

**Restructured and Revised Syllabi for PG Courses from the Department of Agricultural
Extension**

Course Title with Credit Load

Course Code	Course Title	Credit Hours
EXT-501*	Extension Landscape	2(2+0)
EXT-502*	Applied Behaviour Change	3(2+1)
EXT-503*	Organisational Behaviour and Development	3(2+1)
EXT-504*	Research Methodology in Extension	3(2+1)
EXT-505*	Capacity Development	3(2+1)
EXT-506*	ICTs for Agricultural Extension and Advisory Services	3(2+1)
EXT-507*	Evaluation and Impact Assessment	3(2+1)
EXT-508	Managing Extension Organisations	3(2+1)
EXT-509	Enabling Innovation	2(1+1)
EXT-510	Gender Mainstreaming	3(2+1)
EXT-591	Seminar	1(0+1)
EXT-599	Thesis	30(0+30)

***Compulsory courses**

Course Contents

I. Course Title: Extension Landscape

II. Course Code: EXT 501

III. Credit Hours: 2+0

Theory

Unit 1: Challenges before Extension and Advisory Services (EAS)

Extension and Advisory Services (EAS)- Meaning (embracing pluralism and new functions)
New Challenges before farmers and extension professionals: Natural Resource Management- Supporting farmers to manage the declining/deteriorating water and soil for farming; Adaptation to climate changes-How extension can contribute to up-scaling Climate Smart Agriculture; Attracting and Retaining Youth in Agriculture including promotion of agripreneurship

Unit 2: New Functions and New Capacities

Beyond transfer of technology: Performing new functions to deal with new challenges; Organising producers into groups-dealing with problems that need collective decision making such as Natural Resource Management (NRM) and access to markets; New Capacities needed by extension and advisory services at different levels –at the individual (lower, middle management and senior management levels), organizational and enabling environment levels; –Core competencies at the individual level; Varied mechanisms for capacity development (beyond training).

Unit 3: Pluralism in EAS

Pluralism in Extension Delivery: Role of private sector (input firms, agri-business companies, consultant firms and individual consultants)- challenges faced by private extension providers; Role of Non-Governmental Organizations (National/international)/ Civil Society Organizations (CSOs) in providing extension; Producer Organizations- Role in strengthening demand and supply of extension services; their strength and weaknesses-experiences from different sectors; Role of Media and ICT advisory service providers; global experiences with

use of media and ICTs in advisory services provision

Unit 4: From the Linear Paradigm to Systems Paradigm

Diffusion of Innovations paradigm- strengths and limitations; multiple sources of innovation- farmer innovation, institutional innovation; farmer participation in technology generation and promotion; strength and limitations; Agricultural Knowledge and Information Systems (AKIS); strength and limitations; Agricultural Innovation Systems (AIS); Redefining Innovation- Role of Extension and Advisory Services in AIS-From information delivery to intermediation across multiple nodes; Strength and weaknesses of AIS. Rethinking Communication in the Innovation Process – Network building, support social learning, dealing with dynamics of power and conflict.

Unit 5: Evolving Extension Approaches Evolution and features of extension approaches:

Transfer of technology approach; educational approach, farmer participatory extension approach, demand-driven extension, market led extension (value chain extension), extension for climate smart agriculture, gender sensitive extension, extension for entrepreneurship

Unit 6: Changes in Governance, Funding and Delivery

Reduction in public funding: public withdrawal from extension provision (partial/ full); Privatization: Public funding and private delivery; Decentralisation of extension services; Extension and Sustainable Development Goals (SDGs).

Unit 7: Challenges in Managing Pluralistic Extension Systems

Pluralism: Managing pluralism and Co-ordination of pluralistic extension provision; Public private partnerships in extension

Learning outcome

After successful completion of this course, the students are expected to be able to:

- Appreciate the changing global extension landscape
- Broaden their understanding of the role of EAS in the agricultural innovation system
- Critically evaluate the reforms and evolving approaches in extension viz, entrepreneurship

development, climate-smart agriculture, participatory and market-led extension etc.

- Analyse the policy-level challenges in extension funding and delivery
- Understand and develop professional skills to join the extension personnel community.

I. Course Title: Applied Behaviour Change**II. Course Code: EXT 502****III. Credit Hours: 2+1****Theory****Unit 1: Foundations of Human Behaviour**

Human behaviour – Meaning, importance and factors influencing human behaviour; Individual variations – intelligence, ability and creativity– foundations and theories, personality and temperament - foundations, approaches, theories of personality, measuring personality; Motivation – foundations, approaches, theories, managing human needs and motivations; perceiving others – impression, attitude, opinions; Emotions - foundations, types and functions, measuring emotional intelligence.

Unit 2: Cognitive Processes affecting Human Behaviour

Cognitive processes – Attention, perception, remembering and forgetting, knowledge and expertise – foundations and theories; Principles and processes of perception; Consciousness – meaning, types, sleep and dreams; Memory - meaning, types and mechanisms of storage and retrieval of memories in the Human brain; Complex cognitive processes - Concept formation, Thinking, Problem solving and transfer

Unit 3: Information Processing

Information processing – meaning, principles; Models of information processing; Attention and perception; Consciousness.

Unit 4: Learning

Learning – foundations, approaches and theories; Cognitive approaches of learning – meaning, principles theories and models; Behavioural approaches of learning – foundations and theories - classical conditioning, operant conditioning, applied behaviour analysis; Social cognitive and constructivist approaches to learning – foundations and theories – social cognitive theory, Self- regulated learning; learning styles – meaning, types and applications

in learning.

Unit 5: Judgement, Choice and Decision-making

Human judgement – meaning, nature, randomness of situations, theories and models; Choice – meaning, criteria for evaluating options; theories and models of human choice; Choice architecture; Decision-making – Meaning, problem analysis; steps and techniques of decision-making under different contexts.

Unit 6: Social Judgement, Social Identity and Inter-Group Relations

Social judgement – meaning, frame of reference, stereotyping; Attribution – meaning, theories; Rational decision making; Social Identity – meaning, types; assessment; Groups – meaning, types, group processes; sustainability of groups; Inter group processes and theories social learning.

Practical

- Understanding perception
- Lab exercise in applying Maslow's need hierarchy to assess motivation
- Learning - Classical conditioning and operant conditioning
- Practical experience in building self-esteem
- Assessment of emotional intelligence
- Exercises in problem solving
- Exercises in visual perception
- Measuring self-concept using psychometric tools
- Experiment on factors influencing information processing
- Assessment of attitudes
- Simulation exercise to understand decision-making under different situations

Learning outcome

After successful completion of this course, the students are expected to be able to:

- Understand the cognitive processes determining human behaviour
- Understand the process of learning under a different context
- Develop skills and competencies in influencing the human decision process in entrepreneurship development, climate-smart agriculture, participatory and market-led extension etc.
- Design effective strategies to influence attitude and behaviour

I. Course Title: Organisational Behaviour and Development

II. Course Code: EXT 503

III. Credit Hours: 2+1

VI. Theory

Unit 1: Basics of Organization

Introduction to organizations-concept and characteristics of organizations; Typology of organizations; Theories of organizations: nature of organizational theory, Classical theories, Modern management theories, System Theory - Criticisms and lessons learnt/ analysis.

Unit 2: Basics of Organizational Behaviour

Concepts of Organisational Behaviour, Scope, Importance, Models of OB.

Unit 3: Individual Behaviour in Organizations

Introduction, Self-awareness, Perception and Attribution, Learning, Systems approach to studying organization needs and motives – attitude, values and ethical behaviour, Personality, Motivation-Concept and Theories, Managing motivation in organizations.

Unit 4: Group Behaviour in Organization

Foundations of group, group behaviour and group dynamics, Group Development and Cohesiveness, Group Performance and Decision Making, Intergroup Relations; Teams in Organizations-Team building experiential exercises, Interpersonal Communication and Group; Leadership: Meaning, types, Theories and Perspectives on Effective Leadership, Power and Influence, managing Conflict and Negotiation skills, Job/ stress management, decision-making, problem-solving techniques.

Unit 5: Productive Behaviour and Occupational Stress

Productive behaviour - Meaning, dimension; Job analysis and Job performance – meaning, dimensions, determinants and measurement; Job satisfaction and organizational commitment - meaning, dimensions and measures roles and role clarity; Occupational stress – meaning, sources, theories and models, effects, coping mechanism, effects and management;

Occupational stress in farming, farmer groups/ organizations, research and extension organizations.

Unit 6: Organizational System

Organizations Structure- Need and Types, Line & staff, functional, centralization & decentralization, Different stages of growth and designing the organizational structure; Organizational Design- Parameters of Organizational Design, Organization and Environment, Organizational Strategy, Organization and Technology, Power and Conflicts in Organizations, Organizational Decision-Making; Organizational Culture vs Climate; Organizational Change; Organizational Learning and Transformation.

Unit 7: Overview of Organizational Development

Concept of OD, Importance and Characteristics, Objectives of OD, History and Evolution of OD, Implications of OD Values.

Practical

- Case 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, decision-making patterns.
- Study of individual and group behaviour 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.

Learning outcome

After successful completion of this course, the students are expected to be able to:

- This course will equip the students to become potential change agents and OD practitioners in entrepreneurship development, climate-smart agriculture, participatory and market-led extension etc.
- They shall learn skills to improve individual, group/team and organizational performance through OD techniques or interventions.

I. Course Title: Research Methodology in Extension**II. Course Code: EXT 504****III. Credit Hours: 2+1****Theory****Unit 1: Nature of Behavioural Research**

Methods of knowing; Science and scientific method; Behavioural research – Concept, aim, goals and objectives; Characteristics and Paradigms of research; Types of behavioural research based on applications, objectives and inquiry; Types of knowledge generated through research – historical, axiological, theoretical and conceptual knowledge, prior research studies, reviews and academic debate; Role of behavioural research in extension.

Unit 2: The Behavioural Research Process

Basic steps in behavioural research – Formulating a Research Problem; Reviewing the Literature; Identifying the variables and hypotheses; Formulating research designs, methods and tools; Selecting sample; Collecting data; Analyzing and Interpreting the Data; Reporting and Evaluating Research; Skills needed to design and conduct research; Writing research proposals.

Unit 3: Formulating a Research Problem

The research problem and research topic - definitions; Importance of formulating a research problem; Sources of research problems; Characteristics of a good research problem; Research problems in quantitative and qualitative research; Steps in formulating a research problem; Strategies for writing research problem statement; Research purpose statement; Research questions – Types, Criteria for selecting research questions, techniques for narrowing a problem into a research question; Objectives - Meaning, types and criteria for judging the objectives.

Unit 4: Reviewing the Literature

Review-meaning and importance; Types of literature review – Context, Historical, Integrative,

methodological, self-study and theoretical; Literature review for quantitative and qualitative studies; Steps in conducting literature review – Identify key terms, locate literature, critical evaluation and selection; organising literature and writing literature review.

Unit 5: Identifying Variables and Hypotheses

Developing theoretical, conceptual, empirical frameworks; Approaches for identifying concepts, constructs and variables; Role of theory in behavioural research; Steps in identifying variables – Domain, Concepts, Constructs, Dimensions; Indicators; Variables, Definitions, premises, propositions and hypotheses; Techniques of identifying concepts, constructs and variables - Types of concepts; Types of variables –causal relationship, the study design; and the unit of measurement; Types of definitions-Types of propositions and hypotheses. Characteristics of good hypotheses; Measurement – Meaning, levels of measurement – nominal, ordinal, interval and ratio; Criteria for choosing measurement levels for variables.

Unit 6: Formulating Research Designs, Methods and Tools

Research designs – Definition, purpose and functions; Research Design as Variance Control - MAXMINCON Principle; Criteria for selecting a suitable Research Design; Classification of research designs: Quantitative designs - experimental, descriptive, comparative, correlational, survey, ex-post facto and secondary data analysis; Qualitative designs - ethnographic, grounded theory, phenomenological and Narrative research; Mixed method designs – Action research design; Translational research; Elements of research design - Research strategies, Extent of researcher interference, Study setting, Unit of analysis and Time horizon. Sources of errors while specifying research designs. Internal and external validity; Choosing right research design; Triangulation - Importance in behavioural research, Types of triangulation. Research methods: Designing research Instruments – questionnaires, interview schedules; tests – knowledge tests, behaviour performance tests; scales – scales and indexes

Unit 7: Selecting Sample

Sampling - population, element, sample, sampling unit, and subject; Sampling strategies for quantitative and qualitative research; Principles of sampling; Factors affecting the inferences drawn from a sample; Types of sampling, Methods of drawing a random sample, Sampling

with or without replacement, Types of sampling - Probability Sampling - Simple random sampling, Cluster sampling, Systematic sampling, Stratified random sampling and Unequal probability Sampling; Non- probability Sampling - Reliance of available subjects, Purposive or judgmental sampling, accidental sampling, expert sampling, Snowball sampling, and Quota sampling;

Unit 8: Collecting Data

The process of collecting data – Selection, training, supervision, and evaluation of field investigators; Online data collection; Errors and biases during data collection. Testing goodness of measures through item analysis - Reliability and validity; Types of validity – Content validity: Face and content validity, Criterion-related validity: concurrent and predictive validity, Construct validity: convergent, and discriminant validity, factorial validity, and nomological validity; Types of reliability – Test-Retest, Parallel forms, Inter-item consistency reliability, Split-half reliability. Factors affecting the validity and reliability of research instruments, Strategies for enhancing validity and reliability of measures. Validity and reliability in qualitative research.

Unit 9: Analysing and Interpreting the Data

Data coding, exploration and editing; Methods of data processing in quantitative and qualitative studies; Quantitative data analysis - parametric and non-parametric statistical analyses; Parametric analysis – Descriptive and inferential statistics, Hypothesis testing- Type I & Type II errors. Guidelines for choosing appropriate statistical analysis.

Unit 10: Reporting and Evaluating Research

Writing reports and research publications; Evaluation Methodology

Practical

- Selecting a research problem and writing problem statement
- Narrowing down research problem to purpose, research questions and objectives
- Choosing, evaluating and reviewing research literature

- Selection of variables through construct conceptualisation and defining variables
- Choosing research design based on research problem
- Choosing right sampling method and estimating sample size
- Developing research methods and tools – questionnaires, interview schedule, check lists and focus group guides
- Writing a research proposal
- Field data collection using research methods and tools
- Testing reliability and validity of research instruments
- Hands on experience in using SPSS for coding, data exploration, editing, analysis and interpretation Formulation of secondary tables based on objectives of research
- Writing report, writing of thesis and research articles
- Presentation of reports

Learning outcome

After successful completion of this course, the students are expected to be able to:

- Understand the concepts, paradigms, approaches and strategies of behavioural research
- Enable to choose research design, methods and tools suitable for the research problem
- Design research instruments skilfully and conduct research in an objective and unbiased way
- Analyse the data through appropriate analytical methods and tools and derive meaningful interpretations

I. Course Title: Capacity Development

II. Course Code: EXT 505

III. Credit Hours: 2+1

Theory

Unit 1: Capacity Development–An Overview

Training, capacity building, capacity development and HRD-Meaning and differences; Need and principles of capacity development; Types and levels of capacities - Institutional capacities, Organisational, Individual capacities. Types of capacity building - Based on structure, Based on context, and other categories. Components of capacity development; Capacity development cycle.

Unit 2: Capacity Development- Approaches and Strategies

Capacity Development Dilemma- Theory versus Practice, Trainee versus Task, Structured versus Unstructured, Generic and Specific; Approaches in Capacity Development - Informative approach, Participatory approach, Experimental approach/ Experiential, Performance based approach; Capacity Development Strategies

Unit 3: Planning and Organization of Capacity Development Programmes

Steps in Designing and Planning of Capacity Development; Organising capacity development programme; Operational arrangements at different stages; Stakeholders' responsibilities.

Unit 4: Planning and Organization of Capacity Development Programmes

Concept of Need Assessment; Approaches in Need Analysis- Performance Analysis, Task Analysis, Competency Study; Needs Survey.

Unit 5: Capacity Development Needs Assessment Methods

Data Collection Methods in Identifying Needs; Information and Skills required in Need Analysis; Identification of Needs through Task Analysis - Task identification, Task Analysis, Gap Analysis.

Unit 6: Capacity Development Institutions

Capacity Developer (Trainer): Meaning and concept; Types of Capacity Developers; Roles of Capacity Developer; Good Capacity Developer – Qualities, skills and roles; Capacity Development Centres and Locations; Organisation's Role in Capacity Development.

Unit 7: Capacity Development Methods and Tools

Capacity Development Methods –Lecture, Discussion, Syndicate, Seminars, Conference, Symposium, Role Play, Case study, Programmed Instruction, T -group/ Laboratory methods; Factors Determining Selection of Methods-Capacity development objectives, subject matter, categories of participants, and the available resources; Capacity Development Aids.

Unit 8: Human Resource Development

HRD: Meaning, Importance and Benefits; Types of HRD Systems & Sub-systems Career system, Work system, Development system, Self-renewal system, Culture system; Components of HRD System - Performance Appraisal, Potential Appraisal, Task System, Development System, Socialisation System, Governance; Functions of HRD

Practical

- Capacity development needs assessment exercise
- Capacity development project formulation exercise
- Designing a programme
- Writing learning objectives
- Developing objectives into curriculum
- Training plan

Learning outcome

After successful completion of this course, the students are expected to be able to:

- Differentiate between training, skill development, capacity building, capacity development and human resource development

- Explain different levels of capacities, needs assessment approaches & methods, capacity development methods and tools
- Formulate, implement and evaluate need-based capacity and entrepreneurship development programmes

I. Course Title: ICTs for Agricultural Extension and Advisory Services

II. Course Code: EXT 506

III. Credit Hours: 2+1

Theory

Unit 1: ICTs- Concepts and Status

ICTs- meaning, concepts, global and national status, types, functions, advantages and limitations of ICTs.

Unit 2: ICTs in Knowledge Management

Knowledge management: meaning, approaches and tools. Role of ICTs in Agricultural Knowledge Management.

Unit 3: e-Extension initiatives in Agriculture and allied sectors

E-Extension: Global and national e-extension initiatives in Agriculture and allied sectors.

Unit 4: ICT Applications

Knowledge (tele) centres, digital kiosks, websites and web portals, community radio, farmers call centres, m-extension and m-learning, Computer assisted instruction, social media, digital videos, Market Intelligence and Information Systems and e-Marketing.

Unit 5: ICT Expert Systems

Expert System, Decision Support System, Management Information Systems, Farm Health Management & Intelligence System.

Unit 6: ICT Networks

Global and regional knowledge networks, international information management systems, e-Learning platforms, e-Governance Systems; digital networks among farm stakeholders.

Unit 7: Policies in Knowledge Management

Global and national policies e-Governance, Open Data, sources and Standards, Language

Technology Applications; National e-Agriculture policy/Strategies/guidelines.

Unit 8: Web Standards

Web standards, creating and writing for web portals, development of mobile applications, developing digital videos- story board- video recording- video editing, types of blogs and writing guidelines.

Unit 9: Social Media Applications to engage audience

Video conference, live streaming and webinars, types and functions of social media applications, guidelines for preparing social media content, engaging audience and data-analytics.

Unit 10: Smart Technologies

Open technology computing facilities, System for data analytics/mining/modelling/ Development of Agricultural simulations; Remote Sensing, GIS, GPS, Information Utility (AIU); disruptive technologies- Analysis; Internet of Things (IoTs), Drones, Artificial intelligence (AI), block chain technology, social media and Big Data analytics for extension.

Unit 11: Human Computer Interactions

Human Computer Interactions-Meaning; Principles and Theories of multimedia learning, Designing ICT gadgets based on human interaction principles - Interactive design-Meaning, importance and Approaches, Methods of interactive design- Usability testing methods.

Practical

- Content and client engagement analysis
- Designing extension content for ICTs
- Creating and designing web portals, blogs, social media pages
- Developing digital videos
- Live streaming extension programmes and organising webinars
- Working with Farmers call centres

- Engaging with professional digital networks
- Writing for digital media

Learning outcome

After successful completion of this course, the students are expected to be able to:

- Appreciate the importance of the ICTs in Extension Advisory Services
- Understand the ICT application aspects of entrepreneurship development, climate-smart agriculture, participatory and market-led extension etc.
- Critically evaluate ICT initiatives and smart technologies for adding entrepreneurship value to agriculture and rural development
- To execute extension functions for agricultural and rural development by applying ICTs
- Engage stakeholders in the skill development and knowledge management process

I. Course Title: Evaluation and Impact Assessment

II. Course Code: EXT 507

III. Credit Hours: 2+1

Theory

Unit 1: Introduction to Evaluation

Concept of Evaluation: Meaning and concept in different contexts; Why Evaluation is Done and When? Programme planning, analyse programme effectiveness, decision making, accountability, impact assessment, Objectives, types, criteria and approaches of programme evaluation, evaluation principles; the context of program evaluation in agricultural extension; Role and Credibility of Evaluator: Competency and credibility of evaluator.

Unit 2: Evaluation Theories

Evaluation theory vs. practice – synergistic role between practice and theory in evaluation; Evaluation theories - Three broad categories of theories that evaluators use in their works - programme theory, social science theory, and evaluation theory (other theories/ approaches - Utilization-Focused Evaluation (U-FE) Checklist, Values Engaged Evaluation, Empowerment Evaluation, Theory-Driven Evaluation).

Unit 3: How to Conduct Evaluation

Ten Steps in programme evaluation: (1) Identify and describe programme you want to evaluate (2) Identify the phase of the programme (design, start-up, ongoing, wrap-up, follow-up) and type of evaluation study needed (needs assessment, baseline, formative, summative, follow-up) (3) Assess the feasibility of implementing an evaluation (4) Identify and consult key stakeholders (5) Identify approaches to data collection (quantitative, qualitative, mixed) (6) Select data collection techniques (survey interviews and questionnaires with different types) (7) Identify population and select sample (sampling for evaluation, sample size, errors, sampling techniques) (8) Collect, analyse and interpret data (qualitative and quantitative evaluation data analysis) (9) Communicate findings (reporting plan, evaluation report types, reporting results, reporting tips, reporting negative findings) (10) Apply and use findings

(programme continuation/ discontinuation, improve on-going programme, plan future programmes and inform programme stakeholders).

Unit 4: Evaluating the Evaluation

Evaluating the Evaluation - 10 Steps as above with focus on conceptual clarity representation of programme components and stakeholders, sensitivity, representativeness of needs, sample and data, technical adequacy, methods used for data collection and analysis, costs, recommendations and reports.

Unit 5: SWOT Analysis and Bar Charts

SWOT Analysis – Concept, origin and evolution; SWOT As a Programme Management Tool; Conducting SWOT Analysis - Common Questions in SWOT Analysis; Advantages and Disadvantages of SWOT; Bar Charts (Gantt Charts and Milestone Charts) - Characteristics, advantages and limitations.

Unit 6: Networks

Networks –Introduction, origin and widely used networks (Programme Evaluation and Review Technique (PERT) and Critical Path Method (CPM), differences between PERT and CPM, advantages and disadvantages. Networks Terminology – Activity, Dummy activity, Event (predecessor event, successor event, burst event, merge event, critical event), Earliest Start Time (EST), Latest Start Time (LST), Critical Path, Critical Activity, Optimistic time (To), Pessimistic time (Po), Most likely time (TM), Expected time (TE), Float or Slack, Event Slack, Lead time, Lag time, Fast tracking, Crashing critical path, Activity Table, Dangers, Normal Time. Rules for Preparation of Networks and Steps in Network Preparation with example.

Unit 7: Bennett's Hierarchy of Evaluation

Introduction to Bennett's hierarchy – Background and description; Relation between programme objectives & outcomes at 7 levels of Bennett's hierarchy – Inputs, activities, participation, reactions, KASA changes, practice and behaviour changes, end results. Advantages and Disadvantages of Bennett's hierarchy

Unit 8: Logic Framework Approach (LFA)

Background and description; Variations of LFA - Goal Oriented Project Planning (GOPP) or Objectives Oriented Project Planning (OOPP); LFA Four-by-Four Grid – Rows from bottom to top (Activities, Outputs, Purpose and Goal & Columns representing types of information about the events (Narrative description, Objectively Verifiable Indicators (OVIs) of these events taking place, Means of Verification (MoV) where information will be available on the OVIs, and Assumptions). Advantages and Disadvantages of LFA.

Unit 9: Introduction to Impact Assessment

Concept of Impact Assessment: Meaning, concept and purpose in different contexts; Impact Assessment Framework: Meaning of inputs, outputs, outcomes, impacts and their relation with monitoring, evaluation and impact assessment.

Unit 10: Impact Assessment Indicators

Indicators for impact assessment – meaning and concept; Selecting impact indicators; Types of impact indicators for technology and extension advisory services - social and behavioral indicators, socio-cultural indicators, technology level indicators, environmental impact assessment indicators and institutional impact assessment indicators.

Unit 11: Approaches for Impact Assessment

Impact assessment approaches – Quantitative, qualitative, participatory and mixed methods with their advantages and disadvantages; Quantitative Impact Assessment Types – Based on Time of Assessment (Ex-ante and ex-post), Based on Research Design (Experimental, quasi experimental, Non-experimental). Econometric Impact Assessment: - (Partial Budgeting Technique, Net Present Value, Benefit Cost Ratio, Internal Rate of Return, Adoption Quotient, etc). Qualitative and Participatory Impact Assessment Methods.

Unit 12: Environment Impact Assessment (EIA)

Concept of EIA – Introduction, What it is? Who does it? Why it is conducted? How it is done?; Benefits and important aspects of EIA-risk assessment, environmental management and post product monitoring. Steps in EIA process - screening, scoping, collection of baseline data,

impact prediction, mitigation measures and EIA report

Practical

- Search the literature using web / printed resources and identify evaluation indicators for the following:
 - Utilization-Focused Evaluation
 - Values Engaged Evaluation
 - Empowerment Evaluation
 - Theory-Driven Evaluation
- Visit Directorate of Extension in your university and enquire about extension programmes being implemented / coordinated by Directorate. Develop an evaluation proposal of any one programme using 'Ten Steps in Programme Evaluation' discussed in the theory class.
- Review any comprehensive programme evaluation report from published sources. Evaluate the report and write your observations following the 'Evaluating the Evaluation' approach.
- Identify at least four agriculture development programmes and their objectives being implemented in your state. Write two attributes each on Strengths, Weaknesses, Opportunities and Threats related to the identified programme objectives in the SWOT grid.
- Identify an on-going development programme and make-out 6 activities from the programme.
- Draw a Gantt chart for 12 months programme activities.
- Write a report on evaluation hierarchy levels and indicators as per Bennett's hierarchy of evaluation for any development programme or project.
- Develop LFA four-by-four grid for any development programme or project with activities, outputs, purpose and goal and objectively verifiable indicators, means of verification & assumptions.
- Visit a nearby KVKs / ATIC. Select any agriculture technology with package of practices

and extension advisory services promoted by KVK / ATIC. Identify impact assessment indicators for social and behavioral indicators, socio-cultural indicators, technology level indicators, environmental impact assessment indicators and institutional impact assessment indicators.

- Refer any Environment Impact Assessment report and analyse steps in EIA. Write your observations.

Learning outcome

After successful completion of this course, the students are expected to be able to:

- Develop skills and competencies in the areas of evaluation planning, and indicator development.
- Conducting evaluation and impact assessment of programmes related to entrepreneurship development, climate-smart agriculture, participatory and market-led extension etc.
- Writing reports.

I. Course Title: Managing Extension Organizations

II. Course Code: EXT 508

III. Credit Hours: 2+1

Theory

Unit 1: Management- An Over view

Management and Extension management – Meaning, concept, nature and importance; and theories of management. Management, administration and supervision - meaning, definition and scope; Approaches to management, Principles, functions and levels of management; Qualities and skills of a manager; Interpersonal relations in the organization; Reporting and budgeting

Unit 2: Extension Management in public, private sector and other sectors Extension management (POSDCORB) in public sector, Department of Agriculture, Agricultural Technology Management Agency (ATMA), Krishi Vigyan Kendra (KVK), SAUs, ICAR Institutes, Private sector, Cooperatives, NGOs, and FPOs etc. Organisational Structure, Relations between different units- Challenges in management

Unit 3: Concepts in Management

Decision making – Concept, Types of decisions, Styles and techniques of decision making, Steps in DM Process, Guidelines for making effective decisions; Human Resource Management: Manpower planning, Recruitment, Selection, Placement and Orientation, Training and Development; Leadership – Concept, Characteristics, Functions, Approaches to leadership, Leadership styles; Authority and responsibility, Delegation and decentralization, line and staff relations; Challenges of co-ordination in extension organizations; Managing interdepartmental coordination and convergence between KVK, ATMA and line departments; Coordinating pluralism in extension services; Challenges in managing public-private partnerships (PPPs) at different levels in agricultural development in general and extension in particular; Performance appraisal – Meaning, Concept, Methods.

Unit 4: Motivation and Communication

Managing work motivation – Concept, Motivation and Performance, Approaches to motivation, team building; Organizational Communication – Concept, Process, Types, Networks, Barriers to Communication; Mentoring, Time management, Team work and team-building strategies; Modernization of information handling

Unit 5: Supervision and Control

Supervision – Meaning, Responsibilities, Qualities and functions of supervision, Essentials of effective supervision; Managerial Control – Nature, Process, Types, Techniques of Control, Observation, PERT and CPM, Management Information Systems (MIS): Concept, tools and techniques, MIS in extension organizations.

Practical

- Simulated exercises on techniques of decision making
- Study the structure and function of agro-enterprises, Designing organizational structure/ organograms.
- Group activity on leadership development skills
- Simulated exercise to understand management processes
- Field visit to extension organizations (ATARI, KVKs, NGOs), FPOs, dairy cooperatives to understand the functions of management
- Practical exercises on PERT & CPM
- Group exercise on development of short term and long term plans for agro- enterprises
- Developing model agriculture-based projects including feasibility study, financial Planning and cost-benefit analysis.

Learning outcome

After successful completion of this course, the students are expected to be able to:

- Turn good extension and advisory services managers, including agri-ventures, FPOs, cooperatives, etc.

- understand the critical business skills needed for managing agribusinesses and managing the value chains
- critically evaluate the Management functions to make extension systems efficient by applying management principles, and good practices of effective management engaged in the management of extension organizations

I. Course Title: Enabling Innovation

II. Course code: EXT 509

III. Credit Hours: 1+1

Theory

Unit 1: Agricultural Innovation Systems: Concepts and Elements

Innovation vs Invention, innovation systems: origin, concept, development; Agricultural Innovation System (AIS): concept, process, stakeholders' interaction, approaches- ToT, FSR, AKIS and AIS, AIS analysis: structural view, functional view, process view and capacity view.

Unit 2: Enabling Innovation

Enabling environment: Policies and institutions involved; Innovation Platforms, Role of Government-Innovation Policy: Achieving coordination and policy coherence; Methodologies for AIS Diagnosis, Assessing Extension and Advisory Services within AIS; Capacity Development in AIS.

Unit 3: Scaling Up: Tools, Approaches and Pathways

Scaling Up: concept, views, approaches, pathways, framework and tools, enabling policies; Scalability assessment tools; Innovation Management for scaling up knowledge and implications for Extension and Advisory Services.

Practical

- Identify one crop/commodity sector and use AIS framework to diagnose actors and their roles, patterns of interaction, institutions determining interaction and the enabling policy environment and develop an AIS Diagnosis Report (Review and Key informant interviews)
- Undertake a case study on a successful case of scaling up knowledge and identify factors that contributed to its success
- Identify one specific knowledge (a technology, an approach) recently introduced and develop an Up-scaling Strategy.

Learning outcome

After successful completion of this course, the students are expected to be able to:

- Appreciate and apply AIS framework in different contexts
- Develop their knowledge and skills related to enabling innovation
- Diagnose AIS and design interventions for improvement and
- Design scaling-up strategies to achieve innovation and impact in agricultural entrepreneurship sectors

I. Course Title: Gender Mainstreaming**II. Course Code: EXT 510****III. Credit Hours: 2+1****Theory****Unit 1: Historical Perspective of Gender**

Historical perspective of gender: Feminism and emergence of gender as a concept, Scope of gender studies in agriculture and rural development

Unit 2: Agrarian Importance of Gender

Agrarian Importance of Gender; Key gender issues and challenges in agriculture; Global actions to address gender needs and strategies; women empowerment.

Unit 3: Gender Related Concepts and Divides

Gender related concepts: gender equality and equity, gender balance, gender blindness, gender relations, gender neutrality, gender bias and discrimination, gender rights, gender roles and responsibilities. Gender budgeting, Gender divides and their implications: gender digital divide, gender access to resources, inputs divide, gender mobility divide, gender wage divide, Gender needs: practical and strategic.

Unit 4: Gender Analysis

Gender analysis: Importance, usage, prerequisites, Tools and techniques.

Unit 5: Gender and Technology

Gender and technology: How gender and technology impact each other, Gender neutral technology, Gender sensitive technology, Gender supportive assistance in technology adoption: Gender in agricultural research and extension.

Unit 6: Gender Mainstreaming

Gender mainstreaming: Importance in agriculture, Extension strategies to address gender issues such as gender and health, nutrition, gender in agricultural value chains, gender and

climate change adaptation, gender and globalization & liberalization for mainstreaming gender concerns into the national programmes and policies.

Unit 7: Women Empowerment

Women Empowerment: Importance, models, Current national women empowerment and gender indices. Women empowerment approaches (technological, organizational, political, financial, social, legal and psychological), Case studies based on experiences and learning from various development and rural development programmes.

Unit 8: Global Best Practices, Policies and Frameworks

Global Best Practices, Policies and Frameworks: Global best practices, gender mainstreaming models and frameworks for addressing gender concerns in agriculture, approaches of various organizations: Special women focused programmes in agriculture and rural development.

Unit 9: Entrepreneurship Development for Women

Women entrepreneurship development in agriculture and agro processing: current status, women led enterprises, supporting organizations and schemes, Government policies, entrepreneurship development programme and process for women in agriculture.

Practical

- Visit to a village to understand rural gender roles and responsibilities as groups, followed by class presentation by groups
- Exercise for capturing shifts in gender roles and responsibilities
- Conducting gender analysis in a village using gender analysis techniques
- Visit agencies supporting women's empowerment followed by report presentation. Each student is to visit a different organization such as State Rural Livelihood Mission, Women Development Corporation, Department of Agriculture, Important NGOs working for women empowerment
- Exercise for identification and prioritization of issues affecting/needs for women empowerment

- Interaction with a successful women entrepreneur/ SHG

Learning outcome

After successful completion of this course, the students are expected to be able to:

- Appreciate the importance of addressing agrarian gender concerns in the context of sustainable employability, livelihoods and national development
- Understand the various concepts related to gender and the application of these concepts for women empowerment and gender mainstreaming
- Explore various employable, skill-oriented ventures for gender development
- Critically evaluate the various agricultural development, rural development programmes, schemes, policies and strategies for women empowerment within the context of achieving gender equity
- Develop skills on how to engage in gender analysis and collect and analyse sex-disaggregated data for developing strategies for women empowerment and gender mainstreaming