

FNS 455 FOOD PACKAGING

39 Hr (13× 3 units)

Course outcome:

At the end of this course the students will be able to-

- CO 1. Describe the objectives of food packaging and packaging material.
- CO 2. Classify the different types of packaging material depending on food type.
- CO 3. Write down the different packaging equipment and machinery.
- CO 4. Identify the importance of modified atmospheric packaging.

Unit I: Food packaging: Definitions, objectives and functions of packaging and packaging materials. Packaging requirements and selection of packaging materials; Types of packaging materials. Sanitation and hygiene.

Unit II: Food packaging systems: Different forms of packaging such as rigid, semi-rigid, flexible forms and different packaging system for (a) dehydrated foods (b) frozen foods (c) dairy products (d) fresh fruits and vegetables (e) meat, poultry and sea foods.

Unit III: Packaging equipment and machinery: Vacuum, CA and MA packaging machine; gas packaging machine; seal and shrink packaging machine; form and fill sealing machine; aseptic packaging systems; bottling machines: carton making machines. Smart packaging systems for bacterial spoilage, water activity.

REFERENCES

- Robertson, G.L. 2006. Food Packaging: Principles and Practice (2nd Ed.), Taylor & Francis
- Sacharow, S. and Griffin, R.C. 1980. Principles of Foods Packaging (2nd Ed.), Avi, Publication Co. Westport, Connecticut, USA.
- Rooney, M.L. (1995), Active Food Packaging - Blackie Academic & Professional, Glasgow, UK.
- Food Packaging Technology Handbook, 2003. NIIR Board, National Institute of Industrial Research,
- Ahvenainen, R. (Ed.), 2003. Novel Food Packaging Techniques, CRC Press
- Han, J.H. (Ed.) 2005. Innovations in Food Packaging, Elsevier Academic Press