

Shri Vaishnav Institute of Home Science Choice Based Credit System (CBCS) in Light of NEP General Electives Offered PG

			Teaching and Evaluation Scheme								
Subject Code	Category	Subject Name	Theory			Prac					
			End Sem Universit yExam	Two Term	Teachers Assessme nt	End Sem University Exam	Teachers Assessme nt	L	Т	Р	CREDITS
GE MFSN 301	GE	Cereals, Pulses and Oil Seed Technology	60	20	20	0	0	3	0	0	3

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical;C- Credit; ***Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Educational Objectives (CEOs): The Students will -

CEO1: understand the basic composition and structural parts of food grains.

CEO2: aware the importance nutritional value of food grains.

CEO3: understand the basics of milling operations for food grains.

CEO4: know processing food grains and oil seeds with its value-added products.

Course Outcomes (COs): Student should be able to-

CO1: understand different types of grain with its milled products.

CO2: familiarize with rice and barley processing.

CO3: acquainted with processing of baked goods.

CO4: understand pulses and legumes processing and its products.

C05: learn the different types of oil seeds, its processing and their products.

Syllabus

GE MFSN 301: Cereals, Pulses and Oil Seed Technology

UNIT I

Introduction to Cereals: structure, types/varieties, composition and commercial value of wheat, rice, maize, oats, rye, corn, with their nutritional importance and commercial value. Milling of wheat and corn. Different types of wheat, corn and oats products.

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Unit II

Paddy processing and treatment for quality improvement. Puffed rice, rice flakes, parboiling of rice, extruded and fortified rice. Barley, Malt and Millets with their nutritional importance and value-added products.

Unit III

Baking Technology - Introduction to Baking technology: Types of bakery products, standards & regulations. Bread, cakes, biscuits /crackers: role of ingredients & processes, equipment used, product quality characteristics, scoring of quality parameters, faults and corrective measures.

UNIT IV

Pulses and legumes - Types of pulses and legumes their nutritional value. Milling and processing of major pulses and legumes. Modern techniques in Dal mills. Fermented Products of legumes. Methods of cooking - Sprouting, Puffing, Roasting and Parboiling of Legumes, Physical and Bio-chemical changes during these processes. Quick cooking dhal, Instant dhal and dal products.

UNIT V

Oil Seed Technology- Oilseeds Processing for Oil Extraction: preparation of oilseeds, mechanical and solvent extraction methods of oil extraction, oil refining, hydrogenation, utilization of deoiled cake. Soy processing: soya as a source of protein and oil; soya milk, soy protein Isolate, soy concentrates, soya paneer, soya sauce and production of textured vegetable proteins.

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Reference Books:

- Chakravarti A., (2004), post-harvest technology of Cereals, Pulses and Oilseeds by A. Oxford Publishing
- Matz S. (2000) Bakery Technology and Engineering. CBS Publication.
- Khatarpaul N., Grewal R. & Jood D. (1999), Bakery Science & Cereal Technology, Daya publishing house.
- Singh K.M. and Sahay K.K., Unit Operations of Agricultural Processing

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GE MFSN 401	GE	Dairy and Meat Technology	60	20	20	0	0	3	0	0	3

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit;

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Course Educational Objectives (CEOs): The Students will -

CEO1: aware about the composition of milk and milk products.

CEO2: gain knowledge of principles and technical aspects of processing of milk and milk products.

CEO3: understand the processing of different types of meat and meat products.

CEO4: aware about nutritional value of dairy products and meat products.

Course Outcomes (COs): Student should be able to-

CO1: learn composition, types, standards and milk processing.

CO2: familiarize with different types of milk products with its processing.

CO3: gain knowledge about meat and meat processing.

CO4: understand about composition, types, processing of poultry meat, eggs and fish.

Syllabus

GE MFSN 401: Dairy and Meat Technology

Unit I

Dairy Technology - Milk and milk products: Milk, types, Indian standards, composition, factors affecting composition of milk, physio-chemical properties of milk and its constituents. Milk processing: clean milk practices, buying and collection, platform tests, pre-heating, filtration, clarification, standardization, bactofugation, homogenization, pasteurization, cooling, packaging and storage.

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