## Course Structure – at a Glance

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<tr>
<th>Code</th>
<th>Course title</th>
<th>Credits</th>
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<td><strong>M.Sc. First year: First semester (Major Courses)</strong></td>
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<tr>
<td>DX- 611</td>
<td>Fundamentals of Dairy and Animal Husbandry Extension</td>
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<td>Communication for Dairy Development</td>
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<td>DX- 613</td>
<td>Training for Human Resource Development</td>
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<td>Social Psychology and Group Dynamics</td>
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<td>Programme Planning and Evaluation for Rural Development</td>
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<td>Extension Techniques and Audio Visual Aids</td>
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<td>Participatory Methods for Technology Development &amp; Transfer</td>
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<td>Entrepreneurship Development and Management in Extension</td>
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<td>Diffusion and Adoption of Dairy and Animal Husbandry Innovations</td>
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<td>Gender Sensitization for Development</td>
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<td>DX- 711</td>
<td>Organizational Management</td>
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<td>Advances in Training Technology</td>
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<td>Dynamics of Change</td>
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<td>Policies and Regulations in Dairy and Livestock Sector</td>
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**M.Sc. First year: Second semester**

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<td>With Concerned Guide</td>
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**Seminar(s)**

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Discipline of Dairy Extension Education
COURSE CONTENTS

M.Sc. Courses
DX- 611 (2+1): Fundamentals of Dairy & Animal Husbandry

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 dairy extension education.
UNIT III: Extension approaches of State and Central Governments, ICAR, SVUs/ SAUs, NGOs and other organizations in delivery of dairy and animal husbandry services.
UNIT IV: Linkages between researcher-extension agent - livestock farmer-industry in the generation, dissemination and utilization of dairy farming 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
Mosher AT. 1978. An Introduction to Agricultural Extension. ADC.
DX- 612 (2+1): Communication for Dairy Development

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 communicationintraperonal, interpersonal, verbal and non-verbal. Criteria of effective communication, Determinants of communication- Empathy, credibility, fidelity, distortion, feedback and barriers to communication.
UNIT III: Group and mass communication. Modern communication technologies. Key communicators and their role in dairy and animal husbandry development.

Practical

Suggested Readings

DX- 613 (2+1): Training for Human Resource Development

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, dairy farmers, etc. Evaluation of on-going training programmes.

**Suggested Readings**
Selected articles from journals.

**DX- 614(2+1): Social Psychology and Group Dynamics**

**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 dairy and 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 dairy farmers, formation of stereo types and prejudice, factors in attitude change.
- 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**

**DX- 615(2+1): Programme Planning and Evaluation for Rural Development**

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

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

UNIT III: Concept, principles, types and methods of evaluation. Importance of monitoring various dairy 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)


Practical
Preparation of Dairy 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

DX- 616 (2+1): e- Extension for rural development

Objective
Students will gain knowledge and skills in understanding the concepts of Information and communication technologies and how these ICT tools can be used for Agricultural Extension. Besides, he studies various ICT projects which are successful in delivering the services to the clientele fulfilling the objective of Transfer of Technology i.e. Reaching the unreached.

Theory
UNIT I: ICTs- Concept, definition, tools and application in extension education. Reorganizing the extension efforts using ICTs, advantages, limitations and opportunities.
UNIT II: ICTs projects, case studies in India and developing world. Different approaches (models) to ICTs. ICT use in field of extension- Expert systems on selected crops and enterprises; Self learning CDs on package of practices, diseases and pest management, Agricultural web sites and portals related crop production and marketing etc.


Practical

Suggested Readings

DX- 621(2+1):Research Methodology in Social sciences

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 dairy and 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.


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

Suggested Readings
DX-622 (2+1): Extension Techniques and Audio-Visual Aids

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

Theory

UNIT II: Extension approaches in Dairy development—individual, group and mass approach (electronic and non electronic). Relative merits and demerits of different teaching methods in dairy and 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 dairy and animal husbandry extension.

UNIT V: Selection of different extension methods for dissemination of dairy and 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


DX-623 (1+1) Participatory Methods for Technology Development and Transfer

Objective
This course is intended to orient the students with the key concepts, principles process of different participatory approaches for technology development and transfer and also to expose the students with various participatory tools and techniques like space related, time related, relation oriented methods. Besides the students will be learning the preparation of action plans participatory monitoring and evaluation.

Theory
UNIT I : Participatory extension – Importance, key features, principles and process of participatory approaches; Different participatory approaches (RRA, PRA, PLA, AEA, PALM, PAR, PAME, ESRE, FPR) and successful models.
UNIT II : Participatory tools and techniques. Space Related Methods : village map (social & resource), mobility services and opportunities map and transect; Time related methods : time line, trend analysis, seasonal diagram. Daily activity schedule, dream map; Relation oriented methods : cause and effect diagram (problem tree), impact – diagram, well being ranking method, Venn diagram, matrix ranking, livelihood analysis.
UNIT III : Preparation of action plans, concept and action plan preparation; Participatory technology development and dissemination; Participatory planning and management, phases and steps in planning and implementation aspects; Process monitoring, participatory evaluation.

Practical
Simulated exercises on space related methods, time related method and relation oriented methods; Documentation of PTD and dissemination; Preparation of action plan; Participatory monitoring and evaluation of developmental programmes.

Suggested Readings

DX-624 (2+1): Entrepreneurship Development and Management in Extension

Objective
The first part of the course is intended to provide overall picture of planning and development of enterprises for extending sustainable livelihoods for rural people. The second part of the course is structured to help the students to gain knowledge and skills in different concepts and techniques of management in extension organizations.

Theory

Suggested Readings
UNIT II : Micro enterprises – Profitable Agri enterprises in India – Agro Processing, KVIC industries. Micro financing – meaning, Sources of Finance, Banks, Small scale industries development organizations. Marketing for enterprises – Concept, planning for marketing, target marketing, Competition, market survey and strategies, Product sales and promotion. Gender issues in entrepreneurship development – Understanding gender and subordination of women, Gender as a development tool, Policy approaches for women entrepreneurship development. Success and Failure stories for enterprises – Issues relating to success and failure of enterprises – Personal, Production, Finance, Social, Marketing.


Practical
Field visit to Successful enterprises-Study of Characteristics of Successful entrepreneurs Development of Project Proposal -Case Studies of Success / Failure enterprises- Exercise on Market Survey-Field visit to Financial institutions- Simulated exercise to understand management process-Field visit to extension organizations to understand the functions of management -Group exercise on development of short term and long term plan-Simulated exercise on techniques of decision making-Designing organizational structure -Group activity on leadership development skills.

Suggested Readings
DX- 625 (2+1): Diffusion & Adoption of Dairy & Animal Husbandry Innovations

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

Theory
UNIT III: Role of change agents in transfer of technology. Diffusion studies in Dairy and animal husbandry extension. Role of communication in diffusion and adoption process.

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

Suggested Readings

DX- 626 (1+ 1): Gender Sensitization for Development

Objective
In this course the students will learn about an overview of the concept of gender and gender balance on development and develop skills of identifying gender roles, rights, responsibilities and relationships on development. Besides the students will also learn the attitudinal change to internalize gender equity concerns as fundamental human rights and also enhance the capability for identifying and analyzing gender issues in agriculture and allied sectors.

Theory
UNIT I: Gender concepts, issues and challenges in development; Gender roles, gender balance, status, need and scope; Gender analysis tools and techniques.
UNIT II: National policy for empowerment of women since independence; Developmental programmes for women; Gender mainstreaming in agriculture and allied sectors – need and relevance; Gender budgeting – A tool for empowering women.
UNIT III: Women empowerment –Dimensions; Women empowerment through SHG approach; Women entrepreneurship and its role in economic development; Public Private Partnership for the economic empowerment of women; Building rural institution for women empowerment; Women human rights; Action plans for gender mainstreaming.

Practical
Visits to rural institutions of women for studying in the rural institutions engaged in Women empowerment; Visits to entrepreneurial unit of women for studying the ways and
means of establishing entrepreneurship units for Women and their development and also SWOT analysis of the Unit; Visit to Center for women development - NIRD to study the different activities related to projects and research on gender; Visit to gender cell, Office of the Commissioner and Director of Agriculture, Hyderabad, to study the mainstreaming of gender concerns and gender budget of the department.

**Suggested Readings**


**Ph.D. Courses (First semester)**

**DX- 711 (3+0): Organizational Management**

**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 dairy & animal husbandry work. Importance of human needs, priority of needs, Managing work motivation.


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.

UNIT V: Organization development– history, nature, characteristics, assumptions and process. Organization development interventions.

**Suggested Readings**

Selected articles from journals.
DX- 712 (2+1): Farm Journalism and Public Relations

Objective
To sensitize students about the role of mass media, newspapers, magazines, radio, T.V. and internet for promoting dairy & animal husbandry.

Theory
UNIT I: Concept of farm journalism and communication. Journalism as a means of mass-communication and its role in dairy 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 dairy and animal husbandry extension.
UNIT IV: Rapport building with different categories of clients involved in dairy and animal husbandry extension programmes. Art of speaking. Importance of listening and reading. Relations with press media.

Practical
Designing and preparation of news stories, feature articles, success stories related to dairy farming and/or 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.

DX-713(2+1): Advances in Training Technology

Objective
• 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, Counselling, 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 Counselling and Conducting experiential learning sessions. Training evaluation - Techniques of Knowledge, Skill & Attitude evaluation. Visit to training institutions and study of training technologies followed.

**Suggested Readings**

**DX- 714 (2+0): Dynamics of Change**

**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 & 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 dairy development.

**Suggested Readings:** Selected articles from journals.

**DX- 715 (2+0): Policies and Regulations in Dairy & Livestock Sector**

**Objective**
To sensitize the students about policies and regulations in dairy & animal husbandry sector.
Theory


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 dairy and animal sciences.


Suggested Readings : Selected articles from journals.

DX- 721(3+1): Advanced Research Techniques in Social Research

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

Theory

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, summed ratings, scalogram analysis.


UNIT IV : Experimental and quasi experimental research designs. Content analysis and projective techniques.

UNIT V : Multivariate analysis, systems analysis, principle component analysis, discriminate 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.

DX- 722 (2+1): Organizational Communication

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 dairy & animal husbandry

Suggested Readings: Selected articles from journals.

DX-723 (2+1): Educational Technology

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

Theory
UNIT III: Student counselling and guidance, Student evaluation – meaning and methods, construction of measuring instrument – question banking.

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.

DX-724 (2+1): Advances in Extension

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 IV : Various stakeholders in Dairy development; stakeholder analysis, problem tree

Suggested Readings

DX- 790 (0+2): SPECIAL PROBLEM

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

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