

# Detailed Syllabus of PG Diploma in Agricultural Extension (PGDAE)

## **PGDAE – 01: Principles and Practices in Distance Education**

**Unit – 1: Learning methods:** Learning in Ancient India, Conditions of Learning, Theories of Learning Learning Methods, Man and Machine Ratio for Learning

**Unit – 2: Distance Education System:** Distance Education and its Needs, Systems Approach in Distance Education, Growth of Distance Education, Openness in Distance Education, Open Universities a Revolution

**Unit – 3: Communication Technologies in Distance Education:** Types of Communication, Domains of Communication, Potential Technologies, Networking for Technology Application, Technological Application by Open Universities

**Unit – 4: Characteristics of Distance Learning:** Learner as a Customer of Education, Conventional and Distance Learners, Learner Isolation, Psychological Needs of Distance Learners, Open University Approach to Distance Learners

**Unit – 5: Multimedia for Optimum Learning:** Optimum Learning, Roles of a Multimedia, Interactive Multimedia, Open University Approach, Computer as Multimedia

**Unit – 6: Philosophical Perspectives of Distance Education:** Philosophy of Distance Education, Philosophical Contribution of Distance Education, Openness and Learner Autonomy, Cumulative Effects on Open Universities, SQ3R Technique for Studying Text

**Unit – 7: Andragogical Perspectives of Distance Education:** Pedagogical Principles of Learning, Democratic Approach of Andragogy, Pedagogy and Andragogy, Andragogical Essence in Distance Education, Programme Evaluation for Quality Education

**Unit – 8: Economics of Distance Education:** Economy in Distance Education, Economy and Quality of Education, Research Priorities for Managing Economy, Open University Approach in India, Barriers to Economy – A Challenge

**Unit – 9: Management of Distance Education:** Managerial Approach in Distance Education, Managerial Components and their interdependence, Systems Approach in Distance Education, Open Universities and their Management, Management of Open and Conventional Universities.

**Unit – 10: Managing a Need based Mass Education:** Open University – A Mass Varsity, Need Assessment, Types of Educational Needs, Flexibility in Programmes, Managing Mass Education

**Unit – 11: Growth of Distance Education:** Variety of Educational Needs, Social Challenges and Gender Equality, Limitations of Conventional System, Distance Education as an Educational System

**Unit – 12: Distance Education in Developed Countries:** The Regional Perspectives of Distance Education in Europe, The Scenario of Distance Education in Canada and U.S.A., The Developments of Distance Education in Russia, The Success Story of Distance Education in China and Japan, The Practices of Distance Education in Australia and New Zealand

**Unit – 13: Distance Education in Developing Countries:** The Regional Perspectives of Distance Education in Asia, The Scenario of Distance Education in South American Continent, The Developments of Distance Education in African Continent, The Development of Distance Education in Middle East, The Practices of Distance Education in South Pacific Region

**Unit – 14: Distance Education in India and Around:** Dual Mode of Education, Growth of Open Universities in India, Scenario of Distance Education in Neighboring Countries, Issues before Distance Education in India, Issues before Distance Education in India, Future of Distance Education in India

**Unit – 15: Growth of Mega Open Universities:** Open and Distance Education as Social Practice, Development of Mega Open Universities, Status of Distance Education Across the World, Networking with Open Universities, Monitoring of Distance Education

**Unit – 16: Quality Control in Distance Education:** open University as an Industry, Quality Control ISO-9000 for Open and Distance Learning System, Learner Satisfaction – A criteria for Quality, Barriers to Quality Control

**Unit – 17: Cost Effectiveness in Distance Education:** Cost Analysis in Distance Education, Financing in Distance Education, Cost function in Distance Education, Cost Structure in Open and Distance Learning System, Cost in Open and Distance Learning System

**Unit – 18: Networking among Open Universities:** Priorities for Networking among Open Universities, Networking between Open Universities and NGO's, Networking Benefits to Dual Mode Education System, High Tech Institutional Support to ODL System, Short Term Exchange of Staff

**Unit – 19: Staff Development for Distance Education:** Staff Development, Part Time Staff Training Needs, Training of Core Staff for Technology Applications, Future Challenges for Staff Development, Staff Development – Present Scenario

**Unit – 20: Openness and Flexibility in Open University System:** Openness – Some Challenges to an Open University, Flexibility – A Modular Approach, Openness for Optimum Learning, Demerits of Openness and Flexibility, Openness in Dual Mode Institutions.

**Reference for SLM:**

1. SLM Code No. AGR – 401 of YCMOU, Nashik, Maharashtra Developed and used for M. SC. Agricultural Extension in that University. It is available in PDF form On their Website [www.YMCOU.ac.in](http://www.YMCOU.ac.in)

## **PGDAE – 02: Agricultural Extension and Farm Journalism**

- Unit – 1: Fundamentals of Extension Education:** History and Development of Extension Education, Objectives and Philosophy of Extension Education, Recent Trends in Agricultural Extension, Community Development Programme
- Unit – 2: Extension Methods Tools and Techniques:** Principles of Teaching in Extension, Teaching Methods in Extension, Andragogy and Adult Learning, Audiovisual aids for Extension Education
- Unit – 3: Rural Sociology:** Introduction to Rural Sociology, Group Organization and Rural Socialization, Structure and Functions of Society, Social Satisfaction and Interaction, Social Changes
- Unit – 4: Educational Psychology:** Concept of Educational Psychology, Learning Theories and their Impact, Intelligence and Factors Affecting Intelligence, Behaviour Role of Attitude and Interest, Decision Making
- Unit – 5: Programme Planning:** Programme Planning, Professional Abilities of Planners, Role of Extension Agents, Participatory Approach, Programme Evaluation
- Unit – 6: Administration & Management of Organization:** Nature and Purpose of Administration, Principles of Administration, Management of Extension Organization, Public and Private Organization, Privatization of Extension Services
- Unit – 7: Human Resource Development:** Concept and Principles of Human Resource Management, Personnel Management, New Analysis and Motivational Techniques, Performance Appraisal, HRD in Agriculture
- Unit – 8: Rural Leadership:** Theories of Leadership, Importance of Leadership, Qualities and Traits of Leader, Selection and Training of Leaders, Local Leaders in Agricultural Development
- Unit – 9: Training Models and Methods:** Importance and Need of Training; Phases of Training; Training Modules and Models; Types, Techniques and Method of Training; Evaluation of Training
- Unit – 10: Women in Rural Development:** Farm Women, Demographic Features of Farm Women, Farm Women in Agricultural Production, Training Needs of Farm Women, Women Empowerment
- Unit – 11: Principles of Farm Journalism:** Journalism, Farm Journalism in India, Principles of Writing, Rural Press and Periodicals, Legal Aspects of Print Media
- Unit – 12: Basic Tools of Journalism:** Writing for Farmers, Readable Writing, Illustrations in Publications, Writing for Radio and Television, Technical Writing
- Unit – 13: Editing and Printing:** Editing and Printing Instructions, Press Management, Printing Process, Quality of Printed Material, Distribution of printed Material

**Unit – 14: Visual Graphics in Farm Communication:** Definition and Concepts, Principles of Visual Graphics, Photo Treatment, Photo Printing, Picture Services

**Unit – 15: Radio and Television:** Characteristics of Radio and Television; Programme Production; Feedback and Evaluation; Innovation; Storage, Preservation and Distribution

**Unit – 16: Writing for Farmers:** Agriculture in Uttar Pradesh, Information Gathering, Information Processing, Evaluation of Farm Publication. Printing

**Unit – 17: Script Writing for Radio and Television:** Preparation for Film Interview, Information Presentation, Models of Presentation, Editing and Special Effects, Microphone and Camera

**Unit – 18: Farm Photography:** Type of Photography, Press Photography, Film and Television Photography, Scientific and Technical Photography, Commercial Photography

**Unit – 19: Information Technology:** Information Collection, Information Management, Agri-informatics, Presentation Techniques, Public Relations

**Unit – 20: Public Communication:** Models of Public Communication, Exhibition and Exhibits, Hording and Display, Social Advertisements, Evaluation

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## **PGDAE – 03: Agricultural Communication and Mass Media**

- Unit – 1: Process of Communication:** Communication Process and Agricultural Communication, Theories and Models of Communication, Principles of Communication, Communication and Learning, Dimensions of Communication, Aspects Related to Communication
- Unit – 2: Modes of Communication:** Traditional and Folk Media, Print Material, Audio and Radio, Video and Television, Digital Media
- Unit – 3: Consequences of Communication:** Diffusion of Farm Innovation, Adoption of Farm Innovation, Rejection of Farm Innovation, Media and Adoption of Innovation, Opinion Leaders & Diffusion of Farm Innovation
- Unit – 4: HRD in Communication:** Characteristics of Communicator, Training in Communication Methods, Training of Local Leaders in Agricultural Communication, Training Programme in India, Local Human Resources Utilization
- Unit – 5: Agricultural Communication in India:** Rural Institutions and Communication Pattern, Gender in Rural Communication, NGOs in Rural Communication, Communication in Tribal Communities, Communication Pattern in Rural India
- Unit – 6: Communication and Development:** Communication for Rural Development, Development Approach, Information Dissemination in Rural India, Communication Structure and Policies, Developmental Communication
- Unit – 7: Status of Agricultural Communication:** International Organizations, National Organizations, State Level Organizations, Non-Government Organizations, Corporate and Local Organizations
- Unit – 8: Effective Strategy Communication:** Evaluation of Effectiveness; Problems of Communication; Communication Planning; Organizational Communication; Persuasion, Propaganda and Publicity
- Unit – 9: Communication of Farm Innovations:** Promotion of Farm Innovations, Consequences of Diffusion of Farm Innovations, Problems in Communication of Farm Innovations, Extension Organizations
- Unit – 10: Farm advertising:** Farm advertising; Types of Farm advertising; Content – Heading, Illustrations and Layout; Testing of Farm Advertisements; Strategies of Farm Advertisements
- Unit – 11: Modes of Mass Communication:** Print Material, Radio and Television, Video Films, Exhibition, Computer
- Unit – 12: Print Media:** News Paper, Bulletins and Booklets, Farm Magazines, Feature Writing, Poster and Hoardings
- Unit – 13: Preparation for Print Media:** Steps in News Writing, Pattern of News Writing, Leads in News, Manuscript, Manuscript Editing, Readability Test

**Unit – 14: Feature Writing:** Importance of Feature Writing, Types of Feature Writing, Writing Sequence, Importance of Illustrations in Feature, Layout of Farm Literature

**Unit – 15: Writing for Audio and Video Media:** Preparation and Presentation of Audio Talk, Preparation and Presentation of Video Talk, Limitations of Audio-Visual Presentation

**Unit – 16: Audio Media:** Instructional Audio Programme, Types of Audio Programme, Process of Audio Recording, Evaluation of Audio Programme, Advantages and Limitations

**Unit – 17: Video Media:** Instruction through Television and Video; Video Script and its Development; Video Equipment and their Use; Instructional Programming; Types, Advantages and Limitations of Video

**Unit – 18: Computer Literacy and Programming:** Computer Literacy, Principles of Programmed Instructions, Types of Programmes, Evaluation of Instructional Video, Advantages and Limitations

**Unit – 19: Instructional Print Materials:** Characteristics of Instructional Text, Preparation for Writing, Teaching Concepts and Instructional Text, Adult Learning theories and Instructional Text, Writing of an Instructional Text

**Unit – 20: Dimensions of Modern Communication:** Non-verbal Communication, Two Way Communication, Distance Learning, Tele Teaching, Internet

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**PGDAE – 04:            Agricultural Information Technology**

**Unit – 1: Computer System and Development:** Definition and Applications of Computers, History and Development of Computers, Types of Computers, Bits and Bytes

**Unit – 2: Computer Hardware:** Anatomy of Computer, Central Processing Unit (CPU), Peripheral Devices

**Unit – 3: Computer Software:** What is Software, Operating Systems (OS), Programming Languages, Computer Programming, Computer Viruses

**Unit – 4: Software Applications for Office Use:** Word Processing, Desk Top Publishing (DTP) and Printing, Spreadsheet Application, database Application

**Unit – 5: Telecommunication and Computer Networking:** Network Applications, Local Area Network (LAN), Wide Area Network (WAN), Network Devices and Media, Network Protocol

**Unit – 6: Internet Technology:** What is Internet, Use of internet, Requirement for internet Connection, How to Connect Internet, How internet Works

**Unit – 7: World Wide Web:** World Wide Web, Web Browsers, Searching Information on Web, Web Multi Media, Indian Agriculture Websites

**Unit – 8: Communication and Electronic Web:** Fax, Voice and Information Services; Electronic Mail (E-mail), Video Conferencing, Factors Affecting data Communication

**Unit – 9: Introduction to Multi Media:** What is Multimedia, Components of Multimedia, Multimedia Database Management System, Multimedia Computer, Multimedia Applications

**Unit – 10: Information Technology in Business:** Modern Information Processing; E-commerce Site Development; E-commerce Business Chain; Marketing , Advertisement and Sale

**Unit – 11: Agri-Informatics and Agri-Polyclinics:** Modern Agri-Informatics, Model Agri-Polyclinics, Working of Agri-Informatics and Polyclinics, Agri-Informatics Services, Agri-Polyclinics Services

**Unit – 12: Geographical Information System and MIS:** Geographical Information System (GIS), Management Information System (MIS), GIS and Participatory Rural Appraisal, GIS and Watershed Management, MIS and Decision Making

**Unit – 13: Farm Information Management:** Input Management, Production Process Management, Output Management, Data Documentation and Interpretation, Farm Decision Support System, Weather forecasting

**Unit – 14: Electronic Commerce in Agriculture:** Electronic Marketing, Working of Electronic Marketing, Indian Culture and Electronic Business, High-tech agriculture and E-Commerce, WTO and E-Commerce

**Unit – 15: Personal, Legal and Ethical Issues in I.T.:** Computer and Your Health, computer Ethics, Intellectual Property Rights, Computer Crimes, Business Issues in Computer Networking, Internet Technology in Agriculture

**Unit – 16: I.T. in Agricultural Production:** I.T. in Land Use Planning, I.T. in Crop Cultivar Selection, I.T. in Plant Nutrition, I.T. in Plant Protection, I.T. in Post-harvest Technology

**Unit – 17: I.T. in Agricultural Research Management:** I.T. in Agricultural Research, I.T. in Prioritization of Research, I.T. in Research Communication, I.T. in Research Documentation, I.T. in Research Dissemination

**Unit – 18: I.T. in Agricultural Education Management:** I.T. in Agricultural Education, I.T. in Education Planning and Development, I.T. in Human Resource Management, I.T. in Reforms in Education System, I.T. in Online Education

**Unit – 19: I.T. in Agricultural Extension Management:** I.T. in Resource Documentation, I.T. in Methods of Extension, I.T. in Farming systems, I.T. in Technical Knowledge Backup, I.T. in Resource Utilization and Management

**Unit – 20: I.T. in Agro-based Rural Development:** I.T. in Agro-based Industries, I.T. in Watershed Management, I.T. in Wasteland Management, I.T. in Rural Production Enterprises, I.T. in Agro-Marketing Systems

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## **PGDAE – 05: Research Methods and Statistical Analysis**

- Unit – 1: Research Methods** – An Introduction: Meaning and Objective of Research, Types of Research, Research and scientific Methods, Research Process, Problems Encountered
- Unit – 2: Basic Principles of Research Methods:** Motivating Factors in Research, Scope of Research, Limitations in Scientific Research, Type of Research for Agriculture, General Phases of Scientific Procedure
- Unit – 3: Defining the Research Problems:** Research Problems and its Scope, Selection of Research Problems, Techniques involved in Defining Problems, Research Proposal Steps, Illustration of Research Problems
- Unit – 4: Research Design:** Need for Research Design, Features of a Good Research Design, Important Concepts of Research Design, different Research Design, Basic Principles of Experimental Designs
- Unit – 5: Plan of Study:** Delimitation of Scope of Investigation, Choice of Research Topic, Classification of Data, Sequence of Study, Sources of Information
- Unit – 6: Sampling Methods:** Complete enumeration, Types of Sampling Designs, Sampling and Non sampling Errors
- Unit – 7: Methods of Field Observation:** Formulation of Hypotheses and Observation, Field Observation, Aids in Field Observation, Reporting Observation, Errors in Observation
- Unit – 8: Methods of Data Collection:** Types of Data, Data Collection Methods, Major Aspects in the Design of Questionnaire, Problems in Communication, Organization of Data from Questionnaire
- Unit – 9: The Interview:** Major Purpose of Research Interview, Advantages and Limitations, Types of Interview, Some Techniques of Interviewing, Interview Guide, References
- Unit – 10: Project Assessment and Evaluation:** Basis of Assessment, Purpose and Goals of Evaluation, Theoretical Basis of comprehensive Evaluation, Evaluation Models and Approaches, Reporting the Assignment
- Unit – 11: Processing and Analysis of data:** Processing, Operations and Data Classification; Variables and Attributes; Frequency Distribution; Tabulation of Statistical Data
- Unit – 12: Testing of Hypotheses:** Hypothesis and its Definition, Types of Hypothesis, Procedure of Hypothesis Testing, Types of Tests and Limitations of Hypothesis
- Unit – 13: Statistical Concepts:** Measures of Typical Sizes, Variability, Correlation and Regression, Non Parametric Tests
- Unit – 14: Scaling Techniques:** Scales for Measuring Social Status, Scaling Techniques, ‘T’ Scores, Likert Scale, Reliability of Test, Validity of Test Scores
- Unit – 15: Graphic Presentation:** Rectangular Co-ordinate Graphs, Frequency Distribution Graphs, Diagrams, Flowcharts

**Unit – 16: Analysis of Variance and Covariance:** Analysis of Variance and Assumptions, Types of Classification of Data, Analysis and Interpretation of Data, Analysis of Covariance, Need and Use of Covariance Technique, Analysis and Interpretation of ANCOVA

**Unit – 17: Multivariate Analysis:** Concept of Multivariate Analysis, Multiple Correlation Analysis, Discriminate Function,  $D^2$  Analysis and Interpretation of Results

**Unit – 18: Path, Content and Factor Analysis:** Path Analysis, Content Analysis, Factor Analysis

**Unit – 19: Package for Data Analysis:** Need of Software Package for Data Analysis, Software Package for Data Analysis, SPSS Packages

**Unit – 20: Scientific Report Writing:** Scientific Writing, Types of Scientific Reports, Thesis and Dissertation Writing

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