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FSN 321

Principles of Food Science and Nutrition

2(2+0)

Theory

Concepts of Food Science (definitions, measurements, density, phase change, pH, osmosis, surface tension, colloidal systems etc.); Food composition and chemistry (water, carbohydrates, proteins, fats, vitamins, minerals, flavours, colours, miscellaneous bioactives, important reactions); Food microbiology (bacteria, yeast, moulds, spoilage of fresh & processed foods, Production of fermented foods); Principles and methods of food processing and preservation (use of heat, low temperature, chemicals, radiation, drying etc.); Food and nutrition, Malnutrition (over and under nutrition), nutritional disorders; Energy metabolism (carbohydrate, fat, proteins); Balanced/ modified diets, Menu planning, New trends in food science and nutrition.

Lecture Schedule: Theory

S.N.	Topic			
		Lectures		
1.	Concepts of Food Science (definitions, measurements, density, phase change,	5		
	pH, osmosis, surface tension, colloidal systems etc.);			
2.	Food composition and chemistry (water, carbohydrates, proteins, fats,	5		
	vitamins, minerals, flavours, colours, miscellaneous bioactives, important			
	reactions)			
3.	Food microbiology (bacteria, yeast, moulds, spoilage of fresh & processed	5		
	foods, Production of fermented foods)			
4.	Principles and methods of food processing and preservation (use of heat, low	4		
	temperature, chemicals, radiation, drying etc.)			
5.	Food and nutrition, Malnutrition (over and under nutrition), nutritional	5		
	disorders; Energy metabolism (carbohydrate, fat, proteins)			
		4		
6.	Balanced/ modified diets, Menu planning,	4		
7.	New trends in food science and nutrition	4		