; Human Resource Planning- Nature and Significance, Job Analysis, Job Description, job Specification, Job enlargement, Job enrichment, Job rotation, Job evaluation.

UNIT II: Recruitment and Selection Process, Induction, Training and Human Resource Development-Nature, Significance, Process and Techniques, Internal mobility including Transfers, Promotions, employee separation.

UNIT III: Performance Appraisal – Significance and methods, Compensation management, Wage and Salary Administration - Course Objective; Wage Fixation; Fringe Benefits, Incentive Payment, bonus, and Profit Sharing.

UNIT IV: Industrial Relations-Role and Status of Trade Unions; Collective Bargaining; Worker's Participation in Management, Career planning and employee retention.

UNIT V: Quality of work life, employee welfare measure, Disputes and grievance Handling Procedures; Arbitration and Adjudication; Health and Safety of Human Resources; Human Resources accounting, Human Resources outsourcing.

SUGGESTED READINGS:

1. Dessler G. & Varkkey B., 2016. *Human Resource Management*, 14th Edition, Pearson India.
2. Rao VSP., 2010. *Human Resource Management, Text and Cases*, 3rd Edition, Excel Books.
3. Ashwathapa K., 2016. *Human Resource Management, Text and Cases*. Tata McGraw Hill.
4. Kavanagh M.J., Thite M. & Johnson R.D., 2016. *Human Resource Information Systems*. Sage Publications.
5. Rao S. P., 2004. *Essentials of Human Resource Management and Industrial Relations*. Himalaya Publishing House.

ABM 525: FINANCIAL MANAGEMENT: 03 (2+1)

OBJECTIVE: To make students proficient in concepts and techniques of financial management.

CONTENTS:

UNIT I: Introduction to Financial Management, Its meaning and functions, Interface of financial management with other functional areas of a business. Measures of Return and Risk. Determinants of required rate of return, Relationship between Risk and Return. Risk Analysis and its measures.

UNIT II: Capital Structure, Determinants of size and composition of Capital Structure, Capital Structure Theories; Long term financing and Cost of Capital.

UNIT III: Working Capital Management, Determinants of Size and Composition of Working Capital, Cash and receivables management, Working Capital Management Theories, Financing of Working Capital.

UNIT IV: Financial planning and Forecasting, Financial planning for mergers & acquisition, Capital Budgeting, Undiscounted and Discounted cash flow methods of Investment Appraisal; - Urgency, Pay Back periods, ARR, NPA, IRR, Portfolio Analysis, B.C. Ratio, Sensitivity Analysis., Hybrid finance and lease finance.

UNIT V: Business Financing System in India, Securities and Stock Exchange, Money and Capital Markets, Regional and All - India Financial Institutions; Management of Financial Institutions, Management of cooperative institutions , venture capital financing and its stages, micro finance and International financial management.

SUGGESTED READINGS:

1. Pandey I.M., 2015. *Essentials of Financial Management*. Vikas Publishing House.
2. Khan M.Y. & Jain P.K., 2014. *Financial Management: Text, Problems and Cases*. McGraw Higher Education.
3. Chandra P., 2000. *Financial Management*. Tata McGraw Hill.
4. Agarwal M.R., 2002. *Financial Management*. 1st Edition, Garima Publications, Jaipur.
5. Ramachandran N. and Kakani R. K., 2005. *Financial Accounting for Management*. Tata McGraw Hill.
6. Van Horne J. C., 1997. *Financial Management and Policy*. Prentice Hall.
7. Gordon E. and Natarajan K., 2016. *Financial Markets and Services*. 10th Edition Himalaya Publishing House.
8. Reddy G.S., 2010. *Financial Management*. Himalaya Publishing House.

ABM 526: BUSINESS LAWS AND ETHICS: 02 (2+0)

OBJECTIVE: To expose the students to have an understanding of various ethical issues and laws affecting business.

CONTENTS:

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

UNIT II: Companies Act-1956: incorporation, commencement of business, types of companies, management, winding of companies, Negotiable Instruments Act.

UNIT III: Essential Commodities Act, APMC Act, Consumer Protection Act, RTI Act, MRTP Act- major provisions and implications.

UNIT IV: Factory Act, Labour laws, Industrial dispute Act.

UNIT V: Nature and importance of ethics and moral standards; corporations and social responsibilities, scope and purpose of business ethics; Ethics in business functional areas; industrial espionage; solving ethical problems; governance mechanism.

Suggested Readings

1. Mathur S B 2010. *Business Law*. Tata McGraw Hill Education. Pvt Ltd.
2. Gulshan S S& Kapoor G K. 2003. *Business Law including Company Law*. 10th Edition. New Age Publ.
3. Kapoor N D. 2005. *Business Law*. S. Chand & Sons.
4. Tuteja S. K., 2005. *Business Law for Managers*. S. Chand & Sons.
5. Tulsian, P. C., and Tulsian, B., 2015, *Business Law*. TMH, New Delhi.
6. Fernando A.C., 2012. *Business Ethics and Corporate Governance*. Pearson India Private Limited.
7. Khanka S.S., 2014. *Business Ethics and Corporate Governance*. S. Chand and Sons.

ABM 527: MANAGEMENT INFORMATION SYSTEMS: 02 (2+0)

OBJECTIVE: To develop an understanding of the basic concepts, development, functions and usage of MIS for efficient management.

CONTENTS:

UNIT I: The concept of MIS – Definition, importance, Course Objective, pre-requisites, advantages and challenges; Information Needs of organization, MIS and Decision – Making.

UNIT II: Types/Classification of Information System for organizations - Office Automation Systems, Transaction Processing Systems, Decision Support System, Executive Support System, Knowledge Based Expert System.

UNIT III: Development of MIS for an organization – The concept and stages of System Development Life Cycle.

UNIT IV: Applications of MIS in the areas of Human Resource Management, Financial Management, Production/Operations Management, Materials Management, Marketing Management.

UNIT V: Information Technology– concept, applications, advantages and pre-requisites, Choice of Information Technology, Social and Legal Dimension of IT.

SUGGESTED READINGS:

1. O'Brien, J., Marakas G.M., & Behl, R., 2017. *Management Information System*. 9th Edition, McGraw Hill Education.
2. Prasad L. M., & Prasad U., 2015. *Management Information System*. Sultan Chand and Sons, New Delhi.
3. Laudon K., & Laudon J.P., 2016. *Management Information Systems- Managing the digital Fir.*, 14th Edition, Pearson India
4. Wali O.P., 2015. *Information Technology for Management, Advancing Sustainable, Profitable Business Growth*, Wiley Publications.
5. Jaiswal M. & Mittal M., 2005. *Management Information System*, Oxford Press.

ABM 528: OPERATIONS RESEARCH: 03 (2+1)

OBJECTIVE: To acquaint the students with the applications of important operations research techniques for better understanding to solve business problems.

CONTENTS:

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.

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.

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, markow process.

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

SUGGESTED READINGS:

1. Vohra N.D., 2017. *Quantitative Techniques in Management*. McGraw Hill Education.
2. Rathindra P. S., 2010. *Operations Research: Algorithms and Applications*. 1st Edition, PHI Learning.
3. Kapoor V.K., 2011. *Operation Research: Quantitative Techniques for Management*. Sultan Chand & Sons.
4. Prabhakar P. and Pai P. P., 2012. *Operations Research*. OUP India.
5. Sharma J.K., 2012. *Operations Research: Theory and Application*. 5th Edition, Laxmi Publications.
6. Cook TM & Russell RA., 1989. *Introduction to Management Science*. Prentice Hall.
7. Taha H. A., 2014. *Operations Research - An Introduction*. 9th Edition, Prentice Hall.
8. Wagner H.M., 2005. *Principles of Operation Research*. Prentice Hall.

ABN 521: TECHNICAL WRITING AND MANAGEMENT SKILLS: 1(0+1)

OBJECTIVE: To equip the students with skills for better technical and scientific communication and also to develop managerial skills for excellence.

CONTENTS:

UNIT I- Technical Writing: 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

UNIT II- Writing of abstracts: Summaries, précis, citations etc. Use of illustrations, photographs and drawings, pagination, numbering. Editing and proof-reading. Writing a review article and book summary

UNIT III- Contemporary issues in business communication: Meetings and conference: Planning and conducting meetings, meeting process, Minutes of meeting, planning a conference, seminar, effective meetings via video conferencing, web conferencing etc

UNIT IV: Participation in Group discussion, facing an interview, types of interviews, formal presentation and team presentations. Presenting a scientific paper

UNIT V: Interpersonal skills and Group skills: Building relationships by communicating supportively, Gaining power and influence, motivating others, managing conflict, empowering and delegating, building effective teams and teamwork, leading positive change

SUGGESTED READINGS:

1. Day, Robert A. and Gastel, B., 2006. *How to Write and Publish a Scientific Paper*. 6th Edition, Cambridge University Press, U.K.
2. Matthews, Janice R. and Matthews, Robert W. 2008. *Successful Scientific Writing*. 3rd Edition, Cambridge University Press, U.K.
3. Turk, Christopher and Kirkman, John 1994. *Effective Writing*. 2nd Edition, E&FN Spon, London.
4. Lucas, S.E. 2007. *The Art of Public Speaking*. 10th Edition, McGraw-Hill.

SEMESTER III

ABM 531: AGRI SUPPLY CHAIN MANAGEMENT: 02 (2+0)

OBJECTIVE: To introduce the students to the concepts, processes and framework of agricultural supply chain management.

CONTENTS:

UNIT I: Supply Chain: Changing Business Environment; SCM: Present Need; Conceptual Model of Supply Chain Management; Evolution of SCM; SCM Approach; Traditional Agri. Supply Chain Management Approach; Modern Supply Chain Management Approach; Elements in SCM. 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.

UNIT III: Procurement Management in Agri. Supply chain: Purchasing Cycle, Types of Purchases, Contract/Corporate Farming, Classification of Purchases Goods or Services, Traditional Inventory Management, Material Requirements Planning, Just in Time (JIT), Vendor Managed Inventory (VMI).

UNIT IV: Logistics Management: History and Evolution of Logistics; Elements of Logistics; Management; Distribution Management, Distribution Strategies; Pool Distribution; Transportation Management; Fleet Management; Service Innovation; Warehousing; Packaging for Logistics, Third-Party Logistics (TPL/3PL); GPS Technology.

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

UNIT VI: 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 READINGS:

1. Altekhar R.V., 2012. *Supply Chain Management: Concepts and Cases*. Prentice Hall of India.
2. Monczka R., Trent R., & Handfield R., 2011. *Purchasing and Supply Chain Management*. Cengage Learning.
3. Van Weele A.J., 2009. *Purchasing and Supply Chain Management Analysis, Planning and Practice*. Cengage Learning.
4. Acharya, S. S., and Agarwal, N. L., 2011. *Agricultural marketing in India*. Oxford and IBH.
5. Chopra, S., Meindl, P. and Kalra, D. V., 2016. *Supply Chain Management: Strategy, Planning and Operation*. Pearson Education India.
6. Mohanty R.P., 2010. *Indian Case studies in Supply Chain Management & Other Learning Resources*. Oxford Press.
7. Chandrasekaran N., 2010. *Supply Chain Management: Process, system & Practice*. Oxford Press.
8. Singh S., 2009. *Organic Produce Supply Chains in India- Organisation and Governance*. Allied Publications.

ABM 532: STRATEGIC MANAGEMENT: 02(2+0)

OBJECTIVE: The objective of this course is to provide students a strategic orientation in conduct of the business and to develop a holistic perspective of an organization and to enable the students to analyse the strategic situation strategies in general and functional management areas. Review of various researches done in this field and their presentations will equip the students to take decisions in with holistic approach.

CONTENTS:

UNIT I: Introduction - Concepts in Strategic Management, Strategic Management Process; Levels of approaches to strategic decision making; Environment-concept, components and appraisal

UNIT II: Organization appraisal and strategy formulation - organizational dynamics and structuring organizational appraisal, SWOT analysis formulation- corporate level strategies and business strategies, Tools and techniques for strategic analysis. Generic Strategies- Strategy Formulation - Types of Strategies

UNIT III: Strategy implementation - aspects, structures, design and change: behavioural implementation-leadership, culture, value and ethics.

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

UNIT V: Functional implementation - functional strategies, plans and policies; strategic evaluation and control-an overview and techniques of strategic evaluation and control.

SUGGESTED READINGS:

1. Wheelen T.L., & Hunger J.D., 2012, *Strategic Management & Business Policy, towards Global Sustainability*. 13th Edition, Pearson Education.
2. David F. R., & David F. R., 2016. *Strategic Management, Concept and Cases*. 15th Edition, Pearson Education.
3. Thompson A., Peteraf, A. A., and Gamble, J. E., 2015. *Crafting and Executing Strategy*. McGraw Hill.
4. Stead, J. G. and Stead, E. W., 2014. *Sustainable Strategic Management*. Routledge Taylor & Francis Group.
5. Kazmi A. 2015. *Strategic Management*. 4th Edition, McGraw Hill.
6. Srinivasan R. 2014. *Strategic Management*. 5th Edition, PHI Learning.

ELECTIVE COURSES

INDUSTRY ORIENTED ELECTIVE COURSES

ABM 533: AGRICULTURAL MARKETING MANAGEMENT: 02(2+0)

OBJECTIVE: To provide the students an understanding of concepts, policies, strategies and decisions relating to marketing that can be associated with agribusiness organizations.

CONTENTS

UNIT I: Meaning and scope, agricultural marketing and economic development; Agricultural market structure – meaning, components and dynamics of market structure; agricultural marketing and economic development, functions of agricultural marketing

UNIT II: Benefits of infrastructural developments in the field of agricultural marketing; physical Infrastructure; institutional infrastructure- Public Sector Institutions (Regulatory Central/State Institutions for marketing of agricultural produce, Agencies for warehousing, Other important organisations in Agricultural Marketing Government/ Government Sponsored Autonomous Bodies), Co-operative Institutions in Agricultural Marketing

UNIT III: Product management; pricing policies; promotional management; distribution management in agricultural output marketing; marketing strategy – meaning & significance, formulation of marketing strategy, design of marketing mix, market segmentation and targeting, determinants of consumer's behavior.

UNIT IV: Marketing management of products from plant origin, products from animal origin and processed products; export potential of agro-based products

UNIT V: Marketing management of farm inputs-fertilizers, seeds, plant protection chemicals, electricity, farm machinery

SUGGESTED READINGS:

1. Acharya, S. S. and Agarwal, N. L., 2011. *Agricultural Marketing in India*. 4th Edition, Oxford & IBH.
2. Kohls R.L., &Ujh J.N., 2005. *Marketing of Agricultural Products*. 9th Edition, Prentice Hall.
3. Krishnamacharyulu C., &Ramakrishan L., 2002. *Rural Marketing*. Pearson Education.
4. Sharma P., 2010. *Agri-Marketing Management*. Daya Publishing House

ABM 534: QUALITY MANAGEMENT: 02 (2+0)

OBJECTIVE: The course will help the students to have an understanding of the quality standards in agribusiness

CONTENTS:

UNIT I: Basic concepts of quality management, importance of quality and the role of quality assurance in agribusiness.

UNIT II: TQM and business strategy. Quality control process and its relevance.

UNIT III: Quality grades and standards; overview and relevance, benefits to consumers, producers and food processors, food grades and standards for various food commodities; cereals, fruits and vegetables, meats, poultry products.

UNIT IV: Statistics relevant to quality control, quality control charts used in the food industry, process control to assure food quality, food processing.

UNIT V: Food quality standards and world food trade. HACCP, ISO9000, auditing and certification.

SUGGESTED READINGS:

1. Kemp S., 2005. *Quality Management-Demystified*, 1st Edition, Mc Graw Hill Publications.
2. Mohanty R. P. & Lakhe R. R., 2005. *Handbook of Total Quality Management*. Jaico Publishing House.
3. Besterfield D. H., 2004. *Quality Control*, 9th Edition, Pearson Prentice Hall.
4. Kanishka B., 2006. *Quality Management*, 1st Edition, Oxford University Press India.
5. Acharya S.S. & Aggarwal N.L., 2017. *Agricultural Marketing in India*. 6th Edition, Oxford & IBH.
6. Early R., 1995. *Guide to Quality Management Systems for Food Industries*. Springer Publications.
7. Jelen P., 1985. *Introduction to Food Processing*. Reston Publishing.
8. P. J. Fellows, 2016. *Food Processing Technology Principles and Practice*, 4th Edition Woodhead Publishing House.
9. Potter, N. N., 2018. *Food science*. 6th Edition, McGraw-Hill Education.
10. Singh R.P. and Heldman D.R., 2013. *Introduction to Food Engineering*. Elsevier Inc., 5th Edition.
11. Smith J.S. and Y.H. Hui, 2013. *Food Processing: Principles and Applications*, Wiley Publication.

ABM 535: COMMODITY MARKETS AND FUTURES TRADING: 02 (2+0)

OBJECTIVE: To understand the marketing procedure for commodity futures through Commodity exchanges

CONTENTS:

UNIT I: Introduction to commodity derivatives and price risk management in agricultural markets; organizational setup of exchanges and specifications of futures contracts in world's leading commodity exchanges

UNIT II: Mechanics of futures trading; hedging price risk using futures contracts; option transaction and forward transaction – concept and mechanism, price discovery mechanism and market efficiency

UNIT III: Clearinghouse and margin system; clearing, settlement and delivery of contracts

UNIT IV: Market surveillance and risk control; trading in warehouse receipts (WRs): WRs and collateralized commodity financing

UNIT V: Regulation of futures and trading practices in leading national and regional exchanges in India.

SUGGESTED READINGS:

1. Hull, J. C., 2017. *Fundamentals of Futures and Options Markets*, Pearson publication.
2. Hull, J.C. and Basu S. 2016. *Options, Futures and Other Derivatives*. 9th Edition, Pearson Publications.
3. Srivastava, R., 2014. *Derivatives and Risk Management*. 2nd Edition, Oxford University Press India.
4. Purcell W. D. 1991. *Agricultural Futures and Options: Principles and Strategies*. 2nd Edition, Mac millan Publication.
5. Khandela M.C., Agrawal R. and Agrawal S., 2009. *Financial Derivatives*. Ajmera Book Company Jaipur

ABM 536: BANKING & INSURANCE MANAGEMENT: 02 (2+0)

OBJECTIVE: This course aims at developing an understanding of the banking system and insurance with special reference to agriculture sector.

CONTENTS:

UNIT I: Financial Intermediation, Indian Financial system, Origin and Growth of Banking. RBI and its functions. Principles of Banking, Banking Law and Practice. Nationalization of Banks in India, Deposit Products, Lending Activities, Retail Banking, Wealth Management, Financing SMEs, Corporate Banking, Forex Management, Fee-Based & Subsidiary Services, Plastic Money, Role of Central Banks, Emerging Trends in Banking, Fundamentals of International Banking.

UNIT II: Introduction of Marketing, Understanding Services, Distinctive Aspects of Service Marketing, Strategies Issues in Bank Marketing, Positioning Bank Services in the Market, New Product Development, Pricing and Launching, New Distribution Channels for Bank Marketing, Communicating and Promoting Bank Services, Improving Quality and Productivity, Customer Relationship Management in Banks, Globalizing Bank Services, Opportunities and Challenges in Bank Marketing.

UNIT III: Credit Policy in Banks, Principles of Credit Management, Objectives of Credit Management, Credit Disbursal and Monitoring, Credit Deployment and Types of Borrowers, Follow up and Recovery Management, Treasury Operations, Introduction to Risk Management in Banks, Rural Banking in India, Security Considerations, Control System in Banks, Corporate Governance in Banks, Annual Reports and Statutory Audit.

UNIT IV: Introduction to Banking Operations, Front Office and Back Office Operations, Operational Controls, Demand Forecasting and Resource Allocation, Policy Framing – Deposits, Advances and Investments, Services Design and Delivery Strategies in Banks, Service Quality Metrics, Work Measurement and Quality Assurance, Payment and Settlement Systems, RTGS and Clearing House, Cash Management Services, Facilities Planning, ERP in Banks, BPR in Banks, IT Enabled Supply Chain Management, Disaster and Recovery Management.

UNIT V: Introduction to Risk, Risk Management Essentials, Measurement of Risk, Loss Exposure, Risk Management – Non-insurance Techniques, Introduction to Insurance, Principles of Insurance, Insurance Industry, Insurance Market, Insurance as Risk Management Techniques, Selection and Implementation of Risk Management Techniques.

SUGGESTED READINGS:

1. Gulati N.J., 2011. *Banking and Insurance: Principles & Practices*. 1st Edition, Excel Books, New Delhi.
2. Gordon E. & Gupta PK., 2017. *Banking and Insurance*. 1st Edition, Himalaya Publishing House.
3. Arora A. & Rana S.N., 2018. *Banking & Finance*. McGraw Hill Publication.
4. Jyotsna S. & Bhatia N., 2012. *Elements of Banking and Insurance*. 2nd Edition, PHI Learning
5. Wang J. & Rehman A. 2016. *Risk Management in Agriculture: Theories and Methods*. Science Publishing group.
6. Hardaker J. B., Huirne R.B.M., Anderson J. R., Lien G, 2004. *Coping with Risk in Agriculture*, 2nd Edition CABI Publishing,
7. Rose P. S, Hudgins S. C., 2006. *Bank Management & Financial Services*. 7th Edition, Mc-Graw-Hill.

ABM 537: FOOD RETAIL MANAGEMENT: 02 (2+0)

OBJECTIVE: The course aims at equipping the students with desired knowledge and skills for managing food retail operations.

CONTENTS:

UNIT I: Introduction to International Food market, India's Competitive Position in World Food Trade, Foreign Investment in Global Food Industry, Retail management and Food Retailing, The Nature of Change in Retailing, Organized Retailing in India, E-tailing and Understanding food preference of Indian Consumer, Food consumption and Expenditure pattern, Demographic and Psychographic factors affecting Food Pattern of Indian Consumer.

UNIT II: Value Chain in Food Retailing: 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.

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

UNIT V: Retail Sales Management: Types of Retail Selling, Salesperson selection, Salesperson training, Evaluation and Monitoring, Customer Relationship Management, Managing Human Resources in retailing, Legal and Ethical issues in Retailing.

SUGGESTED READINGS:

1. Mahapatra. S, 2017. *Food Retail Management*, 1st Edition, Kalyani Publishers.
2. Berman & Evans. 2008. *Retail Management: A Strategic Approach*. 10th Edition. Prentice Hall of India.
3. Singh, Sukhpal, 2011. *Fresh food retails in India: Organisation and impacts*, Allied publishers Pvt. Ltd., New Delhi.
4. Levy M & Weitz BW. 2004. *Retailing Management*. 5th Edition, McGraw Hill.
5. Zentes, J., Morschett, D., and Schramm K., Hanna, 2016. *Strategic Retail Management: Text and International Cases*. 3rd Edition, Springer Gabler.
6. Agrawal, N., Stephen S. A., 2015. *Retail Supply chain Management: Quantitative Models and Empirical Studies*, 2nd Revised Edition Springer.

ABM 538: MANAGEMENT OF AGRO CHEMICAL INDUSTRY: 02 (2+0)

OBJECTIVE: To familiarize the students with the agrochemicals, their structure, classification and development and management of agro-chemical industries.

CONTENTS

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

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

UNIT III: Fungicides – Classification and preliminary knowledge of commonly used fungicides; Biomagnifications of pesticides and pesticidal pollution.

UNIT IV: Introductory knowledge about development of agro-chemicals; Insecticidal poisoning, symptoms and treatment; Main features of Insecticide Act.

UNIT V: Directorate of Plant Protection, Quarantine and Storage – A brief account of its organizational set up and functions; IPM Concept – Bio-pesticides – Plant products.

SUGGESTED READINGS:

1. Dhaliwal G. S., 2016. *Essentials of Agricultural Entomology*. 2nd Edition, Kalyani Publication.
2. Hayes W.T. & Laws E. T., 1991. *Hand Book of Pesticides*. Academic Press.
3. Hayes W.T. & Laws E. T., 2010. *Hand Book of Pesticides*. 3rd Edition, Elsevier Publications.
4. Matsumura F. 1985. *Toxicology of Insecticides*. 2nd Edition. Springer Publication.
5. Rajeev K. & Mukherjee R. C. 1996. *Role of Plant Quarantine in IPM*. Aditya Books.

ABM 539: SEED PRODUCTION TECHNOLOGY AND MANAGEMENT: 02 (2+0)

OBJECTIVE: To apprise students regarding principles of efficient management of seed production and marketing.

CONTENTS:

UNIT I: Seed Technology – Role of Seed Technology, its Course Objective and goal, Seed Industry in India, National Seed Corporation – Tarai Seed Development Corporation, State Seed Corporations, National Seed Project and State Farms and their role.

UNIT II: Development and Management of Seed Programmes – Seed Village Concept, Basic Strategy of Seed Production and Planning and Organization of Seed Programme; Types of Seed Programme – Nucleus seed, Breeders seed, Foundation seed and Certified seed etc.

UNIT III: Maintenance of genetic purity – Minimum seed certification standard and Management of breeders & Nucleus seed; Management of seed testing laboratory and research and development.

UNIT IV: Management of seed processing plant, seed storage management; seed packaging and handling.

UNIT V: Seed Marketing; GM Crop seed, IPR, PBR, Patents and related issues and their impact on developing countries; Statutory intervention in the seed industry; Seed legislation and seed law enforcement, Seed act; Orientation and visit to seed production farms, seed processing Units, NSC, RSSC, RSSCA and seed testing laboratories.

SUGGESTED READINGS:

1. Agrawal R.L., 2017. *Seed Technology*. 2nd Edition, Oxford & IBH.
2. Desai B.B., Katecha P.M. & Salunkhe D.K., 2006. *Seed Handbook: Biology, Production, Process and Storage*. 2nd Edition, Marcel Dekkan Publication.
3. Kelly A F., 2013. *Seed Production of Agricultural Crops*. Scientific Publication, India.
4. McDonald M.B. Jr. & Copeland LO. 1997. *Seed Production: Principles and Practices*. Chapman & Hall.
5. Thompson Jr. 1979. *An Introduction to Seed Technology*. Leonard Hill.
6. Tomar H. S., 2003. *Seed Technology*. Aman Publishing House, Meerut (U.P.)
7. *Handbook on OECD varietal certification in India* 2014, National Designated Authority OECD Seed Scheme, Dept. of Agriculture and Cooperation, Ministry of Agriculture and farmer welfare, GOI, New Delhi 3968.
8. *Indian Minimizing Seed Certification Standards* 2013, The central seed certification board, DAC, Ministry of Agriculture and farmer welfare, GOI, New Delhi, 6058.

ABM 540: FARM POWER & MACHINERY MANAGEMENT: 02 (2+0)

OBJECTIVE: To acquaint the students with the farm mechanization status in the country and techniques for farm machinery management and marketing.

CONTENTS:

UNIT I: Various sources of farm power, their availability and utilization; Course Objective, importance and present status, level and the scope of farm mechanization.

UNIT II: Tractor and power tillage industry – model, make, capacity, production, present status and future prospects; concept of zero tillage.

UNIT III: Farm machinery selection for different size of farm size and for different agroclimatic conditions; scheduling of farm operations for higher efficiencies, indices of machine performance.

UNIT IV: Cost analysis of operations using different implements, economic performance of machines, optimization of tractor implements system and transport of farm produce.

UNIT V: Agricultural equipment industry – their production, marketing and constraints; establishment of agricultural engineering enterprises (agro service centers, etc.).

SUGGESTED READINGS:

1. Carville L.A., 1980. *Selecting Farm Machinery*. Louisiana Coop. Extn. Service Publications.
2. FAO 1984. *Agricultural Engineering in Development: Selection of Mechanization*. Agric. Service Bulletin.
3. Hunt D., 1977. *Farm Power and Machinery Management*. Iowa State Univ. Press.
4. Waters W.K., 1980. *Farm Machinery Management Guide*. Pennsylvania Agric. Extn. Service Spl. Circular No. 1992.
5. Kumar S., Kavitha T.R. and Duraisamy V.M., 2015. *A Text Book of Farm Machinery*, Thannambikkai Publications, Coimbatore.
6. Sahay J., 2010. *Elements of Agricultural Engineering*. Standard Publishers Distributors, New Delhi.

ABM: 541 FRUIT & VEGETABLE PRODUCTION AND POST HARVEST MANAGEMENT: 02 (2 +0)

OBJECTIVE: To impart knowledge regarding fruit and vegetable production and post-harvest management

CONTENTS:

UNIT I: Importance of horticultural crop, national and international fruit and vegetable production scenario.

UNIT II: Production technology of important fruit crop - Orchard establishment, basic cultural practices, plant protection measures, harvesting and post-harvest management.

UNIT III: Production technology of important vegetable crop - Nursery establishment, basic cultural practices, plant protection measures, harvesting and post-harvest management.

UNIT IV: Biotechnological approaches in fruit and vegetable improvement, Hi-tech horticulture-precision farming government policies and law related to horticultural.

UNIT V: Processing of fruit and vegetable and waste utilization.

SUGGESTED READINGS:

1. Chadha K.L. & Pareek O.P., 1993. *Advances in Horticulture*. Vols. I-IV. Malhotra Publication. House.
2. Kader A.A. 1992. *Post-harvest Technology of Horticultural Crops*. University of California. Div. of Agri. & Natural Resources.
3. Rathore N. S., G K Mathur, Chasta S. S., 2013. *Post-Harvest Management and Processing of Fruits and Vegetables*, ICAR Publications, New Delhi.
4. Jacob J.P., 2012. *Handbook on Post Harvest Management of Fruits and Vegetables*, Daya Publishing House.
5. NIIR Board of Consultants & Engineers 2016, *The Complete Technology Book on Processing, Dehydration, Canning, Preservation of Fruits & Vegetables*, 3rd Revised Edition, NIIR Project Consultancy Services.
6. Thompson K. 2003. *Fruit and Vegetables: Harvesting, Handling and Storage*, 2nd Edition, Wiley-Blackwell.

ABM 542: HUMAN RESOURCE COMPETENCE AND CAPACITY BUILDING SYSTEMS: 2(2+0)

OBJECTIVE: This course is designed to provide an in-depth understanding and enable the participants to manage capacity building processes and performance system for developing human resource.

CONTENTS:

UNIT I: Human Resource competence: - concept and rationale; processes, Organization and Management of competence and competency mapping

UNIT II: Competency modeling and competency assessment: approaches, tools and techniques, competency based human resource management applications

UNIT III: Competency based training and development: Training methods compared with objectives, learning process and facilities, Developing Group and the Climate: the social process – indicators of group development, the training climate, Trainers and Training Style: Post training support for improved performance at work.

UNIT IV: Establishing and operationalizing performance management system; measuring performance- results and behaviour; conducting performance review discussions; harnessing performance management system for performance improvement.

UNIT V: Capacity building systems in agriculture and agri business: Capacity building of farmers and agri stakeholders through e-learning, knowledge management for agri business

SUGGESTED READINGS:

1. Menninen R.L. & Viitala R., 2007. *Competence management and Human Resource Development*. Haaga-Helia University of Applied Sciences, Helsinki.
2. Kandula S.R., 2013. *Competency: Based Human Resource Management*. PHI Publications.
3. Armstrong M., 2006. *Human Resource Management Practice*. Kogan Page Publishers.
4. Andreadis, N., 2009. Learning and organizational Effectiveness: A Systems Perspective. *Performance Improvement*, **48**(1), 5-11.
5. Lengnick-Hall, C. A., Beck, T. E., & Lengnick-Hall, M. L., 2011. Developing a capacity for organizational resilience through strategic human resource management. *Human Resource Management Review*, **21**(3), 243-255.

ABM 543: DATA SCIENCE IN AGRI BUSINESS: (1+1)

OBJECTIVE: To equip students of agribusiness with knowledge, skills and attitude for using data science tools and techniques so that agribusiness get competent professionals who can strategically and successfully implement data science applications.

CONTENTS:

UNIT 1: Introduction to data science, evolution of data science, work profile of a data scientist, career in data science, nature of data science, typical working day of a data scientist, importance of data science in agribusiness; defining algorithm, big data, business analytics, statistical learning, defining machine learning, defining artificial intelligence, data mining; difference between analysis and analytics, business intelligence and business analytics, typical process of business analytics cycle,

UNIT II: current status and future of data science industry, data science competition platforms, data science companies in India and Abroad, professional societies in data science, interviews of eminent data scientists, case study on data science, basic types of business analytics framework, open source and licensed analytics softwares and programs, introduction to programming languages- R, SAS, Python and NoSQL.

UNIT III: Setting the R and R Studio environment, basic architecture of R Studio, packages and function in R Studio, defining types of data, vector, list, data frame and matrices. Introduction to R Script, R Console and R Markdown. Important packages and functions in R Studio. Various formats of importable data in R Studio. Importing files in R Studio. Exporting files from R Studio. Preparing Reports in R Studio. Observing structure of data frame in R Studio, Changing data from one format to another. Mutating data/vector. Basic plots in R Studio. Matrix of plots in R Studio. 3 D plots in R Studio. Basic statistical analysis in R Studio. Case Study on basic algorithm development in R Studio.

UNIT IV: Basic Statistical Analysis of Agribusiness Data in R Studio---Data Preparation and Missing Value Treatment, Univariate Statistics, ANOVA, Chi-Square Test, Visualization, Hypothesis testing, Correlation and Regression Analysis, Logistic Regression and Discriminant Analysis, Segmentation and Clustering, Decision Tree Analysis, Time Series Analysis and model validation and error measurements,

UNIT V: Advanced Level Analysis of Agribusiness Data in R Studio--- Nonlinear Regression, Linear and Nonlinear Optimizations, Queuing models, Factor Analysis, Structured Equation Modeling, Principle Component Analysis, Support Vector Machines, Neural Network, Text Analytics, Value at Risk Analysis, Lean Six Sigma, Process Improvement in R Studio, Game Theory in R Studio.

SUGGESTED READINGS:

1. *Deep Learning with R*. MEAP Edition, Manning Early Access Program. Version 1, 2017, Manning Publication.
2. *An Introduction to Statistical Learning with Applications in R*. Gareth James, Daniela Witten, Trevor Hastie and Robert Tibshirani. Springer Publication, 2017
3. *Machine Learning with Tensor flow: A Deeper Look At Machine Learning With TensorFlow* by Frank Millstein. 2018 Frank Millstein (P)
4. *Introduction to Data Science*. Version 3, 2012, 2013 By Jeffrey Stanton, Portions 2013, By Robert De Graaf.

SEMESTER IV

ABM 544: INTERNATIONAL TRADE AND SUSTAINABILITY

GOVERNANCE: 02 (2+0)

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

CONTENTS:

UNIT I: International trade – basic concepts, WTO and its implications for Indian economy in general and agriculture sector in particular.

UNIT II: TRIPS, TRIMS quotas, anti-dumping duties, quantitative and qualitative restrictions, tariff and non-tariff measures, trade liberalization, subsidies, Green Blue and Amber boxes, issues for negotiations in future in WTO; CDMs and carbon trade.

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

UNIT IV: India's balance of payments; inter regional Vs international trade; tariffs and trade control; exchange rate; the foreign trade multiplier.

UNIT V: Foreign demand, supply side analysis, opportunity cost, trade and factor prices, implications for developing countries, market entry methods, export procedures & documentations.

SUGGESTED READINGS:

1. Chadha G. K., 2003. *WTO and Indian Economy*. Deep & Deep Publications.
2. *Economic Survey of India*, 2018-19. Ministry of Finance, Govt. of India.
3. Vasisht A. K. & Singh A. 2003. *WTO and New International Trade Regime- Implication for Indian Agriculture*. Advance Publications.
4. Dominick S., 2007. *International Economics*. 9th Edition, John Wiley & Sons.

ABM 545: PROJECT MANAGEMENT AND ENTREPRENEURSHIP DEVELOPMENT: 02 (2+0)

OBJECTIVE: To expose the students to the fields of project management and entrepreneurship development with emphasis on grooming them to develop new projects and encouraging them to start their own ventures.

CONTENTS:

UNIT I: Concept, characteristics of projects, types of projects, project identification, and Project's life cycle.

UNIT II: Project feasibility- market feasibility, technical feasibility, financial feasibility, and economic feasibility, social cost-benefit analysis, project risk analysis.

UNIT III: 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; sensitivity Analysis, Cost overrun, Project control and information system.

UNIT V: Entrepreneurship, Significance of entrepreneurship in economic development qualities of entrepreneur, entrepreneurship development programs and role of various institutions in developing entrepreneurship, life cycles of new business, environmental factors affecting success of a new business, reasons for the failure and visible problems for business, Developing effective business plans, Procedural steps in setting up of an industry.

UNIT V: Nationale level Institutions for the promotion of Stat & Entrepreneurship: Make in India programme, Pradhan Mantri Kaushal Vikas Yojana (PMKVY), Atal Innovation Mission (AIM)Unnat Bharat Abhiyan, Support to Training and Employment Programme for Women (STEP), Stand-Up Satrt Up/India, Trade related Entrepreneurship Assistance and Development (TREAD), Jan Dhan- Aadhaar- Mobile (JAM), National Skill Development Mission, ASPIRE, Udyog Aadhar etc. State level Schemes and assistance, District level schemes and assistance, Level of Assistance, how to apply, Scope of approach MUDRA Bank ,DIC ,MSME

SUGGESTED READINGS:

1. Chandra P., 2005. *Project Management*. 6th Edition, Tata McGraw Hill.
2. Krishan G. P. & Nagarajan K., 2005. *Project Management*. New Age Publishers.
3. Hisrich R.D. & Peters M.P., 2002. *Entrepreneurship*. Tata McGraw Hill.
4. Kaplan J.M., 2016. *Patterns of Entrepreneurship*. 5th Edition, John Wiley & Sons.
5. Nandan H., 2007. *Fundamentals of Entrepreneurship Management*. Prentice Hall.
6. Ramamoorthy V.E., 2005. *Textbook of Project Management*. MacMillan.
7. Desai V., 2011. *The Dynamics of Entrepreneurial Development And Management*, 6th Edition, Himalaya Publishing House.

ABN 541: DISASTER MANAGEMENT – Non-Credit:(0+1)

OBJECTIVE: To introduce the students to the key concepts and practices of natural disaster management and to equip them to cope up with the situation.

CONTENTS:

UNIT I: Natural Disasters- Meaning and nature of natural disasters, their types and effects. Floods, Drought, Cyclone, Earthquakes, Landslides, Avalanches, Volcanic eruptions, Heat and cold Waves, Climatic Change: Global warming, Sea Level rise, Ozone Depletion

UNIT II: Man Made Disasters- Nuclear disasters, chemical disasters, biological disasters, building fire, coal fire, forest fire. Oil fire, air pollution, water pollution, deforestation, Industrial wastewater pollution, road accidents, rail accidents, air accidents, sea accidents.

UNIT III: Disaster Management- Efforts to mitigate natural disasters at national and global levels. International Strategy for Disaster reduction.

UNIT IV: Concept of disaster management, national disaster management framework; financial arrangements; role of NGOs, Community-based organizations, and media.

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UNIT V: Central, State, District and local Administration; Armed forces in Disaster response; Disaster response: Police and other organizations.

3.2. Course Structure for Ph.D. (Agri Business)

Distribution of Courses

Compulsory Courses	: 18 credit hours
Seminar	: 2 credit hours
Preliminary	: 4 credit hours
Research	: 40 credit hours

Compulsory Course

Semester	Course Title	Course	Credits
Semester I	Econometrics for Agri Business	ABM 611	2+1
	Communication for Management Teachers	ABM 612	0+2
	Research Methods I	ABM 613	2+1
	Agri Input & Output Marketing	ABM 614	3+0
Semester II	Research Methods II	ABM 621	2+1
	International Business	ABM 622	2+0
	Training & Development for Performance Effectiveness	ABM 623	2+0
Semester III	Seminar I	ABM 691	0+1
	Seminar II	ABM 692	0+1
	Preliminary Examination	ABM 631	4
Semester IV & Semester V	RESEARCH	ABM 699	40

Non-Credit Compulsory Courses: Ph. D. students may be exempted from these courses if already studied during Master's degree.

Course Number	Course Title	Credits
ABN 511	Library & Information Services	01(0+1)
ABN 521	Technical Writing & Communication Skills	01 (0+1)
ABN 522	Disaster Management	01 (0+1)

SEMESTER I

ABM 611: ECONOMETRICS FOR AGRI BUSINESS: (2+1)

NEED OF THE COURSE: The course is mainly designed to solid data base analysis of market and policy variables to back up their business strategies. The emphasis will be given on application rather than theoretical details.

CONTENTS:

1. Introduction: Correlation theory, Basic concept of regression analysis, assumptions of regression model, theory of OLS, properties of least square estimates, maximum likelihood, hypothesis testing, interval estimation, prediction in linear regression model.
2. Heteroskedasticity and autocorrelation, multicollinearity, specification errors, selection of regressors, dummy variables, autoregressive and distributed models.
3. Set of regression equations, causality and simultaneity: application.
4. Time series econometrics- stationarity, unit roots and co-integration, error- correction model, AR, MA, ARMA, ARIMA processes.
5. Qualitative dependent variables – LPM, Logit and Probit models.

SUGGESTED READINGS:

1. Koutsoyiannis A., 2001. *Theory of Econometrics*, 3rd Edition. Palgrave Macmillan.
2. Greene, W.H., 2008. *Econometric Analysis*. 6th Edition, Pearson Education.
3. Johnston, J. and Dinardo, J., 2000. *Econometric Methods*. McGraw-Hill.
4. Maddala, G.S., 2002. *Econometrics*. McGraw Hill.
5. James H. S. and Mark W. W., 2017. *Introduction to Econometrics*. 3rd Edition, Pearson Education.

ABM 612: COMMUNICATION FOR MANAGEMENT TEACHERS: (0+2)

OBJECTIVE: Communication in management education is not limited to classroom teaching. There are lot of innovative techniques to make teaching and learning interesting, practical and effective. There are various researches are done for methodological and effectiveness aspects. This course will be dealt understanding all the methods of communication for management teaching in learning by doing method and presenting the various researches done in this field.

COURSE OUTLINE:

1. Management Education: Action gaps in education and latest developments and required skills
2. Communication: Active listening, group communication, Language process
3. Presentation on readings- recorded and graded: Oral presentation & computer assisted presentations
4. Theory and techniques: Didacticism, Group work & discussion method, Simulation, facilitation skills and styles for experiential learning
5. Emotional perspective in teaching
6. Learning in management education: Experiential learning, Action Learning, Group learning
7. Simulation and games, Role Play
8. Teaching and learning through Electronic Media
9. Case method of teaching: Writing a case and teaching note
10. Critiquing a research article
11. Literature review

SUGGESTED READINGS:

1. Cardon P.W., 2015. *Business Communication, Developing leaders for a networked world*.Mc Graw Hill Education.
2. Chaturvedi P.D. & Chaturvedi M., 2017. *Business Communication, Skills, Concepts, Cases and Applications*, Pearson India Education.
3. Courtland L. Bovee, John V. Thill &Chaterjee A., 2013. *Business Communication Today*. 10th Edition, Pearson Education.

ABM 613: RESEARCH METHODS I: (2+1)

OBJECTIVE: The objective of the course is to enable research scholars in developing the knowledge and skills required to specify, evaluate and utilize different types of unstructured and semi-unstructured information. They are required to develop competence in problem formulation, hypothesis generation and method of carrying scientific research in situations where research work plays a critical role. The course is practical in nature and students are expected to learn by doing live projects and studying the latest researches in different fields related to agri business.

COURSE OUTLINE:

1. Translating problems to research issues: Selection of qualitative Vs quantitative research definitions, objectives, research methodologies rationale, sample/sources of data, data collection techniques
2. Questionnaire designing: use of measurement and scaling techniques, reliability testing.
3. Fieldwork: Data collection, gaining access and entry, ethical considerations, identifying key informants, validation and evaluation of fieldwork, data preparation, field notes and recording
4. Hypothesis Development and Theoretical Modelling.
5. Business Analytics, Business Intelligence, Types of Business Analytics, Introduction to predictive modelling/analytics.
6. Linear programming
7. Contemporary applications of marketing research

SUGGESTED READINGS:

1. Black, T.R., 1993. *Evaluating Social Science Research - An Introduction*. SAGE Publication.
2. Creswell, J.W., 1999. *Research Design - Qualitative and Quantitative Approaches*. SAGE Publication.
3. Dhondyal, S.P., 1997. *Research Methodology in Social Sciences and Essentials of Thesis Writing*. Amman Publ. House, New Delhi.
4. Gregory, Ian., 2003. *Ethics in Research*. Continuum Publications, UK.
5. Homan, Roger. 1991. *The Ethics of Social Research*. Longmans, UK.
6. Kothari, C.R., 2004. *Research Methodology - Methods and Techniques*. WishwaPrakashan, Chennai.
7. Rao K.V., 1993. *Research Methodology in Commerce and Management*. Sterling, New Delhi.
8. Singh A.K., 1993. *Tests, Measurements and Research Methods in Behavioural Sciences*. Tata McGraw- Hill.
9. Venkatasubramanian, V., 1999. *Introduction to Research Methodology in Agricultural and Biological Sciences*. SAGE Publication.

ABM 614: AGRICULTURAL INPUT & OUTPUT MARKETING: (3+0)

OBJECTIVE: Agricultural Input & Output marketing is a dynamic and competitive field where lot is to be done looking to the gap in technology existing and possible. Changes are taking place in manifolds ranging from farming practices to trading in domestic and international markets. Presence of private players, infrastructure development, impact on prices, concept of e mandietc. are becoming more important to understand in current scenario. Scholars will also study the researches and articles to understand interesting changes going on in this field.

COURSE OUTLINE:

1. Agriculture input and output marketing environment-Current status, trends, market structure, infrastructure, competition
2. Government intervention in agricultural inputs and outputs marketing
3. Buyers/users behaviour
4. Market Segmentation
5. Product and Pricing
6. Promotion and advancement in promotional strategies
7. Marketing Channels for different agri inputs and outputs
8. Evaluation of marketing costs and efficiencies
9. WTO and Indian Agriculture
10. Case Studies- Competitive marketing strategies and advancements in agricultural marketing

SUGGESTED READINGS:

1. Acharya SS & Aggarwal NL, 2017. *Agricultural Marketing in India*. 6th Edition, Oxford & IBH.
2. Krishnamacharyulu & Ramakrishnan, 2010. *Rural Marketing: Text and Cases*. 2nd Edition Pearson Education.
3. Dominick S., 2007. *International Economics*. 9th Edition, John Wiley & Sons.

SEMESTER-II

ABM 621: RESEARCH METHOD- II: (2+1)

OBJECTIVE: Once the students are equipped with the information required for interpretive research, RM II will train the students with advanced analytical tools and their uses.

COURSE OUTLINE:

1. Hypothesis testing, Analysis of variance and covariance
2. Correlation and regression
3. Discriminant and Logit analysis
4. Factor analysis
5. Cluster analysis
6. Multidimensional scaling and conjoint analysis
7. Data Mining, Data Mining Methods—Data Dredging, Data Fishing, Data Snooping and Process Mining—Business Process Discovery, Conformance Checking and Model Enhancement.
8. Arena Modelling, Applications of Statistical Softwares like SAS, Modelling with statistical softwares.
9. Report preparation and presentation
10. International Marketing Research

SUGGESTED READINGS:

1. Black, T.R., 1993. *Evaluating Social Science Research - An Introduction*. SAGE Publication.
2. Creswell, J.W., 1999. *Research Design - Qualitative and Quantitative Approaches*. SAGE Publication.
3. Dhondyal, S.P., 1997. *Research Methodology in Social Sciences and Essentials of Thesis Writing*. Amman Publ. House, New Delhi.
4. Gregory, Ian., 2003. *Ethics in Research*. Continuum Publications, UK.
5. Homan, Roger. 1991. *The Ethics of Social Research*. Longmans, UK.
6. Kothari, C.R., 2004. *Research Methodology - Methods and Techniques*. WishwaPrakashan, Chennai.
7. Rao K.V., 1993. *Research Methodology in Commerce and Management*. Sterling, New Delhi.
8. Singh A.K., 1993. *Tests, Measurements and Research Methods in Behavioural Sciences*. Tata McGraw- Hill.
9. Venkatasubramanian, V., 1999. *Introduction to Research Methodology in Agricultural and Biological Sciences*. SAGE Publication. Singh, A.K. 1993. *Tests, Measurements and Research Methods in Behavioural Sciences*. Tata McGraw- Hill.
10. Venkatasubramanian, V. 1999. *Introduction to Research Methodology in Agricultural and Biological Sciences*. SAGE

ABM 622: INTERNATIONAL BUSINESS: (2+0)

OBJECTIVE: The objective of the paper is to acquaint the students with the fundamentals of international business, its environment and complexities. The paper provides exposure to multiple dimensions of the field and imparts international perspective to business decisions.

COURSE OUTLINE:

1. Global trends in international trade and finance; dimensions and modes of IB; structure of IB environment; risk in IB; organizational structure for IB; world trading system and impact of WTO; exchange rate systems; global financial system; barriers to IB; international business information and communication.
2. Foreign market entry strategies; country evaluation and selection; factors affecting foreign investment decisions; impact of FDI on home and host countries; types and motives for foreign collaboration; control mechanisms in IB.
3. Decisions concerning global manufacturing and material management; outsourcing factors; managing global supply chain; International product life cycle, product and branding decisions; managing distribution channels; international promotion mix and pricing decisions; counter trade practices; mechanism of international trade transactions. EXIM policy of India. Export costing and pricing, Export procedures and export documentation. Export assistance and incentives in India.
4. Harmonizing accounting difference across countries; currency translation methods for consolidating financial statements; the LESSARD-LORANGE Model; cross cultural challenges in IB; international staffing decisions; compensation and performance appraisal of expatriate staff; ethical dilemmas and social responsibility issues.

SUGGESTED READINGS:

1. Rosenbloom, B., & Larsen, T. (2003). Communication in International Business-to-Business Marketing Channels: Does Culture Matter? *Industrial Marketing Management*, 32(4), 309-315.
2. Andersen, O., & Buvik, A. (2002). Firms' Internationalization and Alternative Approaches to The International Customer/Market Selection. *International Business Review*, 11(3), 347-363.
3. Charles W., L. Hill and Jain A., 2008. International Business (SIE) 6th Edition, Tata McGraw-Hill Education Pvt. Ltd.
4. K. Aswathappa, 2017. International Business. 6th Edition, Tata McGraw-Hill Education Pvt.

ABM 623: TRAINING AND DEVELOPMENT FOR PERFORMANCE EFFECTIVENESS: (2+0)

OBJECTIVE: This course is designed to provide an in-depth understanding and enable the participants to manage training processes and performance system for developing human resource.

COURSE OUTLINE:

1. Training- concept and rationale; training processes, Organization and Management of training function; Training needs assessment, competency mapping
2. Designing the training programme: attributed and factors influencing; learning process; learning styles; training climate and pedagogy; developing training modules; Training aids.
3. Training methods compared with objectives, learning process and facilities, Developing Group and the Climate: the social process – indicators of group development, the training climate, Trainers and Training Style: Personal needs of trainers, power and influence, trainers' role, trainers' style, Post training support for improved performance at work.
4. Evaluation of training-need for evaluation, principles of evaluation, criteria and approaches; return on investment in training, process of calculating ROI in training; emerging trends in training and development; new perspectives on training cross culture training, e-learning.
5. Establishing and operationalising performance management system; measuring performance- results and behaviour; conducting performance review discussions; harnessing performance management system for performance improvement.

SUGGESTED READINGS:

1. Janakiram B., 2007. *Training and Development: Indian Text edition*, Dream-tech Press.
2. Bhattacharyya D. K., 2015. *Training and Development: Theories and Applications*, SAGE Publication.
3. Pahuja Y., 2015. *Training and Development: An Essential Guide for Students & Practitioners*, Partridge India.

3.3: Course Outline for Post Graduate Diploma in Agri Input Management (PGDAIM)

SEMESTER-I

S. No.	Course Code	Course Title	Credit Hrs
1.	AIM 511	Agri Business Management	2(2+0)
2.	AIM 512	Fundamentals of Marketing	2(2+0)
3.	AIM 513	Accounting & Financial Management	2(2+0)
4.	AIM 514	Communication Skills & Personality Development	2(1+1)
5.	AIM 515	Information Technology and Computer Application	2(1+1)
6.	AIM 516	Agri Input Marketing – I	2(2+0)
7.	AIM 517	Agricultural Extension System	2(1+1)
8.	AIM 518	Human Resource & Organizational Behaviour	2(1+1)
			16

SEMESTER-II

S. No.	Course Code	Course Title	Credit Hours
1.	AIM 521	Selling and Negotiating Skills*	2(0+2)
2.	AIM 522	Sales & Distribution Management	2(1+1)
3.	AIM 523	Logistics & Supply Chain Management	2(1+1)
4.	AIM 524	Agri Input Marketing – II*	2(0+2)
5.	AIM 591	Comprehensive Examination	02
6.	AIM 592	Field Work	04
			14

Note: * These two courses to be developed and taught by DhanukaAgritech Ltd. (DAL)

SEMESTER- I

AIM 511: AGRI BUSINESS MANAGEMENT: (2+0)

Objective: To provide an insight into the basic principles of management, structure and components of agri business and its importance in Indian economy.

CONTENTS:

UNIT 1: Approaches of management; management as science, art and profession; social responsibility of management. importance of good management -Definitions of Management.

UNIT II: Management Functions: Planning- Characteristics of sound plan, steps in planning; Organising –Meaning, purpose, Staffing Process; Directing – Motivation, Ordering, Leading, Supervision, Communication; Control

UNIT III: Agribusiness – Meaning -Definition – The distinctive features of Agribusiness, Structure of Agribusiness (Input sector, Farm sector and Product sector) –Importance of Agribusiness in Indian Economy. Constraints in agribusiness management; Emerging agribusiness areas

UNIT IV: Agribusiness input sector; agribusiness output sector; economic systems of agribusiness and economic activities and analysis. Private and public agribusiness services;

UNIT V: Contemporary issues and case studies.

AIM 512: FUNDAMENTALS OF MARKETING: (2+0)

OBJECTIVES:

- To familiarize with the basic concepts, and techniques of marketing management.
- To understand the behaviour of consumers.
- To create awareness of marketing mix elements.
- To analyse and solve marketing problems in the complex and fast changing business environment.

CONTENTS:

UNIT I: Marketing Basics

Marketing and its core concepts; marketing management and its tasks; different philosophies of marketing management; marketing micro environment; marketing macro environment.

UNIT II: Major Marketing Concepts and Consumer Behaviour

Concepts and components of marketing mix; target marketing; market segmentation and positioning; market targeting; consumer buying behaviour; consumer buying decision process.

UNIT III: Managing Products

Basic concepts of a product; product mix and product line decisions; branding decisions; new product development process; innovation diffusion process.

UNIT IV: PLC and Pricing

Product life cycle strategies; meaning and significance of price; factors influencing pricing; general pricing approaches; pricing practices and strategies.

UNIT V: Distribution and Communication

Marketing channels and its functions; designing marketing channel; concepts and elements of promotion mix; basics of international marketing; basics of marketing information system.

AIM 513: ACCOUNTING AND FINANCIAL MANAGEMENT (2+0)

OBJECTIVE:To expose the student to the concept and methods of financial and management accounting and Financial Management for efficient business management.

CONTENTS:

UNIT I: Financial Accounting- Meaning, Needs, Concept & Conventions; Branches of Accounting, Internal & External Users of Accounting, Advantage and Limitation of Financial Accounting, Accounting Standard.

UNIT II: The Double Entry System- Its Meaning and Scope, The Journal, Cash Book, Ledger, Trial Balance, Trading Account, Profit & Loss Account, Balance Sheet, Introduction of Company Account.

UNIT III: Cost Accounting- Nature, Objective, Significance of Cost Accounting; Costing for Material, Labour, Overhead, Cost of Capital.

UNIT IV: Management Accounting- Meaning, Function, Scope, Utility, Limitation and Tools of Accounting, Analysis of Financial Statement- Ratios, Cash Flow and Fund Flow Analysis.

UNIT V: Financial Management- Meaning, Needs, Function, Advantage and Disadvantage; Financial Appraisal / Evaluation Technique- Discount/Non-discount Cash Flows; Net Present Values, Profitability Index, Internal Rate of Return, Pay Back Period, Working Capital Management.

AIM 514: COMMUNICATION SKILLS AND PERSONALITY DEVELOPMENT: (1+1)

OBJECTIVE: The course aims to make students proficient in written as well as oral communication with focus on business related communication. The course also aims to develop the personality for a professional career

CONTENTS:

UNIT I: Introduction to communication, Communication process, Barriers to Communication, essentials of English grammar, vocabulary and pronunciation

UNIT II: Effective Communication, types of communication in organizations, Non-Verbal Communication, Body language, Interpersonal Communication, assertive communication

UNIT III: Types of business writing *viz.*, writing business letters, types of business letters, reports, emails, resume writing

UNIT IV: Personality development, Goal setting, presentation skills, public speaking, team work and leadership qualities, decision making skills, corporate etiquettes,

UNIT V: Soft skills development-, self - reflection, steps to personal creativity, time management, stress management, handling interviews.

AIM 515: INFORMATION TECHNOLOGY AND COMPUTER APPLICATION: (1+1)

OBJECTIVES:

- Offers coverage of concepts and trends underlying current and future developments in Information technology and fundamental principles for the effective use of computer-based information systems.
- Understand the role of information and the opportunities presented by the application of information technology in directing change.
- Provide a thorough understanding of the principles and practices of using the Internet to market goods and services.

CONTENTS:

UNIT I: Fundamentals of Computing

Introduction to Information Technology (IT), Scope of IT in Business, Basics of Hardware and Software, Types of Computers, Types of Software.

UNIT II: Networks and Telecommunication

Introduction to Networking, Network Uses, Intra- and Inter- Organizational Communication, Network Types, Network Topologies, Network Devices.

UNIT III: Internet and World Wide Web

Introduction to Internet and its Applications, World Wide Web (WWW), E-Commerce, Network and Internet Security Issues.

UNIT IV: Applications of IT in Functional Areas

IT and Marketing, IT and Finance, IT and OM, IT and HRM, Enterprise Systems, Knowledge Management

UNIT V: Emerging Trends in IT

Mobile Communication, Bluetooth, Infrared Communication, Global Positioning System (GPS), Smart Cards, Other Imminent Technologies.

AIM 516: AGRI- INPUT MARKETING - I: (2+0)

OBJECTIVE: To provide the students an understanding of different marketing concepts and marketing systems in context of agricultural inputs.

CONTENTS:

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

UNIT II: History and Current status of the Global and Indian Seed Industry. Market Dynamics, Competitor Analysis of the seed industry, Acts and Legislations related to seed industry. Demand and supply of seeds; Seed marketing channels, pricing, export import of seeds; Role of NSC and State Seed Corporation. Biotechnology and its impact on Agri-input marketing-Biopesticide, Bio fertilizers, GM crops, etc.

UNIT III: Chemical Fertilizers- Production, export-import, supply of chemical fertilizers, Demand/consumption, Prices and pricing policy; subsidy on fertilizers; marketing system – marketing channels, problems in distribution; Role of IFFCO and KRIBCO in fertilizer marketing.

UNIT IV: Plant Protection Chemicals- Production, export/import, consumption, marketing system – marketing channels; Electricity/Diesel Oil- marketing and distribution system; pricing of electricity for agriculture use; subsidy on electricity. Current status of the world and Indian agro-Chemical market, Market Dynamics, Competitor Analysis of the Agro Chemical industry, Acts and Legislations related to Agro-Chemical industry.

UNIT V: Farm Machinery- Production, supply, demand, Marketing and distribution channels of farm machines; Agro-industries Corporation and marketing of farm machines / implements/Equipment.

AIM 517: AGRICULTURAL EXTENSION SYSTEM: (1+1)

OBJECTIVE: To understand the participatory learning approach for promoting agribusiness and rural development

CONTENTS:

UNIT I: Agricultural extension processes and approaches,

UNIT II: participatory rural appraisal, principles of participatory extension, tools and techniques of participatory management.

UNIT III: Farmers organizations and farmer led marketing for promoting agribusiness.

UNIT IV: Reorganization of extension management systems.

UNIT V: Socio-economic and environmental impact of agribusiness.

AIM 518: HUMAN RESOURCE MANAGEMENT AND ORGANISATIONAL BEHAVIOUR: (1+1)

OBJECTIVE: To expose the students to the human resource management practices and their utility for managers. The course also covers the basics of individual behavior and group behavior study in context of the organizational settings

CONTENTS:

UNIT I: Introduction to Human Resources Management; Human Resource Planning- Nature and Significance, Job Analysis, Job Description, job Specification, Job enlargement, Job enrichment, Job rotation, Job evaluation.

UNIT II: Recruitment and Selection Process, Induction, Training and Human Resource Development-Nature, Significance, Process and Techniques, Internal mobility including Transfers, Promotions, employee separation.

UNIT III: Performance Appraisal – Significance and methods, Compensation management, Wage and Salary Administration - Course Objective; Wage Fixation; Fringe Benefits, Incentive Payment, bonus, and Profit Sharing, collective bargaining, career planning

UNIT IV: Introduction to Individual and Group Behaviour, Values and Ethics, Personality, Perception, Learning, Emotions, Attitude, Motivation

UNIT V: Team Dynamics, Team Development, Leadership, Competencies of effective Leadership, conflict management and negotiation

SEMESTER-II

AIM 522: SALES AND DISTRIBUTION MANAGEMENT (1+1)

OBJECTIVES:

- To develop understanding of contemporary issues in sales management
- To develop an insight in personal selling
- To analyse the managerial aspects of sales force management & sales force control systems

CONTENTS:

UNIT I: Sales and Distribution Strategy

Marketing Sales and Distribution linkage, Characteristics of sales job, Myths in selling, Dyadic relationship, and Diversities in selling situation, Selling theories.

UNIT II: Selling Process and Sales Organization

Prospecting, Pre approach, Approach, Presentation, Objection Handling, Sales Close, Sales Organization Design

UNIT III: Sales force Management

Formulation of Personal Selling Strategies, Recruitment and Selection, Sales force Training, Sales force Compensation

UNIT IV: Sales force control system

Sales Quota setting, Sales Territory, Sales Budget, Sales Analysis and Audit and evaluating sales person performance

UNIT V: Contemporary issues in Sales Management

Customer relationship management; Behavior, role perception and satisfaction of sales force, Strategic role of information in sales management and Responsibilities of sales manager and sales persons.

AIM 523: LOGISTICS AND SUPPLY CHAIN MANAGEMENT: 02(1+1)

OBJECTIVES: This course aims at understanding the concept and framework of supply chain management.

CONTENTS:

UNIT I: Introduction to Supply Chain Management

SCM – Introduction, Evolution of SCM, Objectives of Supply Chain, Understanding Basic, Components of SCM, Process View of Supply Chain, Cycle View Of Supply Chain, Major Obstacles to best Supply Chain Fit, Traditional Fulfillment v/s E-Fulfillment, Benefits of SCM, Supply Chain Metrics and Supply Chain Performance.

UNIT II: Suppliers, Purchasing and Supply Chain Management, Evaluation of Suppliers and Selection Process, Supplier Relationship Management, SRM Process, Procurement Decisions, Purchasing, Objectives of Purchasing, Principles in Purchasing, Types of Purchasing, Major Bottlenecks in Purchasing, New Developments in Purchasing and Legal Implications.

UNIT III: Inventory Management, Logistics & Aggregate Planning

Inventory- Introduction, Types of Inventory, Inventory Control Systems, Introduction to Logistics, Designing Flow Management in Logistics, Key Decision in Logistics Strategy, Third Party Logistics, Demand Forecasting - A Basic Approach, Forecasting-Time Series Methods, Aggregate Planning–Main Objectives, Bullwhip Effect, Causes and consequences of Bullwhip Effect, Managing Demand in Supply Chain.

UNIT IV: Designing Supply Chain Network and SCM Strategies

Role of Distribution Network in Supply Chain, Factors Influenced by Distribution Network, Designing Distribution Network, Factors Influencing Network Design Decisions, Transportation in SCM, Achieving Supply Chain Strategic Fit, Obstacles in having Good Strategic Fit, In sourcing and Outsourcing.

UNIT V: Recent trends in Supply Chain

Lean Manufacturing, extending ‘Lean’ to Supply Chains- Six Core Concepts, EDI, Value Stream Mapping, EDI, ERP, ESCM, Kaizen, JIT, Supply Chain Balanced Scorecard. Principles of Global Sourcing, Global Sourcing Process.

3. Online Self Learning Resources:

Government of India has taken initiatives to strengthen the higher education quality across the nation with new education policy with three principles: Access, Equity and Quality. In this era of global online learning our new age students could get benefit from such online learning portals and could add more skills required for their career and professional development.

Some important official online learning platforms are hereby suggested for students as follows:

1. NPTEL Portal, Government of India: <https://nptel.ac.in/>
2. Swayam Portal: <https://swayam.gov.in/explorer>
3. Massive Open Online Courses in Agriculture or AgMOOCs- <https://www.agmoocs.in/>
4. Virtual Learning Platform from NAARM, Hyderabad: <https://naarm.org.in/VirtualLearning/vlc/>
5. Online free courses from IIM Bangalore: <https://www.edx.org/school/iimbx>
6. Global Online Learning Platform: Edx platform: <https://www.edx.org/>
7. Global Online Learning Platform: Coursera- <https://www.mooc-list.com/course/leadership-through-marketing-coursera>