# Department of Home Science Faculty of Science Siddharth University, Kapilvastu Siddharth Nagar 272202 UP, India



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#### ADVANCES IN EXTENSION EDUCATION

## **Course Objectives:**

- To aware students on advanced concepts of Extension Education.
- · To develop understanding on role and importance of development programmes in societal development.
- To develop hands-on-practice on developing extension teaching methods.
- To develop understanding on participatory tools and techniques used for societal development and communication.

## **THEORY**

**Unit-I**: Extension Systems in India; Extension efforts before and 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 etc. Extension Approaches to rural development.

**Unit-II**: Extension Teaching Methods- classification and characteristics. Audio Visual Aids- Classification and its importance in Extension. Role of traditional and modern media in communication - Use of folk media, puppetry, exhibitions, theatre, posters, print media (Newspapers, books, leaflets etc.), Radio, Television and Cinema. Newer methods of communication; ICTs, Digital communication channels, social media

**Unit-III**: Participatory tools and approaches- Principles, methods, classification, techniques and tools, utilization of PRA methods in field studies

# **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.
- 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.
- 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.
- Dahama, O.P. and Bhatnager, O.P. (1987) Education and Communication for development, Oxford and IBH Publishing Co. Pvt. Ltd. New Delhi.
- Ray, G.L. (1999). Extension Communication and Management, Naya Prakashan, Kolkata.
- Reddy, A. (1999). Extension Education. Sree Lakshmi Press, Baptia.
- Waghmare, S.K. (1989), Exploring of Extension Excellence, Multi tech. Pub. Company. Chicago Manual of Style. 14th Ed. 1996, Prentice Hall of India.



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# FOOD PROCESSING TECHNOLOGY AND PRODUCT DEVELOPMENT

## **Theory**

**Unit I:** Food processing operations including thermal, radiation, refrigeration, freezing and dehydration. Effect of processing on cereals and legumes, oilseeds, fruits and vegetables, milk and milk products, egg, meat, poultry and fish, convenience foods, processed foods.

**Unit II:** Sensory Evaluation of Food: Definition, Sensory characteristics of food: Appearance (colour), Flavor, texture, sensory Tests: Importance of testing food quality, trained panel members, tasting and testing time, design of experiment, Score card Physical methods: Test volume, moisture, texture Viscosity, appearance, Chemical methods: Nutrient analysis, sugar concentration, saltiness and flavour.

**Unit III:** Food Preservation - Introduction to Food Preservation and Different Methods of Food Preservation. Bakery and Confectionary – Introduction to baking science, basic materials used in bakery and confectionery, Essential ingredients used in Baking, application in Bakery and Confectionery,

# Suggested Readings-

- 1. Foods Facts and Principles, N. Shakunthala Manay and M. Shadaksharaswamy, 2001.
- 2. Mamoria C.B, 1977, Principles and Practice of Marketing in India, Kitab Mahal, Allahabad.
- 3. Ramaswamy, V.S., 2002, Marketing Management, Macmillan India, New Delhi.
- 4. P J Fellows, Food processing technology: Principles and practice (Third edition) Consultant, UK Woodhead Food Series No. 174 June 2009, Woodhead Publishing Limited.
- 5. Da-Wen Sun, Emerging Technologies For Food Processing, National University of Ireland, Earlsfort Terrace, Dublin Hardbound, 792 pages, publication date: JUL- 2005.
- 6. R.Y. Yada, Rickey Yoshio Yada, Proteins in food processing, CRC Press, 2004.
- 7. Peter Fellows, Food processing technology: principles and practice, CRC Press, 2000