Ph.D. Syllabus

2 + 1

ADVANCES IN AGRICULTURAL EXTENSION

EXT-601 Objective

By the End of the course student will be able to

- Critically analyze different Agricultural Extension approaches
- Understand Agricultural Knowledge Information System (AKISs) ITK
- Understand Advances in Extension Cyber extension, ICT enabled extension services; Market Led Extension, Public Private Partnership, Mainstreaming gender in extension organizational Innovations.
- Visualize implications of WTO AOA and develop extension strategies.
- Understand extension reforms and Farmer Field Schools Decentralized Decision Making, bottom up planning, ATMA, FSBE & CIGs etc., ATIC, IVLP & Kisan Call Centres

Theory

UNIT – I

Approaches of Agricultural Extension: A critically analysis of different approaches of Agricultural extension. Importance and relevance of indigenous knowledge system, identification and documentation of ITK, Integration of ITK system in research formulation, Concept of Agricultural Knowledge and Information System, Training of Stakeholders of AKIS. **UNIT – II**

Cyber Extension - Concept of cyber extension, national and international cases of extension projects using ICT and their impact of agricultural extension, alternative methods of financing agricultural extension – Scope, limitations and experience and cases. Research- Extension – Farmer – Market linkage: Importance, Scope, Implications etc., Market – Led Extension, Farmer – Led Extension, Concept of Farm Field School, Farm School, Public – Private Partnership: Meaning, Models, Identification of various areas for partnership. Stakeholder's analysis in Extension. Main

streaming gender in Extension – Issues and Prospects.

UNIT – III

Implications of WTO – AOA for extension services, re-orientation of extension services for agribusiness and marketing activities, GOI-NGO collaboration to improve efficiency of extension.

UNIT – IV

Extension and contemporary issues: Extension and issues related to rural poverty. Privatization of Extension. Intellectual Property Rights (IPRs). Extension Reforms in India – Decentralized decision making, Bottom up planning, Farming System and Situation based Extension Delivery System, Extension delivery through Commodity Interest Groups. Organization innovations in Extension – ATIC, IVLP, Kissan Call Centres.

Practical

Analysis of ITK systems, cases on integration of ITK and formal research system, Analysis of cases on cyber extension and privatization of extension. Analysis of ATMA and SREP. Practicing bottom up planning. Visit to Public-Private-Farmer partnership. Learnings from Food and Nutritional Security and bio-diversity Projects and Programmes.

EXT - 602ADVANCED DESIGNS AND TECHNIQUES IN SOCIAL SCIENCERESEARCH2 + 1

Objective

By the end of the course student will be able to

- Develop & Standardize Attitude scale using different techniques of attitude scale construction.
- Develop skills of using Projected & Semi Projected Techniques, Computer Package analysis and PRO Tools in Extension Research.

Theory

UNIT – I

Scaling Technique – meaning, principles, steps and quality, techniques of attitude scale construction - Paired comparison, Equal appearing intervals, Successive Intervals, Summated ratings, Sociogram analysis, Scale discrimination technique, Reliability and Validity of Scales. Sociometrics, content analysis, case studies, Q-sort techniques, Semantic different technique.

UNIT – II

Projective and Semi projective techniques, Critical incident techniques, Computer packages for analysis - usage in Extension Research. Knowledge scale measurement. Participatory tools and techniques in behavior Research – Data collection and Evaluation. Impact analysis, e-date collection and information analysis.

Practical

Practice in constructing a scale and use of scale in various situations. Reliability and validity of the scales developed, Application of Semi Projective and Projective techniques. Content analysis, case studies. Practicing participatory tools and techniques. Hands on experience on Computer Preparation and Data Collection instruments, review of previous studies.

EXT - 603 **ADVANCES IN TRAINING TECHNOLOGY** 2 + 1**Objective**

By the end of the course student will be able to

- Plan and design a training programme •
- Plan & Develop effective training sessions
- Manage difficult situations while organizing training programmes
- Use different advanced participatory training methods

Theory

UNIT – I

Paradigm shift in training – learning scenario, Training Approaches – Experiential learning – laboratory – organization development (system) approaches; Training Design, Designing an effective training programme, harmonizing training needs Course Objective, content and methods.

UNIT – II

Designing an effective training session – the semantics involved, Designing experiential training sessions, simulation exercises, and openness in training transaction – managing dilemmas, ambivalence and conflicts and confusion (for both trainers and trainees),

UNIT – III

Recent Training Techniques for understanding and facilitation team building, group dynamics, motivation and empowerment, laboratory methods: micro-lab process work, and sensitivity training, Psychological instruments as training tools: TAT, Inventories, Cases etc.

UNIT – IV

Participatory Training Techniques- Lecture, Brainstorming, Group discussion and Training Games. Role Play, Psycho-drama, Coaching, Counseling etc., Trainer's roles and dilemmas, Factors effecting Training Effectiveness and Training Evaluation.

Practical

Techniques of participatory training need assessment. Formulation of Course Objective, design of training programmes. Simulation exercises. Participatory training methods – Role Play & Brainstorming, Group discussion and Counseling and Conducting experiential learning sessions. Training evaluation – Techniques of knowledge, skill & Attitude evaluation. Visit to training institutions and study of training technologies followed.

EXT - 604 ORGANIZATIONAL DEVELOPMENTS 2 + 1

Objective

By the end of the course student will be able to

• Understand & Study the Organization in terms of types, Characteristics, Needs, Motives,

Organization behavior, Organization Communication, Organization development and Individual behavior in organization.

• To analyze the factors effecting organizational effectiveness and distinguish between functional and non functional organization.

Theory

UNIT – I

Introduction to organizations: Concept and Characteristics of organizations, Organizational Behaviour – Context and concept – levels of organizations – formal and informal organizations, Theories of organizations: Nature of organizational theory – classical theories – features of Bureaucracy – administrative theory and Scientific management – Neo-classical theories – the human relations movement – modern theory.

UNIT – II

Systems approach to study organization needs and motives – Attitude, values and ethical behavior – alienation and work – work motivation – communication and interpersonal behavipor – organization communication – leadership behavior – decision making, problem solving techniques – organizational climate – change proneness and resistance to change, Organizational change, Organizational structure – Process in organizing – Dimension of Motivation Climate.

UNIT – III

Departmentation – Span of Management – Delegation of authority – Centralization and decentralization – line and staff organization – functional organization – divisonalization – Project organization – Matrix organization – free form organization – top management structure. **UNIT – IV**

Individual behavior in organization. Fundamentals of Human relations and Organizational behavior, Groups and terms – Organizational culture and performance. Dynamics of Organization behavior – leadership conflict situations and inter group behavior – Organizational Development – Factors effecting organization effectiveness. Creativity, leadership, motivation and organization development.

Practical

Analysis of organization in terms of process – attitudes and values, motivation, leadership. Simulation exercises on problem-solving – Study of organizational climate in different organizations. Study of organizational structure of development departments, Study of departmentalization, span of control delegation of authority, decisions making patterns, Study of individual and group behavior at work in an organization. Conflicts and their management in an organization. Comparative study of functional and non-functional organizations and drawing factors for organizational effectiveness.

EXT – 605 ADVANCED INSTRUCTIONAL TECHNOLOGIES 2 + 1 Objective

By the end of the course student will be able to

- Understand Agricultural Education Scenario in the country and Curriculum development process
- Plan & Prepare and present course outline, Lesson Plan & Skill plan
- Develop appropriate Teaching & Learning Styles
- Use innovative instructional aids & methods

Theory

UNIT – I

Concepts in Instructional Technology, Scope of Instructional Technology. History of agricultural education in India. Guidelines for curriculum development in Agricultural Universities. Curriculum design development.

UNIT – II

Course outline, Lesson plans for theory and practicals. Teaching and learning styles. Theories of learning. Cognitive levels. Instructional Course Objective. Motivation of students.

UNIT – III

Instructional Methods. Experiential learning cycle. Innovative Instructional Aids. Computer Assisted Instruction. Programmed instruction technique. Team Teaching. E – Learning, Art of Effective Communication. Distance education. Student evaluation – Question Bank. Appraisal of Teacher Performance. Review of research in Instructional Technology.

Practical

Formulation of instructional Course Objective. Development and presentation of course outlines. Preparation & presentation of lesson plans for theory & practical with CAI design. Preparation of innovative low cost instructional aids. Development of model question bank. Preparation of schedule for teacher evaluation. Visit to distance Education centre. Study of research reviews and Presentation of reports.

EXT – 606 THEORY CONSTRUCTIONS IN SOCIAL SCIENCES 2 + 0 Objective

Objective

By the end of the course student will be able to develop skills of theory building and scientific application of theoretical concept in Social Sciences by applying appropriate statistical tests.

Theory UNIT – I

Importance of theory constructions in social science. Theory: Meaning, elements, Ideal Criteria, Functions, Types. Definitions: Meaning, types and Rules. Generalizations: Meaning, Classification. Relationship: Meaning Types.

UNIT - II

Terminologies used in theory constructions: Axiom, Postulate, Proposition, Theorem, Fact, Concept, Construct, Probability and Measurement Basic Derived. Steps in theory building – Axiomatic Techniques, Historical approaches. Scientific application Theoretical concept in Social Sciences. Test of Theory: Applying appropriate statistical tests.

EXT – 607 ADVANCED MANAGEMENT TECHNIQUES 2 + 1

Objective

By the end of the course student will be able to

- Develop understanding on concept of MIS, its scope in Agriculture Extension Organization
- Understand, Develop and Evaluate the MBO System
- To cope up with stress, Resolve conflicts and develop effective inter personal communication skills using Transactional analysis
- To plan & use, DSS, AI, ES, PERT, CPM

Theory

UNIT – I

Management Information System (MIS): Basic concepts, types of information needed at various levels, design of MIS in an agricultural extension organization. Scope for computerization, system alternatives and Evaluation. Implementation, operation and maintenance of the system.

UNIT – II

Management by Course Objective (MBO) : Elements of the MBO system. The Process of MBO. Making MBO effective. Evaluation of the MBO system – Strengths and weakness. Transactional Analysis (TA): Ego states, transactions, inter relationships, strokes, stamps. **UNIT – III** Managing Organizational Stress: Sources of stress in organization, effect of stress. Coping mechanisms and managing stress, Stress management, Team Building Process: Types of teams. Steps in teamwork, Facilitators and barriers to effective relationships, nature of prejudice, tips in reducing interpersonal conflicts, inter-group conflict, resolving techniques. Confect management, tips in reducing interpersonal conflicts.

UNIT – IV

Decision Support Systems (DSSs): Basic information about Artificial Intelligence (AI) Expert System (ESs), their future applications in extension system. Forecasting techniques – time series analysis and Delphi, decision making and talent management PERT, CPM Techniques and time management.

Practical

Managements Information system, in research & development organizations, Study of Management by Course Objective in an organization. Transactional Analysis, exercises on Team building process, coping skills with organizational stress, exercises on Decision Support Systems (DSSs). Practicals exercise on forecasting techniques, Visit to Management organizations.

$\mathbf{EXT} - \mathbf{608}$

MEDIA MANAGEMENT

2 +1

Objective

- To familiarize the students with the working of print, electronic, New Media & Traditional folk media
- To develop working skills needed for Print, Radio and T.V. Journalism to reach farming community
- To develop in students an understanding on Mass Communication Process and Media Management its impact on the society
- To develop writing skills for different media

Theory

UNIT – I

Media Management – Introduction, Definition, Principles and Significance of Management. Media Ownership patterns in India – Proprietorship, Partnership, Private Ltd, Public companies, Trusts, Co-operatives, Religious Institutions (Societies) & Franchisees (Chains). Marketing Function – Product, Price, and Placement & Promotions.

UNIT – II

Mass Communication – Meaning, Concept, Definition and Theories of Mass Communication. The Mass Media – History, functions, uses and Theories of Media. Journalism – Meaning, definition, Scope, functions and different types of Journalism. Journalism as communication tool. Farm Journalism – meaning and Developments in Farm Journalism in India. Different problems with Farm Journalism. Print Media – History, the role of the press, news, types of News, electronics of News and Sources of News, the making of newspaper & magazines, press codes and ethics, Media Laws, News story – Principles of writing, structure a news story, procedure in writing the news story and the elements of style. Success stories & feature article – writing for success & feature articles. Types of Feature articles. Information materials – Types of information materials and user. Techniques in book Publishing. Editing – Principles, Tools & Techniques and art of Proof Reading – Techniques, Measuring Readability of writing.

UNIT – İII

Electronic Media – Role and Importance of Radio – History, Radio Role in TOT, writing and presentation techniques, Different Programmes of Farm Broadcast, developing content for farm broadcast, Role of FM Radio in Agriculture, Ethics of Broad casting, Broadcasting Policy and code. Community Radio – Concept, meaning, role in TOT, Cases of Community radio.

Television – History – Role in TOT, Fundamentals of Television Production, Techniques of Script writing for TV, Visual Thinking, language & Style, Farm Telecast programmes, cable and satellite TV and their impact, Ethics of Telecasting, policy and code.

Video Production Technology – Potential and its utilization, Typology of farm Video production,

Types of Video Production and equipment used in the production, procedure or Technique of video production.

Cassette Technology – Role in TOT, Techniques of production of cassettes for the farming community.

Traditional Media – Role of Folk Media in TOT and integration with electronic media. **UNIT – IV**

Advances in communication technology – Management of Agricultural Information System (MAIS), Use of computers in Agriculture – Application of IT in Agriculture. Use of Modern Communication Medium – Electronic Video, Teletext, tele conference, Computer assisted instruction, Video conferencing - Features, Advantages, Limitations and risk factory involved in New Media. Designing and developing of communication and media strategy for developmental programmes. Online journalism scope & importance.

Practical

Exercise on Writing for Print Media – Writing News / Success Stories / Feature articles for different topics related to Agriculture & allied fields. Exercise of editing & proof reading the Farm News for News papers – different types of intro and leads. Exercise of Writing for Radio, TV, Preparation of story board for farm Video Production – Script writing for Radio and TV Visit to media management organizations for studying the principles, procedures and processes in managing the media. Participation and Interaction through video conference. Developing communication & Media Strategy for selected developmental programme / activity.

EXT – 609 TRÂNSFER OF TECHNOLOGY IN AGRICULTURE 2+1 Objective

By the end of the course student will be able to

- Develop through understanding on different systems of Technology Transfer
- Develop appropriate communication & Media Strategy suitable to the System of Technology Transfer
- Analyze the constraints in Systems of Technology Transfer and Suggest suitable Strategies

Theory

UNIT – I

Technology – Meaning and Concepts – Appropriate technology, transfer of technology – meaning and concepts. Systems of transfer of technology - Knowledge Generating System (KGS) – Knowledge Disseminating System (KDS) – Knowledge Consuming System (KCS) – Input Supplying Agencies System (ISAS)

UNIT – II

Appropriateness of communication media in the system of technology transfer. New communication strategy for transfer and adoption of Agricultural technology. Extension training in transfer of technology.

UNIT – III

Analysis. Constraints in Transfer of Technology, agencies or departments involved in TOT. Extension professional in TOT. Attributes of Technology and its Relation in TOT process. TOT to resource poor farmers. Role of Key communicators or local leaders in TOT. Private and Public partnership in TOT.

Practical

Analysis of Transferred technology. Analysis of knowledge generation and consuming systems. Formulation of communication strategies, Study of attributes of selected fast spreading technologies and slow technologies, study of constraints in TOT, visit to TOT centres of ICAR and SAU, Identification of key communicators, Case studies of Public-Private Partnerships, Visits to the print and electronic media centres to study their role in TOT.