



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav Institute of Home Science
Choice Based Credit System (CBCS) in Light of NEP-2020
General Electives Offered

Subject Code	Category	Subject Name	Teaching and Evaluation Scheme								
			Theory			Practical		L	T	P	CREDITS
			End Sem University	Two Term	Teachers Assessment	End Sem University Exam	Teachers Assessment				
GPFN101	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: get acquainted with processing of baked goods.
- CO4: understand pulses and legumes processing and its products.
- CO5: learn the different types of oil seeds, its processing and their products.

Syllabus

GP MFSN 101: 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.

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.

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Unit III

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

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 dal, instant dal and dal products.

UNIT V

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.

Suggested readings:

- Chakravarti, A. (2004). *Post-harvest technology of Cereals, Pulses and Oilseeds*. Oxford Publishing.
- Khatarpaul, N., Grewal, R., & Jood, D. (2018), *Bakery Science & Cereal Technology*. New Delhi Daya publishing house.
- Matz, S. (2000). *Bakery Technology and Engineering*. CBS Publication.
- Singh, K.M., & Sahay, K.K. (2017). *Unit Operations of Agricultural Processing*. Daya publishing house.

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