

# *Faculty of Agriculture*

*P.K.University*

*Shivpuri (MP)*



**Evaluation Scheme & Syllabus**

**M.Sc (Agriculture) – Agricultural Extension**

# ***M.Sc (Agriculture) - Agricultural Extension***

## ***(Faculty of Agriculture)***

***P.K. University, Shivpuri (MP)***

**Academic eligibility for admission: - B.Sc. (Ag.)**

### **Curriculum and Syllabus**

Semester	Course Code & No.	Course Title	CRD	Mid Exam.	Final Exam		Total
					Theory	Practical	
<b>I<sup>st</sup> Sem.</b>	AEX 6401	Fundamentals of Extension Education & Rural Development	3 (2+1)	30	70	50	150
	AEX 6402	Fundamentals of Rural Sociology	3 (2+1)	30	70	50	150
	AEX 6403	Programme planning in Extension	3 (2+1)	30	70	50	150
	AST-6424	Statistical Methods	3 (2+1)	30	70	50	150
<b>Total</b>			<b>12</b>				<b>600</b>

<b>II<sup>nd</sup> Sem</b>	AEX 6405	Diffusion and Adoption of Innovations	3 (2+1)	30	70	50	150
	AEX 6406	Psychology of Human Behavior	3(2+1)	30	70	50	150
	AEX 6407	Agricultural Journalism	3 (2+1)	30	70	50	150
	AST-6408	Design of Experiment	3(2+1)	30	70	50	150
<b>Total</b>			<b>12</b>				<b>600</b>

<b>III<sup>rd</sup> Sem</b>	AEX 7401	Audiovisuals and Graphic Communication	3(2+1)	30	70	50	150
	AEX 7402	Communication Media and Information Technology	3(2+1)	30	70	50	150
	AEX 7403	Management in Extension	3(2+1)	30	70	50	150
	AEX 7404	Methods of Social Research	3(2+1)	30	70	50	150
<b>Total</b>			<b>12</b>				<b>600</b>

<b>IV<sup>th</sup> Sem</b>	AEX 7405	Process and Methods of Communication	3(2+1)	30	70	50	150
	AEX 7406	Training for Human Resource Development	3(2+1)	30	70	50	150
	AGR-599	Seminar	1	Satisfactory/Unsatisfactory			
	<b>Optional (any one from two)</b>						
	AGR-7407	Training Methodology	12 (9+3)	30	70	50	150
	<b>or</b>						
	AGR-598	Thesis Research	12	40 % Internal +60% External)			150
<b>Total</b>			<b>19</b>				
<b>Grand Total</b>			<b>55</b>				<b>2250</b>

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**SEMESTER -I**

**1. FUNDAMENTALS OF EXTENSION EDUCATION (AEX-6401)**

**Credit Hours: (2+1=3)**

Analysis of definitions, principles and philosophy of Extension Education. Extensions education as discipline and profession, objectives and role in development: Historical and emerging perspective of Agriculture Extension in India, Integrated functioning of teaching, research and extension in ICAR and SAU system in India and its linkage with National Agricultural Research System. Gender issues in rural development & its implications to Extension Education.

Practical: related with the course.

**2. FUNDAMENTALS OF RURAL SOCIOLOGY: ( AEX-6402)**

**Credit Hours: (2+1=3)**

Rural Sociology : Definition, scope, importance and relationship with extension education: Basic sociological concepts society, community, rural social institutions, association, social change, cultural change, technological change, social values, norms, folkways, more customs and traditions, Culture: concept, types, structure, patterns, problems, cultural relativism and cultural lag, cultural integration and its role in development; Socialization: concept, role in personality development; Social stratification: concept, structure, role; Groups: concept, types and dynamic; Leadership: concept, types, styles, theories and principle, and its implication, for development; Religious belief system and its significance for development; Social structure, social organizations and social system concept, differences, types, their role in development; Social sanctions and deviance; Social Process: concept, types- competition, conflict, cooperation, assimilation and accommodation; Social change due to developmental programs and gender roles.

**Practical :-**

Rural sociology and extension cases on social, cultural and technological changes, studies on relief system, Exploring social process, Exploring group dynamics and leadership pattern in villages. Leadership styles in village situation, Rural social institutions (Panchayats, Cooperatives). Social sanctions, values and deviance — cases Assignments and term papers.

### **3. PROGRAMME PLANNING IN EXTENSION (AEX-6403)**

**Credit Hours: (2+1=3)**

Importance, principles, steps and process in developing sound extension programmes; Process of developmental planning and national planning system; Organizational structure for planning at various levels; Formulation of five year plans in india; Participatory planning process; PRA, RRA and PLA techniques; Changing role of panchayats in programme implementation; Execution of various programmes; Project formulation and project appraisal in terms of social benefit analysis; Project management Techniques PERT and CPM ; Critical analysis of the various agricultural and rural development programmes including NGOs and Self Help Groups.

**Practical:** Preparation of plans projects programme proposals. Exercises on participatory methods - RRA,PRA, PLA etc. evaluation of plans, Exercises of PERT, Visit to development organizations and NGOs Assignments and term papers.

### **4. EXPERIMENTAL STATISTICS (AST-6424 )**

**(Credit Hours: 2+1=3)**

Frequency distribution, classification and tabulation of data, graphical and diagrammatic representation of data, measures of central tendency, measures of dispersion, coefficient of variance, standard error, skewness & kurtosis. Census & sample survey, population and sample, probability, concept of random sampling, simple random sample, stratified sample systematic & cluster sampling parameter & sample value. Testing of hypothesis, test of significance based on Z , t and F test  $\chi^2$ -test for goodness of fit and independence of attributes.Scattered diagram. Linear regression & correlation, regression and correlation coefficient.

Practical: related with the course.

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**SEMESTER –II**

**1. DIFFUSION AND ADOPTION OF INNOVATIONS : (AEX-6405)**  
**(Credit Hours: 2+1=3)**

Introduction to the field: Concept of diffusion, elements, traditions of research on diffusion, typology of diffusion research contribution and shortcoming of diffusion research. Generation of innovation tracing the innovation development process. Converting research into practices. Adoption Process: concept of stage, shade of agreement, neglected element need dynamic nature of stage, covert and processes at stage innovation decision process; a critical appraisal of the new formulation; adopter categories: Innovativeness and adopter categories, adopter categories as idea types, characteristics of adopter categories. Predicting innovativeness: Simulation of innovation diffusion; perceived attributes of innovation and their rate of adoption; shades of proposals on attributes factors influencing rate of adoption; Diffusion effect and concept of over adoption; opinion leadership and mustiest flow of innovations concepts; concept of homophily and heterophony, and their influence on flow of innovation; measuring opinion leadership; characteristics of opinion leaders, monomorphic and polymorphic opinion leadership types of innovation decision; consequence on innovations; desirable or undesirable, direct or indirect anticipated or unanticipated consequence.

**Practical-**

Attributes rating of current farm and home practices, Content analysis of recent adoption studies. Measurement of variables influencing rate of adoption. Field visit to study recently diffused innovations.

**2. PSYCHOLOGY OF HUMAN BEHAVIOUR: (AEX-6406)**  
**(Credit Hours: 2+1=3)**

Psychology:-: Meaning, scope and importance in extension education; psychology of human behavior; perception nature, laws and selectivity in perception, sensory factors in perception, importance of perception in extension work; attitude: meaning and characteristics. Formation of stereotypes and prejudices, factors in attitude change; motivation: nature, characteristics, theories and of types of motives of techniques of motivation farm people; Emotion: nature, types of emotional response, theories, and role of emotion in regulation human behaviour; learning definition, principles, indicators, theories of learning and experimental learning; defence mechanism; types and importance; personality and individual difference, personality as a set of traits and personality as the self, Roger's self theory, Maslow's self actualization theory.

Practical: related with the course.

### **3. AGRICULTURAL JOURNALISM (AEX-6407) (Credit Hours: 2+1=3)**

Journalism : Concept, theories scope; agricultural journalism as means of mass communication, its form, and role in rural development opportunities , strength and limitations Ethics of journalism, Basis of writing copy-writing, news story, 'feature article, magazine article, farm bulletins and folders Technique of collection of material for news story and feature article; art clear writing: readability and comprehension testing procedures, photo journalism radio and TV journalism techniques of writing scripts for radio and TV advertisement dynamics types story board,, designing a&3, fundamental of layout and design, art of page makeup, technique of editing and proof reading research in agricultural journalism and application printing method and process for different extension publications.

#### **Practical**

Process of printing extension literature; news collection and interview; Writing for farm magazines and newspapers and extension publication including folder, booklet curricular letter, wall newspaper; writing script for radio and TV: communicating through picture : designing cover page of magazine and folder visit to different presses.

### **4. DESIGN OF EXPERIMENT (AST-6408) (Credit Hours: 2+1=3)**

Analysis of variance, Basic principals of experimental design, CRD, RBD, LSD with their analysis mission plot techniques in R.B.D and L.S.D. Factorial experiments its concepts and analysis of  $2^2$ , factorial confounding in symmetrical factorial (in  $2^2$  experiments), split plot design, strip plot design, uniformity trials. Progeny row trials. Complete family block design, with over trails and simple rotational experiments. Statistical organization, statistics of livestock & filstricks. Source of livestock and agriculture in general. Sources of official statistician, crop cutting experiments.

Practical: related with the course.

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**SEMESTER -III**

**1. AUDIOVISUAL AND GRAPHIC COMMUNICATION (AEX-7401)**

**(Credit Hours: 2+1=3)**

Role of Visuals in Communication characteristics of visuals, functions of visuals and graphics; Theories of visual perception; Classification of visuals visual formats, selection of visuals: Designing message for visuals; designing and layout of visual elements, balancing; Graphic formats and device, typology; presentation of scientific data : general and exact data : Principles of production of visual, low-cost visuals, phonographs, reprographic visuals PC based visuals, and digitized video materials in multi-media and TV/Video media; Pre-testing and evaluation of visuals.

**Practical :-**

Preparation of low cost non-projected visuals; Preparation of projected visual; Designing and layout of visual for charts, posters, flash cards etc: Generating computer-aided presentation graphics; Scanning of visuals and evaluation of visuals assignment.

**2. COMMUNICATION MEDIA AND INFORMATION TECHNOLOGY**

**(AEX-7402)**

**(Credit Hours: 2+1=3)**

Media use in agricultural development; Classification of media and their uses; Media planning in extension projects: selection process of media use, essential and optional characteristics, system approach to media selection and use; Cost benefit analysis of media uses; Enhancement in learning experiences through different projected and non-projected media including multimedia presentation; principle of production of Audio and Video tapes; Production of OHP transparencies; photographic slides, computer aided slides, technology for conversion of magnetic tape to digital formats and vice-versa, Application and production of multimedia; Principles of integrated presentation system; internet application tools and web technology; production of web-based instruction material and electronic E-book; Networking system of information, problems and prospects of new communication and information technology.

**Practical**

Production of Communication Material: OHP transparencies, photographic slide including computer aided slide, DIP publishing. Digital printing, production of posters, development of charts and other conventional media; digital editing: audio/video editing and multimedia production and integrated computer-aided on- screen presentation of technology' internet applications: E-mail, voicemail and web tools and technologies, web based instruction, B-book and multimedia production, media testing pre-testing of audio/video media; handling and maintenance of new communication technologies and exploiting their potentials; exercises on development of media plan to assist extension programme.

### 3. Management in Extension (AEX-7403)

(Credit Hours: 2+1=3)

Nature and scope of management with special reference to extension organizations: qualities of a good manager; Principles and theories of management; functions of management in extension organizations; Planning; fundamental of planning. Planning of different levels. Types of plans, systems approach to planning. Planning of different levels. Types of plans, systems approach to planning process; decision making; steps tools and limitation, organization: organizational structure, authority and power. Span of management, principles of organization: departmentation – factors to be considered in grouping activities; Staffing; concept and method; Leading and influencing: basic consideration in motivation approaches to motivation, leadership styles and behavior/job satisfaction and morale; co-ordination: principles and step; controlling : nature and steps in control process, types of control-effective control systems, control techniques; reporting concept, type and method; Budgeting : purpose types of budgets, budgeting process; contemporary issues and challenges of extension management.

**Practical:** Actual Case analysis related to various functions of management- Simulation exercise and field practical to study leadership. Motivation and communication; Discussion with various level of extension managers in identification of extension management problems, A Competitive study of management function and processes in different organizations; private, corporate and government.

### 4. METHODS OF SOCIAL RESEARCH (AEX-7404) (Credit Hours: 2+1=3)

Science and scientific approach: characteristics and purpose of social research, problems of objectivity: theory and facts; element of scientific method; Selection and identification of researchable problem. Designs of social research: meaning, types, purpose, and principles. Faulty designs and criteria of research: design.

MAX-MIN-CON: Types of research: historical, Descriptive and experimental. Laboratory experiment. Field experiment and field studies-survey research. Action research. Aglo-eco-system research. Participatory research. Case study. Experimental and ex-post facto approaches. Simple randomized design: hypothesis: meaning, utility, sources. Types and qualities of workable hypothesis development of hypothesis and its testing; construct and variable ; nature and type of variable- independent, dependent and intervening variable methods of observation and data collection : sample ; population, instrument interview and interview schedule. Construction of schedule and questionnaire: observation: projective technique. Content analysis: sociometry. The semantic differential. Use of documents and records: advance in collection of data-RRA and PRA: analysis of data, tabulation. Coding, use of statistical tools, use of computers in social

science research- SPSS: research report: interoperation of data use of style manual. Formulas of research report, the thesis or dissertation: recent advance in social research.

#### **Practical**

Formulation of research proposal. Research design- formulation of research problem and conduct of research including data collection, analysis, interoperation and report writing. Development eases based on field studies. Suitable assignment and term paper.



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**SEMESTER-IV**

**1. PROCESS AND METHODS OF COMMUNICATION (AEX-7405)**  
**(Credit Hours: 2+1=3)**

Basics of communication: meaning. Nature, processes, purpose and levels of communication; Language in communication; of meaning non-verbal communication; Role of communicator in Extension Education; Communication behavior, Communication skills, Friendlily of communication: communication competence and empathy: 'communication effectiveness and credibility, Improving oral and written communication, Message design dimension of message, channels of communication meaning dimension , classification behaviour; Social Network – homophily, heterophony, traditional and mass media of communication; Theories and models of communication; interpersonal, Interpersonal and mass of communication, need concept and scope in India and third world counties, communication technology and its implications Methodological issues in communication research.

**Practical**

Exercises on presentation skills, listening skills, writing skills, exercises on distortion of communication message; scientific study of communication network in villages through appropriate tools, Exercises on development of appropriate communication plan for extension projects.

**2. TRAINING FOR HUMAN RESOURCE DEVELOPMENT (AEX-7406)**  
**(Credit Hours: 2+1=3)**

Training and educating concept, meaning and relationship; Human resources development: concept dimension, needs and priorities: Basic assumption HRD; strategic intervention in FIRD; HRD policy of Govt. of India (GOT), state development, ICAR, SAUs and selected NGOs; Training typology; training approaches and strategies; Conceptual models of training: Planning, designing and conducting training programmes; Training need assessment: Training Methods; preparation, selection and use, Monitoring, evaluation and follow up of training institutions in India and facilities available for human resource development.

**Practical:**

Exercises on training needs assessment, training and curriculum development: Visit of training and development institutions ( KVKs, FTCs, TICs EElS, MANAGE, MAARM etc.) to share their experience on different aspects of training.

**THESIS RESEARCH (AEX-599)**

**OR**

**TRAINING METHODOLOGY (AEX-7407)**

Principles of learning: pedagogy and andragogy; Selection of trainees: Assessment of training needs; Setting objectives; Designing and conducting extension programmes; Developing training modules; selecting and orientator of trainers; Training methods: lecture, seminar, symposium, workshop, case study, group discussion conference, Convention, panel discussion, buzz session. Forum debates, syndicate, simulation exercises, socio-drama, psychodrama. Role playing, business games, skits, Critical Incidence Technique (CII), in- basket exercise, programmed instruction, experiential learning techniques such as sensitive training, I group, Transactional Analysis and fish bowl exercise Evaluation and follow up of training.

**Practical**

Exercises in using selecting training methods in simulated and real life; Design and conduct of extension training at village level; Design and conduct of training module for field personal at block level; follow up of training conducted at field and block level.

16. SEMINAR