## **Home Science**

## DEPARTMENT OF HOME SCIENCE EXTENSION & COMMUNICATION MANAGEMENT

## M.Sc and Ph.D programmes List of courses

S.No	Course No.	Title of the courses	Credits
MAJOR COURSES			
1	HECM501	Global Extension Systems	3(3+0)
2	HECM 502	Training and Human Resource Development	3(1+2)
3	HECM 503	Communication for Development	3(1+2)
4	HECM 504	Media Production and Management	3(1+2)
5	HECM 505	Participatory Programme Management	3(1+2)
6	HECM 506	Gender Sensitization for Empowerment	2(2+0)
7	HECM 507	Extension Management	2(2+0)
8	HECM 508	Corporate Communication and Event Management	3(1+2)
9	HECM 509	Scientific Writing and Reporting for Media	3(1+2)
10	HECM 510	Educational Technology	3(2+1)
11	HECM 511	ICT and New Media	2(0+2)
12	HECM 601	Recent trends in Extension and Communication	3(3+0)
13	HECM 602	Managerial Skills for Extension Professionals	3(3+0)
14	HECM 603	Advanced Media Management	3(2+1)
15	HECM 604	Sustainable Livelihood Systems	2(2+0)
16	HECM 605	Project Management	2(1+1)
17	HECM606	Monitoring Evaluation and Impact Assessment	3(3+0)
18	HECM 607	Advertising and Marketing Communication	2(1+1)
19	HECM 608	Dynamics of Group Behaviour	2(2+0)
20	HECM 610	Special Project	2(2+0)
21	HECM 591	Master's Seminar	1(1+0)
22	HECM 599	Master's Research	20
23	HECM 691	Doctoral Seminar I	1(1+0)
24	HECM 692	Doctoral Seminar II	1(1+0)
25	HECM -699	Doctoral Research	45

#### **MINOR COURSES**

- Department of Resource Management and Consumer Sciences
- Department of Human Development and Family Studies
- Department of Apparel and Textiles
- Department of Foods and Nutrition

S.No	Course No	Title Of the Courses	Credits	]
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SUPPORTING COURSES			
1	HSC 500	Research Methods in Home Science	3(2+1)
2	STAT 500	Statistical Methods	3(2+1)
3	HSC-600	Research Project Management	3(2+1)
4	STAT 600	Data Processing	2(1+1)
	NON- CREDIT COMPULSORY COURSES		
1	PGS 501	Library and Information Services	1(0+1)
2	PGS 502	Technical Writing and Communication Skills	1(0+1)
3	PGS 503	Intellectual Property And Its	1(1+0)
	(e-Course)		
4	PGS 504	Basic Concepts In Laboratory Techniques	1(0+1)
	(e-Course)		
5	PGS 505	Agricultural Research, Research Ethics	1(1+0)
	(e-Course)		
6	PGS 506	Disaster Management	1(1+0)
	(e-Course)		

#### M.Sc : Minor courses - Any one discipline from the list

#### Ph.D : Minor courses and seminar-Any one discipline from the list

#### M.SC- HOME SCIENCE COMPULSORY COURSES

S.No	Course No	Title of the Courses	Credits
1	HECM501	Global Extension Systems	3(3+0)
2	HECM 502	Training and Human Resource Development	3(1+2)
3	HECM 503	Communication for Development	3(1+2)
4	HECM 504	Media Production and Management	3(1+2)
5	HECM 510	Educational Technology	3(2+1)
6	HSC 500	Research Methods in Home Science	3(2+1)
7	HECM 591	Master's Seminar	1(1+0)
		Total	19 (11+8)

#### HECM 501 GLOBAL EXTENSION SYSTEMS Objective

To appraise students about historical perspectives of extension education in India and comparative extension system of selected

3+0

#### countries. Theory

#### <u>UNIT I</u>

Extension systems in India; Extension efforts after independence -Community Development Programme – Genesis and critical appraisal; Panchayati Raj Institutions; Area and target oriented programme – IAAP, T & V; Special programmes for poor, women and children - IRDP, TRYSEM, DWCRA; JRY, IAY, SGSY. UNIT II

Extension Approaches to rural development; Adult literacy

programme - Need, Importance and Objective, National Literacy mission, Post literacy activities;Support structures and their functions – DRDA, NREGP, Central Social Welfare Board, State Social Welfare Board, NABARD;National Level Voluntary Agencies – CAPART and KVIC; ICAR extension systems- KVK, NATP, IVLP, ATIC, NAIP, AICRP.

<u>UNIT III</u>

Role of SAUs in rural development; role of international organizations in rural development; Review of five year plans in India; privatization of extension services-scope and limitations.

Comparative extension system of selected developed and developing countries: USA, UK, Israel, China, Pakistan, Japan and Brazil with brief history, approaches, organizational structure, linkage with research and extension methods used; its comparative analysis with Indian extension system.

#### **Suggested Readings**

- Axinn George H & Thorat SS. 1972. *Modernizing Agricultural World Wide.* Oxford & IBH.
- Cernea MM, Russel JFA & Coulter JK. (Eds.). 1983. Agricultural *Extension by Training and Visit- The Asian Experience*. The World Bank Washington D.C.
- Cernea MM, Russel JFA & Coulter JK. (Eds.). 1983. Agricultural Extension by Training and Visit- The Asian Experience. The World Bank Washington D.C.
- Dantwala ML & Barmeda JN. 1990. Rural Development Approaches and Issues, Indian Ag. Dev. Since Independence. Oxford & IBH.
- Dantwala ML & Barmeda JN. 1990. Rural Development Approaches and Issues, Indian Ag. Dev. Since Independence. Oxford & IBH.

Dhama OP & Bhatnagar OP. 1991. Communication for Development.

Oxford & IBH. Mondal S & Ray GL. 2007 A Text Book of Rural Development. Kalyani. Ray GL. 2006. Extension Communication and Management. Kalyani.

Rivera WH. 1987. Agricultural Extension World Wide Issues, Practices and Emerging Pririties. Croom Helm.

Rivera WH. 1987. Agricultural Extension World Wide Issues, Practices and Emerging Pririties. Croom Helm. Singh H. 1985. *Rural Development in India.* Print Well Publ. Singh H. 1985. *Rural Development in India.* Print Well Publ.

Singh RP, Mathur PN & Kumar GAK. 1999. *Extension Education -A Handbook for Extension Personnel.* IFWA, IARI, New Delhi.

Swanson BE, Bants RP & Sofrenko AJ. 1984. Improving Agriculture Extension - A Reference Manual. FAO.

Vanden Ban AW & Hawkins HS. 1988. *Agriculture Extension.* Longman Scientific Technicals.

#### HECM 502 TRAININGANDHUMANRESOURCEDEVELOPMENT 1+2 Objective

To acquire knowledge and skill on various aspects of trainings, human resource development and develop expertise as training professionals.

#### Theory

<u>UNIT I</u>

Training – concept and importance in Human Resource Development (HRD) and rural development; types of training; conceptual models of training process.

#### <u>UNIT II</u>

Participatory training methods - lecturette , interactive demonstration, brain storming, case studies, syndicate method, simulation exercises, role –play, business game, in-basket exercise; sensitivity training, T-group, transactional analysis and fish bowl exercise.

#### <u>UNIT III</u>

Experiential Learning Cycle (ELC)- concept and types; designing, management and delivery of training programme; monitoring, evaluation and impact assessment.

#### <u>UNIT IV</u>

Human resource – concepts, importance and types; HRD- concept, dimensions and importance in rural development; strategic interventions; HRD policies of Government, ICAR and NGOs; facilitators of HRD- motivations, stress management; techniques of HRD.

#### Practical

Visiting and studying the nature and functioning of training institute; practice of selected training methods, planning, organizing and evaluation of training programmes for different clientele.

#### **Suggested Readings**

Lynton R. & Pareek U. 1991. *Training Development.* Vistat.

Singh RP. 2000 Management of Training Programmes. Anmol Publ.

#### HECM 503 Objective

To acquaint students about communication process, recent advances in communication and diffusion and help students acquire necessary communication skills.

1+2

#### Theory

<u>UNIT I</u>

Communication- concept, meaning, importance, models, theories and types; communication approaches- individual, group and mass, factors affecting their selection and use; communication fidelity, credibility, empathy, feedback and factors affecting communication process; barriers in communication.

<u>UNIT II</u>

Communication skills; Role of ICT in communication, soft skills; effective oral communication, public speaking; non-verbal communication, writing skills; soft skills; role of ICT in communication.

<u>UNIT III</u>

Participative communication - meaning, importance, process and determinants; development communication- concept, nature and significance; recent advances in communication-print and electronic, internet, e-mail, fax, mobile, interactive video and teleconferencing, computer and computer networking (PAN, LAN, CAN, MAN, WAN); AGRINET, e-Governance.

<u>UNIT IV</u>

Concept and element of diffusion; concept and stages of Innovation – decision process, attributes and consequences of Innovations; adopter categories and innovativeness.

#### Practical

Practical exercises on oral and written communication; planning and use of different communication approaches; Practical hands on experience in recent advances in print, electronic and new media.

#### **Suggested Readings**

Bhagat R. & Mathur PN. 1989. *Mass Media and Farm Women.* Intellectual Publ. House.

Chopra K, Kaukodi GK & Murthy MN. 1990. Participatory Development.

Sage Publ.

Deep & Deep Publ.

Hage Jerald 1977. *Communication and Organizational Control.* Wiley Interscience.

Melkote SR. 1991. Communication for Development in the Third World: Theory and Practices. Sage Publ.

Mody B. 1991. Designing Message for Development Communication. Sage Publ.

# Punam Linda L & Pacanowsky Micheal E. 1983. *Communication and Organizations: An Interpretive Approach.* Sage Publ.

Ratnaswamy P. 1995. Communication Management - Theory and Practice.

- Ray GL. 1991. *Extension and Communication and Management.* Naya Prakashan.
- White Shirley A, Nair KS & Ascroft J. 1994. *Participatory Communication.* Sage Publ.

#### HECM 504 MEDIA PRODUCTION AND MANAGEMENT 1+2 Objective

To develop competency in production and management of different media.

## Theory

<u>UNIT I</u>

Production technology, process and skills; process of producing newspaper, magazine and other printed literature (leaflets, brochures, newsletters, bulletins, booklets, posters etc.).

### <u>UNIT II</u>

Concept of media and role in changing communication scenario; multi- media – concept and evolution of multimedia; fundamentals of making a multi media programme-text; graphics, audio, etc; process of producing radio, television and multi media programmes; different programme formats for radio and televisiion; hardware and gadgetry requirements; use of radio, television, and multimedia in extension; planning and production of selected media products-print and electronic.

#### <u>UNIT III</u>

Paper-kinds of paper, sizes; colour theory for print and multi media; software for production-basics of photoshop, pagemaker, coral draw, quarkxpress; use of graphics, illustrations and diagrams in production; animation.

#### <u>UNIT IV</u>

Ownership patterns of various media; economics of media organizations; organizational structures; different departments; production planning; lay out consideration; marketing planning; registration; liaison with government departments; understanding regulatory mechanisms for newspapers; radio and television; coordination; motivation; decision making and control.

#### Practical

Visit to media industries and marketing agencies; Planning and production of selected media products – print and electronic; Study of one multimedia enterprise in detail; Preparing a project proposal for submitting to a funding agency.

#### **Suggested Readings**

Akhauri MMP. 1990 Entrepreneurship for Women in India. NIESBUD, New Dehli.

Gupta CB & Srinivasan NP. 2000. Entrepreneurship Development in India.

Sultan Chand & Sons

Hisrich RD & Brush CG. 1986. *The Women Entrepreneurs.* D.C. Health & Co.

Meredith GG. 1982. Practice of Entrepreneurship. ILO.

Singh N. 2003 Effective Entrepreneurship Management. Anmol Publ Verma S. 2004. Entrepreneurship and Effective Marketing. Aavishkar Publ.

#### HECM 505 PARTICIPATORY PROGRAMME MANAGEMENT 1+2 Objective

To develop understanding regarding the principles, procedure and approaches of extension programme planning, implementation, evaluation of extension programme and participatory management techniques.

#### Theory

<u>UNIT I</u>

Conceptual framework of extension programme planning – key concepts and importance in planned change.

<u>UNIT II</u>

Participatory planning – concept, importance, process; techniques of participatory planning- RRA, PRA and PLA and their application in extension; approaches of participatory planning – cooperative , democratic, bottom up and down.

<u>UNIT III</u>

Project management techniques – PERT, CPM, SWOT analysis; obtaining technical and monetary support from GOs and NGOs ; importance and ways of people's participation in programme planning, concept and formation of women SHGs. UNIT IV

Implementation and evaluation - concept, importance and techniques. **Practical** 

Application of PRA methods; critical review of evaluation studies related with women and rural development programmes; critical analysis of monitoring and evaluation of developmental programmes; preparation and implementation of home improvement work plans; critical evaluation of work plan with specific evaluation techniques; organize and evaluate programmes related to women and children at village level.

#### Suggested Readings

Adhikary MM. 2006. Participatory Planning & Project Management in Extension Sciences. Agrotech Publ. Academy.

Basu. D. 2006. Participatory Monitoring & Evaluation of Development programmes: Prationer's Guide. Agrotech Publ. Academy.

Dhama OP & Bhatnagar OP. 1991. *Communication for Development.* Oxford & IBH.

Dhama OP. 1986 *Extension and Rural Welfare.* Ram Prasad & Sons. Mukherjee N. 1994. *Participatory Rural Appraisal - Methodology and Application.* Concept Publ. Co.

Ray GL. 1991. *Extension Communication and Management.* Naya Prokash. Sandhu AS. 1994. *Extension Programme Planning.* Oxford & IBH.

Singh R. 1987. *A Text Book of Extension Education.* Sahitya Kala Prakashan.

#### HECM 506 GENDER SENSITIZATION FOR EMPOWERMENT 2+0 Objective

To sensitize students about various dimensions of gender and development, legal rights and using gender tools and methodologies.

#### Theory

<u>UNIT I</u>

Gender and empowerment: meaning, gender related definitions and importance for empowering women; need and focus on gender sensitization

- gender in community diversity and its implication for empowerment.

Gender perspectives in development of women, social characteristics, roles, responsibilities, resources, constraints, legal issues and opportunities; economical, educational and other parameters.

<u>UNIT III</u>

Gender tools and methodologies: Dimensions and methodologies for empowerment; gender budgeting; gender analysis framework-

context, activities, resources and programme action profile;

technologies and empowerment - gender specific technologies,

household technology interface, socio-cultural interface and women as consumer of technologies.  $\underline{\sf UNIT}\,{\sf IV}$ 

Gender issues and development: health and nutrition, violence, governance, education and media.

#### Suggested Readings

Cockburn C & Ormrod S. 1993. Gender and Technology in the Making.

Sage Publ.

Grover I. 2006. *Introducing Gender.* Manual, Department of Home Science Extension Education, COHS, CCS HAU, Hisar.

Grover I. 2006. Unpacking Gender and Feminism. Manual,

Department of Home Science Extension Education, COHS, CCS HAU, Hisar.

- Grover I., Kaushik S & Khetarpaul N. 2006. *Gender Health and Nutrition.* Manual, Department of Home Science Extension Education, COHS, CCS HAU, Hisar.
- Kaushik S. 2006. *Gender & Education*. Manual, Department of Home Science Extension Education, COHS, CCS HAU, Hisar.
- Krishanraj M & Chanani K. 1989. Gender and the Household Domain - Social and Cultural Dimension. Sage Publ.
- Me Neil Maureen (Ed.). 1989. *Gender and Expertise.* Free Association Books.

Mehta S. 2006. *Gender and Media*. Manual, Department of Home Science Extension Education, COHS, CCS HAU, Hisar. Oxfam 1994. *Gender Training Manual*. Oxfam.

Rani S. 2006. *Gender and Work.* Manual, Department of Home Science Extension Education, COHS, CCS HAU, Hisar.

Rose K. 1992. Where Women are Leaders -The SEWA Movement in India.

Vistaar Publ.

- Shiva V. 1989. *Staying Alive Women, Ecology and Development.* Zed Books.
- Yadav L. 2006. *Gender and Governance*. Manual, Department of Home Science Extension Education, COHS, CCS HAU, Hisar.

#### HECM 507 EXTENSION MANAGEMENT 2+0 Objective

To familiarize students with basic concept, importance, elements, functions and principles of extension management and to sensitize them about problems and issues of extension management and appraisal of management of various extension organizations.

#### Theory

<u>UNIT I</u>

Concept of administration and management; principles and theories of administration and management, schools of management thoughts; meaning, nature and scope of extension management; scientific management movement.

<u>UNIT II</u>

Process of management; Planning, Organizing, Staffingmeaning definition of staffing, Directing, Communicating, coordination, controlling, monitoring and evaluation .

<u>UNIT III</u>

Organizational climate, behaviour, development;

Management by Objective (MBO).

<u>UNIT IV</u>

Qualities and functions of extension personnel; extension system of ICAR, SAUs and state departments; problems and issues of extension management in India; critical appraisal of management of various extension organizations, community conflicts and its resolution.

#### Suggested Readings

Ahuja KK. 1983. Personnel Management. Kalyani.

Dhama.OP & Bhatnagar OP. 1991. Education and Communication for Development. Oxford & IBH.

Grover I. 2002. Extension Management. Agrotech Publ.

Ray GL. 2006. *Extension Communication and Management*. Kalyani. Tripathi PC & Reddy RN. 1983. *Principles of Management*. Tata McGraw Publ.

#### HECM 508 CORPORATE COMMUNICATION & EVENT MANAGEMENT

1+2

#### Objective

To develop understanding about concept, goals and strategies of corporate communication, public relation and event management and also develop skill in planning and managing an event.

## Theory

<u>UNIT I</u>

Corporate communication – concept& importance with special reference to Indian Electronic Media context; Identification and under standing corporate goals; corporate policy, strategy and corporate niche, branding; corporate planning, implementation and evaluation.

<u>UNIT II</u>

Corporate public relations-community, customer, investors, media relations; communication campaigns, managing corporate crises, change management conflict and communication, communication audit, managing diversity, issues management; new media and corporate communication. <u>UNIT III</u>

Strategic communication support during mergers/acquisitions, litigations; corporate social responsibility, monitoring blogs for PR activity, environmental analysis; rural public relations; social marketing.

#### <u>UNIT IV</u>

Event management – concept, objective, need, types and structures of event; priority of event management; process of organizing and event; effective use of resources in context to vision, mission and roles; effective goal planning strategies; planning events- press meets/conferences/ exhibitions, organizing media tours; evaluating public opinion.

#### Practical

Visit to different corporate organizations related to media, organizing discussion with corporate personnel; planning and organizing an event for effective communication with corporate sector.

#### **Suggested Readings**

Chopra K, Kaukodi GK & Murthy MN. 1990. Participatory Development.

Sage Publ.

Dwivedi RS.1982. Management of Human Resources: A Behavioural Approach to Personnel. Oxford & IBH.

Hage Jerald 1977. *Communication and Organizational Control.* Wiley Interscience.

Hellriegel Don, Slocum John W & Woodman, Richard W. 1992. Organizational Behavior. 6<sup>th</sup> Ed. West Publ. Co.

Melkote SR. 1991. Communication for Development in the Third World: Theory and Practices. Sage Publ.

Mody B. 1991. Designing Message for Development Communication. Sage Publ.

Pareek U & Rao T Venkateswara 1981. Designing and Managing Human Resource System. Oxford & IBH.

Punam Linda L & Pacanowsky Micheal E. 1983. *Communication and Organizations: An Interpretive Approach*. Sage Publ.

Ratnaswamy P. 1995. *Communication Management - Theory and Practice.* 

Deep & Deep Publ.

Wertger William B & Keith Davis 1982. *Personnal Management* and Human Resources. McGraw Hill.

White Shirley A, Nair KS & Ascroft J. 1994. *Participatory Communication.* Sage Publ.

#### HECM 509 SCIENTIFICWRITINGANDREPORTINGFORMEDIA 1+2 Objective

To aquaint and develop writing and reporting skills among students about science and Technology in various formats for different clientele to media.

#### Theory UNIT I

Concept and various formats of scientific communication, need and importance of scientific communication in changing communication scenario.

<u>UNIT II</u>

Concept of reporting, types of reporting, reporting skills; Reporting -Field reporting, coverage of Science and Technology events (conference

/speeches / seminars and conventions / exhibitions / natural

phenomena etc.); Role & responsibilities of a reporter, classification and qualities of a reporter; techniques of reporting.

Writing: Writing for special target groups like – children, women, farmers and rural folks. Writing in various format for newspaper, science columns, magazines and books. UNIT IV

Editing: Its principles and process, proof reading, editing of articles, stories and newspaper etc.

#### Practical

Field reporting, coverage of Science and Technology events – conference, speeches, seminars, conventions, exhibitions, natural phenomena, Writing for different clientele, editing. Compulsory Industrial Training for Extension Students.

#### **Suggested Readings**

D'Souza YK. 2000. *Encyclopedia of Advanced Journalism.* Vols. I-III. Anmol Publ.

Ravindran RK. 1999. Hand Book of Reporting and Editing. Anmol Publ.

2+1

## HECM 510 EDUCATIONAL TECHNOLOGY Objective

To develop ability among students in handling of different educational technologies and build competency as a teacher and public speaker.

#### Theory

<u>UNIT I</u>

Teaching learning process: meaning and characteristics of teaching and learning; teaching learning process, maxims of teaching which facilitate teaching learning process, stages, forms and levels of teaching and learning. Motivation- concept, importance and techniques.

<u>UNIT II</u>

Meaning and scope of educational technology; curriculum design and development; lesson planning: concept and methodology; teaching learning strategies: microteaching, programmed instruction, simulation role-play, team teaching, experiential learning, traditional media, ICT, video 'production and multimedia presentations etc.

#### <u>UNIT III</u>

Genesis and tren ds in modern education; management of formal and non formal education in India; vocationalization of education; distance education; guidance and counseling. UNIT IV

Evaluation of instructions effectiveness: competence based question paper; reliability and validity of question papers.

#### Practical

Designing a course curriculum, preparation of lesson plans of selected topics; preparation and use of different instructional material; conducting selected, teaching lessons; exercises on teaching learning strategies; reading and speech exercises; construction of competency based question paper and seminar organization.

#### Suggested Readings

Kemp Jerrold E. 1985. Planning and Producing Audio Visual Materials.

Harper & Row.

Kochhar SK. 1985. Methods and Techniques of Teaching. Sterling Publ.

Kulkarni SS. 1986. Introduction to Educational Technology. Oxford & IBH.

Robert Heinich 1990. Instructional Media. MacMillan.

Vedanayagam EG. 1988. Teaching Technology for College Teachers.

Sterling Publ.

#### HECM 511 ICT AND NEW MEDIA Objective

0+2

To familiarize students with the ICT and new media technologies and provide hands on training.

#### Practical

Multi media and emerging technologies. Video-on demand, internet radio and web television, impact of new media on traditional media. Writing for general interest sites, online and net newspapers and editions, blogs, search engines, video logs, citizen journalism, unique features of web language, web pages, home pages, design and layout. Writing on specialized area on of e-journalsthe web. Evaluation advantages and disadvantages. Web site designing concept, HTML, interative, web animation, animated graphics, designing interactive elements, sound addition, web visual editor, creation and editing.

#### **Suggested Readings**

Robert Reinhard & Snow Dowd 2004. *Macromedia Flash Mx 2004 Bible.* 

Wiley.

Tay Vaghan 2002. *Multimedia- Making it Work.* 5<sup>th</sup> Ed. Tata McGraw- Hill.

# HECM 601 RECENT TRENDS IN EXTENSION AND COMMUNICATION

3+0

#### Objective

To develop understanding about concept, approaches, models and theories of extension and recent advances in communication.

## Theory

<u>UNIT I</u>

Changing concepts and emerging issues in extension – Rational and realities; recent Extension strategies for rural upliftment; future scenario of extension.

<u>UNIT II</u>

Recent trends in technology transfer –Need of Identification and documentation of appropriate homestead technologies, Assessment and refinement of technologies; Importance and relevance of indigenous technical knowledge system, Integration of ITK with formal research.

#### <u>UNIT III</u>

Emerging issues in communication- understanding communication in global perspective; Role of Mass Media for rural audience with special emphasis on women.

New communication technologies ;computer Assisted

Instruction; Latest in print technology; Enhancing learning through communication intervention; Visual communication – A psychological perspective; Distance learning; Cyber extension-definition, scope, advantage, limitations, application in Home Science.

#### **Suggested Readings**

Grover I, Sethi N & Grover D. 2004. *Handbook of Communication and Media*. Agro-tech Publ. Academy.

Gupta VS. 2005. *International Communication.* Concept Publ. Rao VM. 2007. *E-Governance.* ABD Publ.

Wadia A. 1999. Communication and Media. Kanishka Publ.

#### HECM 602 MANAGERIAL SKILLS FOR EXTENSION PROFESSIONALS

3+0

#### Objective

To develop expertise on management problems of extension organizations and learn techniques of management in extension organizations.

#### Theory

<u>UNIT I</u>

Conceptualization of management process and its major functions; Management problems in extension organizations; Managerial skil1 - Nature and importance for extension professionals; Skills in effective management of extension and rural development organizations.

#### <u>UNIT II</u>

Strategic planning: importance, steps and techniques involved; Management by objective as applicable to extension organizations; Techniques of Transactional Analysis for improving interpersonal communication.

#### <u>UNIT III</u>

Creative problem solving techniques; Stress management practices; Total Quality Management (TQM); Concept of learning organization to improve extension services at various levels; Time management practices; Development of Management Information System for extension organization at various levels.

#### <u>UNIT IV</u>

Work motivation Organizational climate; Resource management: concept and methods; Team building: process and strategies at organizational and village levels. Mobilization and empowerment skills: concept and strategies in mobilization, concretisation and empowerment of rural people.

#### Suggested Readings

Jan Servaes, Thomas L Lacobson 1996. Shirley A White (Ed.). Participatory Communication for Social Change. Sage Publ.

Leon C Megginson, Donald C Hosely & Paul H Pietri Jr. 1989. Management Concepts and Applications. 3<sup>rd</sup> Ed. Harper & Row. Michel Le Boeuf (Ed.). 2001. Essence of time Management. Jaico Publ.

House.

Narayan B. 1999. Project Management. APH Publ.

Srinivasan R & Chunawalla SA. 1995. *Management Principles & Practice.* 

4<sup>th</sup> Ed. Himalaya Publ. House.

Stemphen P Robbins 1989. *Training in Inter Personal Skills: Tips for Managing People at Work*. Prentice Hall.

Tripathi PC & Reddy PN. 1995. *Principles of Management.* 2<sup>nd</sup> Ed. Tata McGraw Hill.

#### HECM 603 ADVANCED MEDIA MANAGEMENT 2+1 Objective

To strengthen the capabilities in media planning and production. **Theory** 

UNIT I

Principles of management; managing the media organization; managerial functions in the media organization; introduction to media organization.

<u>UNIT II</u>

Editorial and circulation management- Need and importance; marketing- concept and circulation, affecting factors, circulation manager, function of circulation department, difficulties in circulation, promoting circulation.

<u>UNIT III</u>

Need and concept of personnel management; role of personnel management; integration of interests, functions, human resource planning; Advertising management; Financial management-Importance of finance, financial problems, production and printing management.

<u>UNIT IV</u>

Significant issues in the management of broadcast media; organistional structure of radio and television in public and private sectors; Functions of various departments and personnel-production, marketing, financial, managing the station/ channel.

#### Practical

Visit to print, electronic and new media organisations to understand the designing, media development, organisational management, functions, problems etc.

#### **Suggested Readings**

Bhagat R & Mathur PN. 1989. *Mass Media and Farm Women.* Intellectual Publ. House.

Kemp JE. 1975. *Planning and Producing Audio Visual Material.* 3<sup>rd</sup> Ed.

Thomas Y. Growell.

Melkote SR. 1991. Communication for Development in the Third World: Theory and Practices. Sage Publ.

Mody B. 1991. Designing Message for Development Communication. Sage Publ.

Ray GL. 1991. Extension and Communication and Management. Naya Prakashan.

#### HECM 604 Objective

To develop understanding about resources and livelihood systems, dimensions of sustainable development for livelihood security of rural people.

#### Theory <u>UNIT I</u>

Holistic and multidisciplinary exposure to the understanding of concepts, processes and relationships among agro-climatic and natural resources, production systems and livelihoods of rural/urban people; resources – land, soil, climate, water and forests;

<u>UNIT II</u>

The production systems – agriculture, horticulture, sericulture, forestry, animal husbandry and dairying fisheries, non-farm activities, their linkage with the livelihoods of rural people; food security, livelihood security.

#### <u>UNIT III</u>

Sustainable development concept and challenges; ecological , social and economic dimensions of sustainable development; peoples participation and sustainability, indicators of environmental sustainability; sustainable livelihoods; quality of life.

#### Suggested Readings

Chandela MC. 2004. *Environmental Protection & Development.* Aavishkar Publ.

Dayananadan R. 2005. Sustainable Development Opportunities and Challenges. Serials Publ.

Vyas PR & Somani LL. (Eds.). 1996. Ecological Crises and Environmental Protection (With Special Reference to Agriculture). Agrotech Publ.

#### HECM 605 PROJECT MANAGEMENT 1+1 Objective

To understand concept importance and strategies of project management and develop skill in planning a project proposal for funding agencies.

## Theory

<u>UNIT I</u>

Project management – Concept, process and types; functions of project manager; project life cycle; project appraisal, feasibility analysis, techno- economic analysis, project design and network analysis, input analysis, financial analysis, social cost benefit analysis; project appraisal;

<u>UNIT II</u>

Project planning – criteria for selecting project, planning proposal, project review techniques, project estimation, managerial and other problems related to projects;

<u>UNIT III</u>

Data management, factors influencing efficiency of a project; monitoring and control of a project. evaluation and reporting results.

<u>UNIT IV</u>

Thrust areas of Home Science research; sources and priorities

of funding agencies for Home Science research; National and International funding agencies for project, research application of Home Science in industry.

#### Practical

Identifying researchable issues in H.Sc. its analysis and presentation; devloping a need based research project, identifying different funding institutions (minimum 4) for project submission; submission of prepared research proposal for funding.

#### **Suggested Readings**

Bajpai SR.1969. *Methods of Social Survey and Research.* Kitab Ghar. Best W. 1983. *Research in Education.* 4<sup>th</sup> Ed. Prentice Hall of India.

Carter Good V. 1966. *Essential of Educational Research.* Appleton Century Profits, Educational Division, Mereelith Corporation, New Delhi.

Kaul Lokesh 1984. Methodology of Educational Research. Vikas Publ.

Kerlinger F. 1973. *Foundations of Behavioural Research.* Rinehart Winetons.

#### HECM 606 MONITORING EVALUATION AND IMPACT ASSESSMENT

3+0

#### Objective

To help students to acquire knowledge, skill, appreciation in monitoring, evaluation and impact assessment.

## Theory

<u>UNIT I</u>

Monitoring: meaning and theoretical concepts; components of project monitoring; performance appraisal standards and sustainability; approaches to participatory impact monitoring; implementation of monitoring; usefulness of monitoringprojects/reports.

#### <u>UNIT II</u>

Evaluation: meaning and theoretical concepts; criteria, steps and standards of evaluation; using models to focus evaluation; planning evaluation process; design of evaluation studies; methods of data collection.

#### <u>UNIT III</u>

Designing evaluation instruments; analysis and interpretation of evaluation data; cost effectiveness and cost benefit analysis; managing evaluation projects and writing evaluation reports; reporting and meta- evaluation (evaluation of evaluation); utilization of evaluation results, other issues, trends and course evaluation.

#### <u>UNIT IV</u>

Impact assessment techniques: concepts and process; domains of impacts; levels of impact assessment; approaches in development programme; types, criteria and; indicators of impacts; impact, monitoring, methods 'and designs; impact assessment perception of partners; techniques of analysis of impact assessment; policy implication of impact assessment.

#### **Suggested Readings**

Andrews Cochin Mac & Sien, Chia Un (Ed.). 1986. Too Rapid Rural Development:Perceptions and Perspectives from South East Asia. Ohio Univ. Press. Bahattacharya Sid Nath 1983. *Rural Development in India and Other Developing Countries.* Parashar Printers.

Chaturvedi HR & Mitra SK 1986. *Citizen Participation in Rural* Development. Oxford & IBH.

Desai DK.1983. Management in Rural Development. Oxford & IBH.

Jain SC. 1985. *Rural Development Institutions and Strategies.* Rawat Publ.

Long N. 1976. Introduction to the Sociology of Rural Development. ELBS & Javistock Publ.

Mathew T. 1984. *Rural Development in India.* Agri-Sole Publ. Academy. Mehra Rekha & Saradmoni K. 1983. *Women and Rural Transformation.* 

Concept Publ. Mehta SR. 1972. *Emerging Pattern of Rural Development.* Wiley Eastern.

Panchanadikar KC & Panchandaikar Z.1985. *Rural Modernisation in India (A Study in Developmental Infrastructure).* Popular Prakashan.

Papo1a TS. 1982. Rural Industrialisation (Approaches and potential).

Himalaya Publ. House.

Quaraishi MA.1985. *Indian Agriculture and Rural Development.* BR. Publ.

Corp. Seetharamu AS. 1980. *Education and Rural Development.* Ashish Publ.

House.

Shabbir Cheema C. 1985. *Rural Development in Asia.* Sterling Publ. Shah SA. 1977. *Rural Development Planning and Reforms.* Abhish Publ.

Swaminathan MS.1982. Science and Integrated Rural Development.

Concept Publ. Tiwari J. 1984. *Rural Development Administration: Perspectives and Prospects*. Chugh Publ.

Vivakananda M. 1980. *Planning Unit Areas for Integrated Rural.* Ashish Publ. House.

#### HECM 607 ADVERTISINGANDMARKETINGCOMMUNICATION 1+1 Objective

To help the students to know the concept, evaluation, history, classification, various media for advertising, socio-economic effects of advertising, trends in advertising and marketing, govt. policy on advertising and marketing and to develop competency in creating advertisements for mass communication.

#### Theory UNIT I

Evaluation and history of advertising, relevance of advertising in marketing, an overview of the advertising scene in India.

<u>UNIT II</u>

Classification of advertising; various media for advertising, advertising writing process; law and ethics in advertising, socioeconomic effects of advertising.

<u>UNIT III</u>

Advertising agency, operations/management , an understanding of key issues, strategies in advertising, govt. policy on advertising and management, apex bodies in advertising. <u>UNIT IV</u>

Advertising as a tool of marketing and Advertising campaigns and their role in marketing; Marketing communication - concept and functions, consumer behaviour and its various factors; recent trends in advertising and marketing.

#### Practical

Visit to advertising agencies, advertising layout techniques for newspaper, radio, posters, TV, hoardings, wall paintings, case studies on institutional advertisement, advertisement campaign.

#### References

Chunawala SA 2003. Advertising an Introductory Text. Himalaya Publ.

House.

Derek Townsend 1993. *Advertising and Public Relations.* Alvin Rednam. Ganesh S. 2005. *Introduction to Advertising.* Radha Publ.

Thomas CO Grim, Allen CT & Richard J Semenik 2003. Advertising and Integrated Brand Promotion. Vikas Publ.

Verma S. 2004. Entrepreneurship and Effective Marketing, Aavishkar Publ.

#### HECM 608 DYNAMICS OF GROUP BEHAVIOUR Objective

2+0

To develop understanding about group behavior and dynamics for effective communication and group management

#### Theory

<u>UNIT I</u>

Meaning, characteristics, types and functions of groups; Stages and process of group formation; group norms and structure. <u>UNIT II</u>

Understanding individual, interpersonal and human behaviour and its different dimensions; recognising points of view; feeling, perception and assumptions that intervene in inter-personal interactions.

<u>UNIT III</u>

Group dynamics: cooperation, competition, communication, group pressure, group cohesiveness, leadership etc.

<u>UNIT IV</u>

Managing group: team building, conflict management, stress management, active listening and feedback, achieving cooperative group structure.

#### Suggested Readings

Gbosh A. 2006. Communication Technology and Human Development.

Sage Publ.

Hellriegel Don, Slocum John W & Woodmqn Richard W. 1992. Organizational Behavior. 6<sup>th</sup> Ed. West Publ.. Co.

Melkote SR. 1991. Communication for Development in the Third World: Theory and Practices. Sage Publ. Ratnaswamy P. 1995. *Communication Management - Theory and Practice.* 

Deep & Deep Publ. Roy GL. 1991. Extension and Communication and Management. Naya Prokash.

## HOME SCIENCE EXTENSION & COMMUNICATION MANAGEMENT List of Journals

- Indian Journal of Adult Education
- I Indian Adult Education Association, New Delhi
- Indian Journal of Home Science
  - I Home Science Association of India, Baroda
- Indian Journal of Social Work
  - ITata Institute of Social Science, Deonar, Bombay
- Indian Journal of Training and Development
- Indian Society for Training and Development, New Delhi.
- Journal of Indian Education
  - I NCERT, New Delhi
- Journal of Rural Development
  - 1 National Institute of Rural Development, Rajendranagar, Hyderabad
- Rural India

Adarsh Seva Sangh, Ishwardas Mansions, Nana Chowk, Bombay, Maharashtra

- Social Welfare
  - Central Social Welfare Board, New Delhi
- Indian Journal of Social Sciences
  - Academic & Law Series, New Delhi.
- International Journal of Home Science
  - Academic & Law Series, New Delhi
  - Journal of Home Science Dairy & Food Science
    - Agricultural Research and Communication Centre, Karnal, Haryana
- Journal of Communication Studies
- I NCDC, Banaras Hindu University, Varanasi
- Communicator
  - IIMC, New Delhi
- Vidura
  - Press Trust of India, New Delhi
- Studies on Home and Community Studies
  - Kamla Raj Enterprise, New Delhi
  - Journal of Human Ecology
    - 1 Kamla Raj Enterprise, New Delhi
- Journal of Social Science
- I Kamla Raj Enterprise, New Delhi
- Indian Journal of Extension Education
  - Indian Society of Extension Education, Division of Agricultural Extension, IARI, New Delhi
- Maharashtra Journal of Extension Education
  - Maharashtra Society of Extension Education, Akola
  - Rajasthan Journal of Extension Education
    - IRajasthan Society of Extension Education Udaipur.
- Journal of Extension.
  - Extension Building, 432 North Lake Street Madison, Wisconsin.

## <u>e-Resources</u>

- <u>http://www.uwex.edu/ces/pdande</u>
- <u>http://www.extension.missouri.edu/staff/programdev/plm</u>
- <u>http://www.fao.org/DOCREP/ARTICLE/WFC/XII/0346-AL.htm</u>
- <u>http://www.krishiworld.com/htm/agri\_extension\_edu1.html</u>
- <u>http://www.uasd.edu/extension.htm</u>
- <u>http://www.csrtimys.res.in/but\_files/trg.php</u>
- http://www.vedamsbooks.com/no44211.htm
- http://www.flipkart.com/..../B-S-

Hansara-K-

Vijayarayavan/8180693210/6V23F9T02

0.html

- <u>http://www.communicationskills.co.in/importance-of-communication-skills.htm</u>
- <u>http://www.managementparadise.com/forums/archive/index.php/f-18918.html</u>
- <u>http://www.hird.ap.nic.in/clic/list.html</u>
- <u>http://www.kar.nic.in/bellary/rdpr.html</u>
- http://www.isu.edu/faculty/aclind/syllabus%204050fall%202001.htm
- <u>http://www.npandia.org/hrd.htm</u>
- <u>http://www.firsthr.org</u>

• <u>http://www.rocw.raifoundation.org/management/mba/HRPD/lecture-notes/lecture-</u> os

- en.wikipedia.org/wiki/Corporate\_communications
- <u>www.televisionpoint.com/news2008/newsfullstory</u>
- findarticles.com/p/articles/mi\_hb3036/is\_200210/ai\_n7737881
- books.google.co.in/books?isbn
- <u>www.thebusinessedition.com/corporate-communication-strategy-</u> <u>in-the-new-</u> media-corporate-blogs-394/ -
- papers.ssrn.com/sol3/papers.cfm?abstract\_id=873348
- www.pratapantony.com/corporate\_communications.html
- www.primepointfoundation.org/
- www.academictutorials.com/corporate-communication
- <u>www.thinkingmanagers.com/business-management/corporate-</u> <u>communication.php</u>
- <u>www.corporatecommunicationservices.com</u>
- <u>www.ebizq.net/to/VITRIAPCWEBINAR</u>
- advice.cio.com/john\_m\_worthington/the\_event\_management\_gap\_the\_importa nce
  - \_of\_monitoring\_intelligence\_for
- <u>www.thesportjournal.org/article/importance-expectations-</u>
- participatory-sport- event-satisfaction
- www.psychwww.com/mtsite/smredimp.html
- <u>www.webbuyersguide.com/resource/white-</u>
- paper/655/Importance-of-Event- Management
- www.scmagazineus.com/Event-describes-importance-of-
- securing-Web- 20/article/109537/
- advice.cio.com/john\_m\_worthington/the\_event\_management\_gap\_the\_importa nce
  - \_of\_monitoring\_intelligence\_for\_.
- en.wikipedia.org/wiki/Communicatio<u>nwww.mhca.org.au/Resources/Co</u> <u>mmunityD</u> evelopment/documents/CDEPMod1-
- EffectiveCommunication\_ParticipantGuide.pdf
- books.google.co.in/books?isbn
- www.skagitwatershed.org/~donclark/leader/leadcom.html
- www.hss.iitb.ac.in/courses/hs490/communication.ppt
- web.cba.neu.edu/~ewertheim/interper/commun.htm
- www.hodu.com/
- humanresources.about.com/od/interpersonalcommunicatio1/Effective\_I nterpersona I\_Communication.htm –

- <u>www.mywordpower.com/</u>
- www.earthlingcommunication.com
- <u>www.acceptedtraining.org/</u> 7k -
- <u>www.iimidr.ac.in/iimi/pages/institute/mdpdetail.php?tid=133</u> 20k
- www.sfhelp.org/pop2/ecx.htm 18k -
- <u>www.i2lifeselfgrowth.com/communication/written-communication-skills-</u> <u>ppt.php</u> - 21k -
- <u>www.ortmap.org/newsletters/fondas-news-2004-apr-jun.pdf</u>
- www.icar.org.in/aeac/curricula/mHSc-2001.pdf -
- www.caen.iufm.fr/colloque\_iartem/pdf/pandey.pdf
- www.nscb.gov.ph/ncs/9thncs/papers/gender\_Towards.pdf
- lsr.nellco.org/cgi/viewcontent.cgi?article=1006&context=cornell/biss
- www.misu.ait.ac.th/NewsAndEvents/newsletterData/iss3no4.pdf
- mitpressjournals.org/doi/pdf/10.1162/1054204041667703
- www.nscb.gov.ph/ncs/9thncs/papers/gender\_Towards.pdf

# Suggested Broad Topics for Master's and Doctoral Research

- Women empowerment
- Technology assessment, refinement and transfer
- Media development, standardization and effectiveness
- Communication and media studies
- Adoption and diffusion
- Gender perspectives
- Social marketing, advertising and public relation
- Evaluation and impact assessment
- Women in agriculture

## COMPULSORY NON-CREDIT COURSES

(Compulsory for Master's programme in all disciplines; Optional for Ph.D. scholars)

CODE	COURSE TITLE	CREDITS
PGS 501	LIBRARY AND INFORMATION SERVICES	0+1
PGS 502	TECHNICAL WRITING AND COMMUNICATIONS SKILLS	0+1
PGS 503 (e-Course)	INTELLECTUAL PROPERTY AND ITS MANAGEMENT IN AGRICULTURE	1+0
PGS 504	BASIC CONCEPTS IN LABORATORY TECHNIQUES	0+1
PGS 505 (e-Course)	AGRICULTURAL RESEARCH, RESEARCH ETHICS AND RURAL DEVELOPMENT PROGRAMMES	1+0
PGS 506 (e-Course)	DISASTER MANAGEMENT	1+0

## Course Contents

PGS 501 LIBRARY AND INFORMATION SERVICES 0+1
Objective

To equip the library users with skills to trace information from libraries efficiently, to apprise them of information and knowledge resources, to carry out literature survey, to formulate information search strategies, and to use modern tools (Internet, OPAC, search engines etc.) of information search.

#### Practical

Introduction to library and its services; Role of libraries in education, research and technology transfer; Classification systems and organization of library; Sources of information-Primary Sources, Secondary Sources and Tertiary Sources; Intricacies of abstracting and indexing services (Science Citation Index, Biological Abstracts, Chemical Abstracts, CABI Abstracts, etc.); Tracing information from reference sources; Literature survey; Citation techniques/Preparation of bibliography; Use of CD-ROM Databases, Online Public Access Catalogue and other computerized library services; Use of Internet including search engines and its resources; e- resources access methods.

#### PGS 502 TECHNICAL WRITING AND COMMUNICATIONS SKILLS 0+1 Objective

To equip the students/scholars with skills to write dissertations, research papers, etc.

To equip the students/scholars with skills to communicate and articulate in English (verbal as well as writing).

#### Practical

Technical Writing - Various forms of scientific writings- theses, technical papers, reviews, manuals, etc; Various parts of thesis and research communications (title page, authorship contents page, preface, introduction, review of literature, material and methods, experimental results and discussion); Writing of abstracts, summaries, précis, citations etc.: commonly used abbreviations in the theses and research communications; illustrations, photographs and drawings with suitable captions; pagination, numbering of tables and illustrations; Writing of numbers and dates in scientific write-ups; Editing and proofreading; Writing of a review article. Communication Skills -Grammar (Tenses, parts of speech, clauses, punctuation (Common Error analysis errors): marks): Concord; Collocation; Phonetic symbols and transcription; Accentual pattern: Weak forms in connected speech: Participation in group discussion: Facing an interview; presentation of scientific papers.

#### **Suggested Readings**

Chicago Manual of Style. 14th Ed. 1996. Prentice Hall of India.

Collins' Cobuild English Dictionary. 1995. Harper Collins.

Gordon HM & Walter JA. 1970. *Technical Writing*. 3<sup>rd</sup> Ed. Holt, Rinehart & Winston.

Hornby AS. 2000. *Comp. Oxford Advanced Learner's Dictionary of Current English*. 6<sup>th</sup> Ed. Oxford University Press.

James HS. 1994. *Handbook for Technical Writing*. NTC Business Books. Joseph G. 2000. *MLA Handbook for Writers of Research Papers*. 5<sup>th</sup> Ed.Affiliated East-West Press.

Mohan K. 2005. *Speaking English Effectively*. MacMillan India. Richard WS. 1969. *Technical Writing*. Barnes & oble.

Robert C. (Ed.). 2005. *Spoken English: Flourish Your Language*. Abhishek. Sethi J & Dhamija PV. 2004. *Course in Phonetics and Spoken English*. 2<sup>nd</sup> Ed. Prentice Hall of India. Wren PC & Martin H. 2006. *High School English Grammar and Composition*. S. Chand & Co.

#### PGS 503

#### INTELLECTUAL PROPERTY AND ITS MANAGEMENT IN 1+0 AGRICULTURE

(e-Course)

#### Objective

The main objective of this course is to equip students and stakeholders with knowledge of intellectual property rights (IPR) related protection systems, their significance and use of IPR as a tool for wealth and value creation in a knowledge-based economy.

#### Theory

Historical perspectives and need for the introduction of Intellectual Property Right regime; TRIPs and various provisions in TRIPS Agreement; Intellectual Property and Intellectual Property Rights (IPR), benefits of securing IPRs; Indian Legislations for the protection of various types of Intellectual Properties; Fundamentals of patents, copyrights, geographical indications, designs and layout, trade secrets and traditional knowledge, trademarks, protection of plant varieties and farmers' rights and bio- diversity protection; Protectable subject matters, protection in biotechnology, protection of other biological materials, ownership and period of protection; National Biodiversity protection initiatives; Convention on Biological Diversity; International Treaty on Plant Genetic Resources for Food and Agriculture; Licensing of technologies, Material

transfer agreements, Research collaboration Agreement, License Agreement.

#### **Suggested Readings**

- Erbisch FH & Maredia K.1998. Intellectual Property Rights in Agricultural Biotechnology. CABI.
- Ganguli P. 2001. Intellectual Property Rights: Unleashing Knowledge Economy. McGraw-Hill.
- Intellectual Property Rights: Key to New Wealth Generation. 2001. NRDC & Aesthetic Technologies.
- Ministry of Agriculture, Government of India. 2004. State of Indian Farmer. Vol. V. Technology Generation and IPR Issues. Academic Foundation.
- Rothschild M & Scott N. (Ed.). 2003. Intellectual Property Rights in Animal Breeding and Genetics. CABI.
- Saha R. (Ed.). 2006. Intellectual Property Rights in NAM and Other Developing Countries: A Compendium on Law and Policies. Daya Publ. House.

The Indian Acts - Patents Act, 1970 and amendments; Design Act, 2000; Trademarks Act, 1999; The Copyright Act, 1957 and amendments; Layout Design Act, 2000; PPV and FR Act 2001, and Rules 2003; National Biological Diversity Act, 2003.

#### PGS 504 Objective

To acquaint the students about the basics of commonly used techniques in laboratory.

#### Practical

Safety measures while in Lab; Handling of chemical substances; Use of burettes, pipettes, measuring cylinders, flasks, separatory funnel, condensers, micropipettes and vaccupets; washing, drying and sterilization of glassware; Drying of solvents/chemicals. Weighing and preparation of solutions of different strengths and their dilution; Handling techniques of solutions; Preparation of different agro-chemical doses in field and pot applications; Preparation of solutions of acids; Neutralisation of acid and bases; Preparation of buffers of different strengths and pH values. Use and handling of laminar flow, vacuum microscope, pumps, viscometer. thermometer, magnetic stirrer. micro-ovens, incubators. sandbath, waterbath, oilbath; Electric wiring and earthing. Preparation of media and methods of sterilization; Seed viability testing, testing of pollen viability; Tissue culture of crop plants; Description of flowering plants in botanical terms in relation to taxonomy

#### Suggested Readings

Furr AK. 2000. CRC Hand Book of Laboratory Safety. CRC Press.

Gabb MH & Latchem WE. 1968. A Handbook of Laboratory Solutions.

Chemical Publ. Co.

#### PGS 505

# AGRICULTURAL RESEARCH, RESEARCH ETHICS 1+0

#### (e-Course)

Objective

To enlighten the students about the organization and functioning of agricultural research systems at national and international levels, research ethics, and rural development programmes and policies of Government.

## Theory

<u>UNIT I</u>

History of agriculture in brief; Global agricultural research system: need, scope, opportunities; Role in promoting food security, reducing poverty and protecting the environment; National Agricultural Research Systems (NARS) and Regional Agricultural Research Institutions; Consultative Group on International Agricultural Research (CGIAR): International Agricultural Research Centres (IARC), partnership with NARS, role as a partner in the global agricultural research system, strengthening capacities at national and regional levels; International fellowships for scientific mobility. UNIT II

Research ethics: research integrity, research safety in laboratories, welfare of animals used in research, computer ethics, standards and problems in research ethics.

## <u>UNIT III</u>

Concept and connotations of rural development, rural development policies and strategies. Rural development programmes: Community Development Programme, Intensive Agricultural District Programme, Special group – Area Specific Programme, Integrated Rural Development Programme (IRDP) Panchayati Raj Institutions, Co-operatives, Voluntary Agencies/Non-Governmental Organisations. Critical evaluation of rural development policies and programmes. Constraints in implementation of rural policies and programmes.

#### **Suggested Readings**

- Bhalla GS & Singh G. 2001. Indian Agriculture Four Decades of Development. Sage Publ.
- Punia MS. *Manual on International Research and Research Ethics*. CCS, Haryana Agricultural University, Hisar.
- Rao BSV. 2007. Rural Development Strategies and Role of Institutions - Issues, Innovations and Initiatives. Mittal Publ.
- Singh K.. 1998. Rural Development Principles, Policies and Management. Sage Publ.

#### PGS 506 DISASTER MANAGEMENT 1+0 (e-Course)

#### Objectives

To introduce learners to the key concepts and practices of natural disaster management; to equip them to conduct thorough assessment of hazards, and risks vulnerability; and capacity building.

#### Theory

<u>UNIT I</u>

Natural Disasters- Meaning and nature of natural disasters, their types and effects. Floods, Drought, Cyclone, Earthquakes, Landslides, Avalanches,

Volcanic eruptions, Heat and cold Waves, Climatic Change: Global warming, Sea Level rise, Ozone Depletion

<u>UNIT II</u>

Man Made Disasters- Nuclear disasters, chemical disasters, biological disasters, building fire, coal fire, forest fire. Oil fire, air pollution, water pollution, deforestation, Industrial wastewater pollution, road accidents, rail accidents, air accidents, sea accidents.

#### <u>UNIT III</u>

Disaster Management- Efforts to mitigate natural disasters at national and global levels. International Strategy for Disaster reduction. Concept of disaster management, national disaster management framework; financial arrangements; role of NGOs, Community-based organizations, and media. Central, State, District and local Administration; Armed forces in Disaster response; Disaster response: Police and other organizations.

#### Suggested Readings

Gupta HK. 2003. *Disaster Management*. Indian National Science Academy. Orient Blackswan.

Hodgkinson PE & Stewart M. 1991. Coping with Catastrophe: A Handbook of Disaster Management. Routledge.

Sharma VK. 2001. *Disaster Management*. National Centre for Disaster Management, India.