

VETERINARY AND ANIMAL HUSBANDRY EXTENSION

Course Structure - at a Glance

CODE	COURSE TITLE	CREDITS
AHE 601	FUNDAMENTALS OF VETERINARY AND ANIMAL HUSBANDRY EXTENSION	2+1
AHE 602	COMMUNICATION FOR LIVESTOCK DEVELOPMENT	1+1
AHE 603	DIFFUSION AND ADOPTION OF ANIMAL HUSBANDRY PRACTICES	2+1
AHE 604	EXTENSION TECHNIQUES AND AUDIO VISUAL AIDS	2+1
AHE 605	ANIMAL HUSBANDRY PROGRAMME PLANNING AND EVALUATION	2+1
AHE 606	RESEARCH METHODOLOGY IN VETERINARY AND ANIMAL HUSBANDRY EXTENSION	2+1
AHE 607	SOCIAL PSYCHOLOGY AND GROUP DYNAMICS	2+1
AHE 608	ANIMAL HUSBANDRY DEVELOPMENT PROGRAMMES	1+0
AHE 609	DEVELOPMENTS IN THE CONCEPT OF EXTENSION	1+0
AHE 610	HUMAN RESOURCE MANAGEMENT IN ANIMAL HUSBANDRY SECTOR	2+1
AHE 611	GENDER AND LIVESTOCK DEVELOPMENT	1+0
AHE 612	INFORMATION AND COMMUNICATION TECHNOLOGY IN LIVESTOCK DEVELOPMENT	1+1
AHE 691	MASTER'S SEMINAR	1+0
AHE 699	MASTER'S RESEARCH	20
AHE 701	ORGANIZATIONAL MANAGEMENT	3+0
AHE 702	FARM JOURNALISM AND PUBLIC RELATIONS	2+1
AHE 703	ADVANCED RESEARCH TECHNIQUES IN SOCIAL RESEARCH	3+1
AHE 704	TRAINING FOR HUMAN RESOURCE DEVELOPMENT	2+1
AHE 705	POLICIES AND REGULATIONS IN LIVESTOCK SECTOR	2+0
AHE 706	EDUCATIONAL TECHNOLOGY	2+1
AHE 707	DYNAMICS OF CHANGE	2+0
AHE 708	ORGANIZATIONAL COMMUNICATION	2+1
AHE 790	SPECIAL PROBLEM	0+2
AHE 791	DOCTORAL SEMINAR I	1+0
AHE 792	DOCTORAL SEMINAR II	1+0
AHE 799	DOCTORAL RESEARCH	45

Course Contents

AHE 601: FUNDAMENTALS OF VETERINARY AND ANIMAL HUSBANDRY EXTENSION

2+1

Objective: To acquaint the students with the genesis, development and present status of animal husbandry extension and linkages among departments and various institutions.

Theory

UNIT I

Concept, philosophy, principles, genesis, growth and scope of extension education.

UNIT II

Earlier extension efforts and their implications. Emerging issues, problems and challenges of animal husbandry extension education.

UNIT III

Extension approaches of State and Central Governments, ICAR, SVUs/ SAUs, NGOs and other organizations in delivery of animal husbandry and veterinary services.

UNIT IV

Linkages between researcher-extension agent - livestock farmer-industry in the generation, dissemination and utilization of animal husbandry practices.

Practical

Study of the organizational set-up and functioning of State Animal Husbandry Department and dairy/rural development agencies. Study of indigenous technical know-how about animal husbandry practices in villages.

Suggested Readings

- Adams ME. 1982. *Agricultural Extension in Developing Countries*. Longman, Singapore Publ.
- Burton ES, Robert PB & Andrew JS. 1997. *Improving Agricultural Extension - A Reference Manual*. FAO. Dahama OP & Bhatnagar OP. 1987. *Education and Communication for Development*. Oxford & IBH.
- Mosher AT. 1966. *Getting Agriculture Moving- Essentials for Development and Modernization*. Praeger, New York.
- Mosher AT. 1978. *An Introduction to Agricultural Extension*. ADC. Owen E, Kitalyi A, Jayasuryia N & Smith T. (Ed). 2005. *Livestock and Wealth Creation - Improving of the Husbandry of Animals Kept by Resource Poor People in Developing Countries*. Nottingham Univ.Press.
- Roling N. 1988. *Extension Science. Information Systems in Agricultural Development*. Cambridge Univ. Press.
- Rivera WM & Schram SG. (Ed). 1987. *Agricultural Extension World wide- Issues, Practices and Emerging Priorities*. Croome Helm, London.
- Rivera WM. & Gustafson DJ. (Ed). 1991. *Agricultural Extension: Worldwide: Institutional Evolution and Forces for Change*. Elsevier.
- Samanta RK. (Ed). 1990. *Development Communication for Agriculture*. BR Publ. Corp., Delhi.
- Swanson BE. (Ed). 1984. *Agricultural Extension: A Reference Manual*. 2nd Ed. FAO.
- Van den Ban AW & Hawkins HS. 1998. *Agricultural Extension*. Longman Scientific Tech.

AHE 602: COMMUNICATION FOR LIVESTOCK DEVELOPMENT

1+1

Objective: To acquaint the students with concept and models of communication and to improve their communication skills

Theory

UNIT I

Communication- meaning, concept, purpose and process.

UNIT II

Models and theories of communication. Types of communication-intrapersonal, interpersonal, verbal and non-verbal. Criteria of effective communication, Determinants of communication- Empathy, credibility, fidelity, distortion, feed back and barriers to communication.

UNIT III

Group and mass communication. Modern communication technologies. Key communicators and their role in animal husbandry development.

Practical

Exercises in oral communication and group discussion. Exercises in written communication. Writing for newspapers, magazines. Script writing for radio and TV. Client management in veterinary clinics . Identification of key communicators in a village.

Suggested Readings

Cragan FJ. & Wright WD. 1999. *Communication in Small Groups -Theory, Process, Skills*. Wadsworth Publ.
Mcquail D & Windahl S. 1993. *Communication Models for the Study of Mass Communications*. Longman Publ. Ray GL. 1991. *Extension, Communication and Management*. Naya Prokash.
Rogers EM & Shoemaker FF. 1971. *Communication of Innovations: A Cross - Cultural Approach*. The Free Press. Roloft Michael F. 1981. *Interpersonal Communication*. Sage Publ. Servaes J, Thomas LJ. & Whitle AS. (Ed). 1997. *Participatory Communication for Social Change*. Sage Publ.

AHE 603: DIFFUSION AND ADOPTION OF ANIMAL HUSBANDRY PRACTICES

2+1

Objective: To sensitize the students towards technology generation, dissemination and its adoption through effective communication.

Theory

UNIT I

Concept of diffusion. Elements in diffusion process, models and theories of diffusion. Decision-making, Stages in diffusion-adoption process.

UNIT II

Concepts and stages of adoption. Adoption models. Adopter categories and their characteristics. Factors influencing adoption. Attributes of innovations, rate of adoption and sources of information. Consequences of adoption of innovations.

UNIT III

Role of change agents in transfer of technology. Diffusion studies in veterinary extension. Role of communication in diffusion and adoption process.

Practical

Study of selected animal husbandry innovations- the adoption and non-adoption of various practices. Reasons for adoption and non-adoption of innovations

Suggested Readings

Brown Lawrence A. 1981. *Innovation Diffusion: A New Perspective*. Methuen.
Cragan FJ & Wright WD. 1999. *Communication in Small Groups - Theory,Process, Skills*. Wadsworth Publ.
Rogers EM. 2003. *Diffusion of Innovations*. Free Press.
Servaes J, Thomas LJ & Whitle AS. (Ed). 1997. *Participatory Communication for Social Change*. Sage Publ.

AHE 604: EXTENSION TECHNIQUES AND AUDIO VISUAL AIDS

2+1

Objective: To train the students about various techniques/methods for transfer of animal husbandry technologies through suitable audio-visual aids.

Theory

UNIT I

Teaching learning process and its principles. Steps in extension teaching process, cone of experience. Learning situation. Criteria for effective teaching and learning.

UNIT II

Extension approaches in livestock development- individual, group and mass approach (electronic and non electronic). Relative merits and demerits of different teaching methods in animal husbandry extension.

UNIT III

Audio-visual aids- classification, use and evaluation. Selection criteria of audio-visual aids.

UNIT IV

Multi-media projection and computer aided teaching aids for animal husbandry extension.

UNIT V

Selection of different extension methods for dissemination of animal husbandry technologies and media-mix.

Practical

Preparation and presentation of various audio-visual aids. Use of different teaching methods in field situations. Review of research studies in teaching methods and A.V. aids.

Suggested Readings

Dahama OP & Bhatnagar OP. 1987. *Education and Communication for Development*. Oxford & IBH.
Hass KB & Packer HQ. 1962. *Preparation and Use of Audio-Visual Aids*. Prentice Hall.
Mathialagan P. 2005. *Text Book of Animal Husbandry and Livestock Extension*. International Book Distributing Co.
Mody Bella 1992. *Designing Messages for Development Communication. An Audience Participation based Approach*. Sage Publ.
Oakley P & Garforth C. 1985. *Guide to Extension Training*. FAO.
Priyanjam Kartik 2005. *Audio Visual Aids and Education*. Dominant Publ.
Ray GL. 1991. *Extension, Communication and Management*. Naya Prokash.

AHE 605: ANIMAL HUSBANDRY PROGRAMME PLANNING AND EVALUATION

2+1

Objective: To expose the students on planning, formulation, implementation and evaluation of various animal husbandry development programmes.
Theory

UNIT I

Importance of programme planning in veterinary and animal husbandry extension. Objectives, principles and steps in programme planning process. Role of animal husbandry extension agencies, local leaders, livestock owners and institutions in planning and implementation of need-based veterinary extension programmes.

UNIT II

Genesis, nature and principles of planning. Planning Commission and its role. Five Year Plans with reference to animal husbandry development. Organizational structure for planning at different levels.

UNIT III

Concept, principles, types and methods of evaluation. Importance of monitoring various livestock development programmes.

UNIT IV

Needs assessment- meaning, importance, classification and steps. Concept of FSR, Participatory Approaches- Rapid Rural Appraisal (RRA) and Participatory Rural Appraisal (PRA)

UNIT V

Project management techniques- Programme Evaluation and Review Technique (PERT). Critical Path Method (CPM). Project formulation. Project appraisal in terms of social benefit analysis, logical frame work.

Practical

Preparation of livestock development plan for a village. Developing instruments for monitoring and evaluation of on-going development programme at village level (Logical Frame Work). Exercises on Participatory approaches (RRA,PRA, Case study, Problem Based Learning).

Suggested Readings

Collinson M. 2000. *A History of Farming System Research*. CAB Publ.
Dantwala ML & Beroneda JN. 1990. *Rural Development, Approaches and Issues in Indian Agricultural Development since Independence*. Oxford & IBH.
Penders JMA. 1958. *Methods and Programme Planning in Rural Extension*. Veenman & Zonen. Swanson BE. (Ed). 1997. *Agricultural Extension: A Reference Manual*.
FAO. Thyagrajan M. 1982. *Project Management through Network Techniques (PERTCPM)*. Indian Institute of Public Administration, New Delhi.
White Shirley (Ed). 1999. *The Art of Facilitating Participation - Releasing the Power of Grassroots Communication*. Sage Publ.

AHE 606: RESEARCH METHODOLOGY IN VETERINARY AND ANIMAL HUSBANDRY EXTENSION

2+1

Objective: To apprise the students about the selection criteria of research problem, variables, research design, sampling techniques, data collection procedure and report writing in the field of animal husbandry extension.

Theory

UNIT I

Concept, nature and scope of research in social sciences. Types of research- fundamental, applied and action research, experimental and non-experimental research. Variables, types and their measurement. Selection and formulation of research problem. Hypothesis- importance, selection criteria (quality of workable hypothesis), formulation and testing of hypothesis.

UNIT II

Measurement and levels of measurement; Research designs- exploratory, experimental, and ex-post-facto research design. Action research. Sampling methods-probability and non-probability sampling. Sources of errors.

UNIT III

Methods of data collection- survey method, observation method, interview/questionnaire method, case study, content analysis, sociometry and projective techniques. Action research. Reliability and validity of measurements.

UNIT IV

Social statistics - Parametric and non-parametric. Data processing and analysis. Report writing. Review of studies in social research.

Practical

Selecting a research problem and working it out with all the steps; report writing and presentation of the report.

Suggested Readings

Arlene Fink (Ed). 2003. *The Survey Kit* (10 booklets). Sage Publ. Creswell John W. 1994. *Research Design - Qualitative and Quantitative Approaches*. University of Nebraska, Lincoln. Edwards AL. 1969. *Techniques of Attitude Scale Construction*.
Vakil, Feffer & Simons Garrett HE. 1966. *Statistics in Psychology and Education*. International Book Bureau, Hyderabad. Goode WJ & Hatt PK. 1952. *Methods in Social Research*. McGraw-Hill.
Guilford JP. 1971 . *Psychometric Methods*. TATA McGraw Hill.
Henerson EM, Morris LL. & Gibbon CT. 1987. *How to Measure Attitudes*. Sage Publ.
Kerlinger FN. 1994. *Foundations of Behavioural Researches*. Holt,
Rinehart & Winstons. Kumar, R. 1999. *Research Methodology - A Step by Step for Beginners*. Sage Publ.
Miller Delbert C. 1991. *Handbook of Research Design and Social Measurement*. Indiana University. Sage Publ. Oppenheim AN. 1979. *Questionnaire Design and Attitude Measurement*.
Heinemann Educational Books.

AHE 607: SOCIAL PSYCHOLOGY AND GROUP DYNAMICS

2+1

Objective: To acquaint the students with the structure and functioning of social groups and socio-psychological aspects in interacting with livestock farmers.

Theory

UNIT I

Meaning, scope and importance of psychology in animal husbandry extension work. Orientation of psychology.

UNIT II

Perception- nature, laws and selectivity in perception, factors in perception, importance of perception in extension work. Attitude- nature, theories, measurement and change of attitude towards livestock owners, formation of stereo types and prejudice, factors in attitude change.

UNIT III

Motivation- nature, characteristics, theories, types and techniques of motivating farm people. Emotion- nature, types of emotional response, theories and role of emotion in regulating the human behaviour. Learning-principles, theories of learning and experiential learnings

UNIT IV

Intelligence- nature, theories and measurement. Personality- nature, traits, types, biological and socio-cultural determinants of personality. Group and individual behaviour.

UNIT V

Concept and types of groups; Typology and importance in rural development; Group structures - attraction, coalition, communication and power; Processes in group development and group identity; Factors affecting group performance; Conflicts in groups; Group belongingness.

Practical

Study of structure and functioning of selected Self Help Groups (SHGs), factors influencing the success/ failure of SHGs, Milk Cooperative Societies.

Suggested Readings

Baron RA. 1995. *Psychology*. Prentice Hall. Cragan, FJ & Wright WD. 1999. *Communication in Small Groups - Theory, Process, Skills*. Wadsworth Publ. Kagan J & Havemann E. 1980. *Psychology - An Introduction*. Harcourt Brace Javanovich Inc.
Morgan CT, King RA & Robinson NM. 1979. *Introduction to Psychology*. Tata McGraw-Hill.
Napier RW & Gershenfeld MK. 2006. *Groups - Theory and Experience*. AITBS Publ.
Secord PF & Backman CW. 1964. *Social Psychology*. McGraw-Hill.

AHE 608: ANIMAL HUSBANDRY DEVELOPMENT PROGRAMMES

1+0

Objective: To make the students aware of livestock development programmes launched by various agencies.

Theory

UNIT I

Concept of development, social and economic development; Historical overview on Rural Development in India

UNIT II

Ongoing Animal Husbandry Development Programmes - NPCBB, PM assistance livestock development programme, rural development programmes with special reference to livestock- SGSY, EGS

UNIT III

Transfer of Technology (TOT) programmes of ICAR- National Demonstration, Krishi Vigyan Kendra, Trainers' Training Centres, Lab to Land Programme, Operational Research Project, National Agricultural Research Project, Agricultural Technology Management Agency, National Agricultural Innovative Project.

UNIT IV

Understanding the functioning of livestock development institutions - DRDA, NABARD, Insurance Companies, NGOs.

Suggested Readings

Candler W & Kumar N. 1998. *India. The Dairy Revolution - The Impact of Dairy Development in India and the World Bank Contribution*. The World Bank.
Dahama OP & Bhatnagar OP. 1987. *Education and Communication for Development*. Oxford & IBH. Govt. of India 2005.
A Reference Manual. Ministry of Information and Broadcasting, New Delhi. <http://www.dahd.nic.in> Mathialagan P. 2005.
Text Book of Animal Husbandry and Livestock Extension. *International Book Distributing Co*. Ray GL. 1991. *Extension, Communication and Management*. Naya Prokash.

AHE 609: DEVELOPMENTS IN THE CONCEPT OF EXTENSION

1+0

Objective: To acquaint the students with the recent development in extension.

Theory

UNIT I

Important concepts in extension science; various schools of thought; Systems concept in extension.

UNIT II

Changing approaches - Farmer participatory approaches; Global concepts of extension as applied to Indian Context.

UNIT III

Recent trends in extension. Privatisation of extension. Public Private Partnership. Contract farming. Organic animal husbandry. Indicators of livestock sustainability. Animal welfare programmes

UNIT IV

Various stake holders in Livestock development; stakeholder analysis, problem tree

Suggested Readings

Blackburn DJ. 1989. *Foundations and Changing Practices in Extension*. Univ. of Guelph, Canada. Jones GE. (Ed). 1985. *Investing in Rural Extension: Strategies and Goals*. Elsevier.
Roling N. 1988. *Extension Science*. Cambridge Univ. Press.

AHE 610: HUMAN RESOURCE MANAGEMENT IN ANIMAL HUSBANDRY SECTOR

2+1

Objective: To expose the students in human resource management techniques and dealing with the hierarchical and organizational problems.

Theory

UNIT I

Concept, importance and functions of human resource management. Process of management- planning, organizing, staffing, directing, coordination, reporting and budgeting. Principles, levels and types of organization.

UNIT II

Training- models, methods, identification of training needs, training evaluation and developing strategies for human resource development in animal husbandry sector.

UNIT III

Supervision- meaning, process and techniques. Work motivation. job efficiency and job satisfaction.

UNIT IV

Organizational communication. Organizational climate. Conflict management.

UNIT V

Personnel management in animal husbandry organizations and disaster management.

Practical

Training needs assessment, development of training module, organization, evaluation of a training programme

Suggested Readings

Buford JA, Bedeian AG & Lindner JR. 1995. *Management in Extension*. Ohio State Univ., USA.
Dwivedi RS. 1979. *Human Relations and Organizational Behaviour – A Global Perspective*. 5th Ed. McMillan India.
Keith D. 2004. *Human Behaviour*. 8th Ed. Mc Graw Hill. Lynton R & Pareek U. 1990. *Training for Development*. Vistar Publ.
Lynton R & Pareek U. 2000. *Training for Organizational Transformation*. Sage Publ.
Mishra DC. 1990. *New Directions in Extension Training*. Directorate of Extension, Ministry of Agriculture, Govt. of India, New Delhi.
Stoner JAF & Freeman RF. 1994. *Management*. 5th Ed. Prentice Hall.
Turban E & Meredith J. 1991. *Fundamentals of Management Science*. 5th Ed. Home Wood I.L. Irwin.
Weirich H & Koontz H. 1993. *Management - A Global Perspective*. McGraw-Hill.

AHE 611: GENDER AND LIVESTOCK DEVELOPMENT

1+ 0

Objective

To acquaint the students with the concept of gender, its importance in livestock development, livestock development policies and programmes of the government to empower women.

Theory

UNIT I

Basic concepts - gender, empowerment and livestock. Role of livestock sector in Indian economy and poverty alleviation. Enterprise integration- women in agriculture and livestock. Livestock and agrarian scenario -trends in numbers, growth, composition and exports and imports.

UNIT II

Policies and programmes in livestock for empowering women, Composition of livestock sector- dairying and poultry sector, Women entrepreneurship in livestock, Institutional structure in livestock production, processing and marketing- co-operatives, contract farming and SHGs, Case studies- success and failures- from the state, country and other countries.

UNIT III

Globalization and livestock development - opportunities and challenges, WTO- need for quality standards in livestock production- assurance and safety measures- SWOT analysis, Extension techniques for livestock development, Group project work- livestock feasibility report/live-in situation report.

Suggested readings

Bura N, Deshmukh J, Ranadive & Murthy KR. (Ed). 2006. *Micro Credit, Poverty and Empowerment - Linking the Triad*. Sage Publ. NABARD. 2005. *SHG Bank Linkage Programme*. [http:// www.nabard.org](http://www.nabard.org) Ramkumar S, Garforth C, Rao SVN & Waldie K. (Ed). 2001. *Landless Livestock Farming - Problems and Prospects*. RAGACOVAS, Pondicherry. Seth Mira 2001. *Women and Development - Indian Experience*. Sage Publ. Samanta RK. (Ed). *Women in Agriculture -Perspectives, Issues and Experiences*. MD Publ. Waldie K & Ramkumar S. 2002. *Landless Women and Dairying - Opportunities for Development within a Poverty Perspective*. RAGACOVAS, Pondicherry.

AHE 612 : INFORMATION AND COMMUNICATION TECHNOLOGY IN LIVESTOCK DEVELOPMENT

1+1

Objective: To apprise the students about information system, networking and use of various ICT tools.

UNIT I

ICT - concept, importance and types of tools; Development and application of ICT tools including information kiosks, E-learning

UNIT II

Concept of information system and networking, component of information system, information resources, sharing and networking. Types of net work - PAN, LAN, WAN, Internet, AGRINET, AKIS, Indian National Agricultural Research database.

UNIT III

ICT programmes in livestock development, Problems and prospects of ICTs in livestock development, Digitisation, Simulation models.

Practical

Study of various ICT tools in livestock development.

Suggested Readings

Anonymous 2002. *Handbook of Animal Husbandry*. ICAR. Arnon I. 1989. *Agriculture Research and Technology Transfer*. Elsevier Science Publ. England. Ramkumar S & Rao SVN. 2004. *Knowledge Dissemination on Cattle Health through Information Kiosks in Veterinary Centres*. RAGACOVAS, Pondicherry. Singhal A & Rogers EM. 1989. *India's Information Revolution*. Sage Publ.

AHE 701: ORGANIZATIONAL MANAGEMENT

3+0

Objective: To acquaint the students with the general administration, management and motivational techniques for organizational change and development.

Theory

UNIT I

Concept, approaches and functions of management. Principles and process of organization, hierarchy of organization, departmentalisation. Authority and responsibility. Components of individual behaviour in organization. Organizational climate, decision making by consensus and participation by subordinates.

UNIT II

Motivation- nature and significance, motivational process, theories of motivation with respect to animal husbandry work. Importance of human needs, priority of needs, Managing work motivation.

UNIT III

Conflict - types and management. Leadership and its role in conflict resolution. Morale in organizations, organizational factors affecting morale, attitude, and productivity, methods of improving morale and evaluation of morale. Performance appraisal process.

UNIT IV

Supervision- principles, techniques and functions of supervision. Qualities of supervisor, supervisor-subordinate relationship and interaction process. Changing organizational structure and system, changing organizational climate and interpersonal style, issues and choice involved in making organizational climate.

Organization development- history, nature, characteristics, assumptions and process. Organization development interventions.

Suggested Readings

Selected articles from journals.

AHE 702: FARM JOURNALISM AND PUBLIC RELATIONS

2+1

Objective

To sensitize students about the role of mass media, news papers, magazines, radio, T.V. and internet for promoting animal husbandry.

Theory

UNIT I

Concept of farm journalism and communication. Journalism as a means of mass-communication and its role in livestock development. Opportunities, strength and limitations. Ethics and principles of journalism for effective writing.

UNIT II

Art of writing, news items, news stories, feature articles, success stories, magazines, bulletins, folders etc. Fundamentals of lay-out in writing. Writing of research papers and popular articles in journals and farm magazines.

UNIT III

Methods and techniques of broadcasting of farm programmes. Writing scripts for radio and televisions. Importance of public relations in veterinary and animal husbandry extension.

UNIT IV

Rapport building with different categories of clients involved in veterinary and animal husbandry extension programmes. Art of speaking. Importance of listening and reading. Relations with press media.

UNIT V

Event management, Organization of press meet. Qualities of a good public relation manager. Writing for press news.

Practical

Designing and preparation of news stories, feature articles, success stories related to animal husbandry. Designing and preparation of magazines, folders, popular research articles, radio and T.V. scripts. Visit to agricultural information and communication centre to record the activities of preparation, editing and publication of news articles and research publications. Exercise on the art of good speaking in class-room and field situations.

Suggested Readings

Selected articles from journals.

AHE 703: ADVANCED RESEARCH TECHNIQUES IN SOCIAL RESEARCH

3+1

Objective: To train the students about various research and management techniques/ methods applicable to animal husbandry researches.

UNIT I

Measurement- meaning and levels, tests, and scales. Different types of Variables.

UNIT II

Techniques of attitude scale construction viz. paired comparison, equal appearing interval, successive interval, summated ratings, scalogram analysis.

UNIT III

Measurement of reliability and validity of tests and scales. Sociometry. Critical incidence techniques. Q - sort technique, observation techniques, case studies.

UNIT IV

Experimental and quasi experimental research designs. Content analysis and projective techniques.

UNIT V

Multivariate analysis, systems analysis, principle component analysis, discriminant analysis and their application in extension education research.

Practical

Exercises on scaling techniques, attitude scale construction - Paired Comparison, Equal Appearing interval, Summated Rating Scale, Critical Incident Technique, Knowledge Test.

Suggested Readings

Selected articles from journals.

AHE 704: TRAINING FOR HUMAN RESOURCE DEVELOPMENT**2+1**

Objective: To make the students aware of planning, implementation and evaluation of various training programmes.

Theory**UNIT I**

Concept of training and education. Training infrastructure for extension personnel and farmers in India. Role of institution, organization and participants in success of training programme.

UNIT II

Assessment of training needs, curriculum design and development. Training strategies, models of training.

UNIT III

Planning, development and execution of training programmes.

UNIT IV

Training methods- Lecture, symposium, workshop, case studies, group discussion, conference, convention, panel discussion, buzz session, forum, debates, syndicate, simulation exercises, role playing, brain storming.

UNIT V

Evaluation and follow-up of training programmes.

Practical

Preparation of training programmes for extension personnel, livestock and poultry farmers. Evaluation of on-going training programmes.

Suggested Readings

Selected articles from journals.

AHE 705: POLICIES AND REGULATIONS IN LIVESTOCK SECTOR**2+0**

Objective: To sensitize the students about policies and regulations in animal husbandry sector.

Theory**UNIT I**

World Trade Organization in relation to livestock sector. Impact of WTO on Indian international trade of food products of animal origin, Intellectual Property Rights in relation to animal husbandry.

UNIT II

HACCP, Sanitary and phyto-sanitary measures to protect the animals' life and health, food safety uses in relation to animal husbandry sector. Introduction to Agreement on Technical Barriers to Trade (ATBT).

UNIT III

Animal welfare laws- legislations in veterinary and animal sciences.

UNIT IV

Prevention of Cruelty to Animals Act-1960 and Rules. Animal Welfare Board, ABC Programme. Acts related to animals and animal diseases. Animal quarantine and certification.

Suggested Readings

Selected articles from journals.

AHE 706: EDUCATIONAL TECHNOLOGY**2+1****Objective**

To acquaint students with different concepts of education technology and preparation of teaching aids

Theory**UNIT I**

Educational Technology - Meaning, concepts and components. Curriculum development at macro and micro levels. Formulation of instructional objectives.

UNIT II

Preparation of course outline for instructions, lesson planning. Designing instructions for theory and practical, Instructional methods and devices in class room instruction, computer aided learning. Understanding learners' behavior, learning styles, motivating learners.

UNIT III

Student counselling and guidance, Student evaluation - meaning and methods, construction of measuring instrument - question banking.

UNIT IV

Performance appraisal of teachers -meaning and methods, construction of assessment instruments. Use of library for effective learning.

Practical

Preparation of course outline, Preparation of lesson plans, Planning and preparation of instructional aids, Individual classroom instructional exercises, Development of student evaluation instrument, Development of performance appraisal instrument for teachers.

Suggested Readings

Selected articles from journals.

AHE 707: DYNAMICS OF CHANGE**2+0**

Objective: To make the students aware of dynamics of change, group dynamics and social change.

Theory**UNIT I**

Definition of change, development, social and cultural change. Dimensions, characteristics, types, rate and directions of social change. General conditions of social change.

UNIT II

Process of change. Concept, importance and problems of planned change. Role of change agents. Approaches of change agents towards planned change. Acceptance and rejection to planned change in animal husbandry. Techniques for accelerating change.

UNIT III

Theories of change: Darwin, Kurt, Lewin, Ogburn & influence process of change, assessment of resources, fixation of change objective, evaluating change effect. Barrier to change- psychological, social & economical, stimulants to change: psychological, social & economical.

UNIT IV

Agrarian changes with reference to livestock development.

Suggested Readings

Selected articles from journals.

AHE 708: ORGANIZATIONAL COMMUNICATION**2+1**

Objective: To sensitize the students towards communication and networking to increase the efficiency of an organization.

Theory**UNIT I**

Organizational communication- its importance, function and characteristics. Understanding of organizational communication. Types of organizational communication- upward, downward, diagonal and grapevine. Communication network.

UNIT II

Effectiveness and efficiency of organizational communication.

UNIT III

Essentials of a sound organizational communication system. Social and Psychological barriers to effective organization communication. Causes of poor organization communication.

Practical

Studies on organizational communication patterns in animal husbandry

Suggested Readings

Selected articles from journals.

AHE 790: SPECIAL PROBLEM**0+2**

Objective: To provide expertise in handling practical research problem(s).

Practical

Short research problem(s) involving contemporary issues and research techniques.

List of Journals

- * Communicator
- * Development communication
- * Indian Dairyman
- * Indian journal of Adult Education
- * Indian Journal of Dairy Science
- * Indian Journal of Extension Education
- * Indian Journal of Psychology
- * Indian Journal of Public Administration

- * Journal of Dairy Research
- * Journal of Extension Systems
- * Journal of Rural Development
- * Journal of Training and Development
- * The Indian Journal of Animal Sciences
- * The Indian Veterinary Journal
- * Journal of Agriculture Extension and Education
- * Indian Journal of Animal Research
- * Indian Journal of Gender of Studies
- * Kurukshetra
- * Yojana
- * Economic and Political weekly
- * Indian Farming

e-Resources

- * www.informaworld.com (Journal of Agricultural Education and Extension)
- * www.blackwellpublishing.co (International Journal of Training & Development)
- * www.blackwellpublishing.co Educational Measurement: Issue and Practices
- * www.academicjournals.net (International Journal of Dairy Science)
- * www.cipav.org.co (Livestock Research for Rural Development)
- * www.joe.org Journal of Extension

Suggested Broad Topics for Master's and Doctoral Research

- * Veterinary Education
- * Training
- * Communication and development
- * Diffusion and adoption
- * Management and entrepreneurship
- * Livestock economics
- * Evaluation of animal husbandry programmes