

## **APPLIED NUTRITION AND DIETETICS**

**PLACEMENT: II SEMESTER**

**THEORY: 3 credits (60 hours) Theory: 45 hours Lab: 15 hours**

**DESCRIPTION:** The course is designed to assist the students to acquire basic knowledge and understanding of the principles of Nutrition and Dietetics and apply this knowledge in the practice of Nursing.

**COMPETENCIES:** On completion of the course, the students will be able to

1. Identify the importance of nutrition in health and wellness.
2. Apply nutrient and dietary modifications in caring patients.
3. Explain the principles and practices of Nutrition and Dietetics.
4. Identify nutritional needs of different age groups and plan a balanced diet for them.
5. Identify the dietary principles for different diseases.
6. Plan a therapeutic diet for patients suffering from various disease conditions.
7. Prepare meals using different methods and cookery rules.

## COURSE OUTLINE

### T–Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
I	2(T)	Define nutrition and its relationship to Health	<p><b>Introduction to Nutrition</b></p> <p><i>Concepts</i></p> <ul style="list-style-type: none"> <li>• Definition of Nutrition &amp; Health</li> <li>• Malnutrition – Under Nutrition &amp; Over Nutrition</li> <li>• Role of Nutrition in maintaining health</li> <li>• Factors affecting food and nutrition</li> </ul> <p><i>Nutrients</i></p> <ul style="list-style-type: none"> <li>• Classification</li> <li>• Macro &amp; Micronutrients</li> <li>• Organic &amp; Inorganic</li> <li>• Energy Yielding &amp; Non-Energy Yielding</li> </ul> <p><i>Food</i></p> <ul style="list-style-type: none"> <li>• Classification – Food groups</li> <li>• Origin</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum</li> <li>• Discussion</li> <li>• Charts/Slides</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Very short answer</li> </ul>
II	3(T)	Describe the classification, functions, sources and recommended daily allowances (RDA) of carbohydrates  Explain BMR and factors affecting BMR	<p><b>Carbohydrates</b></p> <ul style="list-style-type: none"> <li>• Composition – Starches, sugar and cellulose</li> <li>• Recommended Daily Allowance (RDA)</li> <li>• Dietary sources</li> <li>• Functions</li> </ul> <p><b>Energy</b></p> <ul style="list-style-type: none"> <li>• Unit of energy – Kcal</li> <li>• Basal Metabolic Rate (BMR)</li> <li>• Factors affecting BMR</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Charts/Slides</li> <li>• Models</li> <li>• Display of food items</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Very short answer</li> </ul>
III	3(T)	Describe the classification, Functions, sources	<p><b>Proteins</b></p> <ul style="list-style-type: none"> <li>• Composition</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Charts/Slides</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Very short</li> </ul>

Unit	Time (Hrs)	Learning Objectives	Content	Teaching/Learning Activities	Assessment Methods
		and RDA of proteins.	<ul style="list-style-type: none"> <li>• Eight essential amino acids</li> <li>• Functions</li> <li>• Dietary sources</li> <li>• Protein requirements – RDA</li> </ul>	<ul style="list-style-type: none"> <li>• Models</li> <li>• Display of food items</li> </ul>	answer
IV	2(T)	Describe the classification, Functions, sources and RDA of fats	<b>Fats</b> <ul style="list-style-type: none"> <li>• Classification – Saturated &amp; unsaturated</li> <li>• Calorie value</li> <li>• Functions</li> <li>• Dietary sources of fats and fatty acids</li> <li>• Fat requirements – RDA</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Charts/Slides</li> <li>• Models</li> <li>• Display of food items</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Very short answer</li> </ul>
V	3(T)	Describe the classification, functions, sources and RDA of vitamins	<b>Vitamins</b> <ul style="list-style-type: none"> <li>• Classification – fat soluble &amp; water soluble</li> <li>• Fat soluble – Vitamins A, D, E, and K</li> <li>• Water soluble – Thiamine (vitamin B1), Riboflavin (vitamin B2), Nicotinic acid, Pyridoxine (vitamin B6), Pantothenic acid, Folic acid, Vitamin B12, Ascorbic acid (vitamin C)</li> <li>• Functions, Dietary Sources &amp; Requirements – RDA of every vitamin</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Charts/Slides</li> <li>• Models</li> <li>• Display of food items</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Very short answer</li> </ul>
VI	3(T)	Describe the classification, functions, sources and RDA of minerals	<b>Minerals</b> <ul style="list-style-type: none"> <li>• Classification – Major minerals (Calcium, phosphorus, sodium, potassium and magnesium) and Trace elements</li> <li>• Functions</li> <li>• Dietary Sources</li> <li>• Requirements – RDA</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Charts/Slides</li> <li>• Models</li> <li>• Display of food items</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• Very short answer</li> </ul>

<p><b>VII</b></p>	<p>7(T) 8(L)</p>	<p>Describe and plan balanced diet for different age groups, pregnancy, and lactation</p>	<p><b>Balanced diet</b></p> <ul style="list-style-type: none"> <li>• Definition, principles, steps</li> <li>• Food guides – Basic Four Food Groups</li> <li>• RDA – Definition, limitations, uses</li> <li>• Food Exchange System</li> <li>• Calculation of nutritive value of foods</li> <li>• Dietary fiber</li> </ul> <p><b>Nutrition across lifecycle</b></p> <ul style="list-style-type: none"> <li>• Meal planning/Menu planning – Definition, principles, steps</li> <li>• Infant and Young Child Feeding (IYCF) guidelines – breastfeeding, infant foods</li> <li>• Diet plan for different age groups –</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Meal planning</li> <li>• Lab session on <ul style="list-style-type: none"> <li>○ Preparation of balanced diet for different categories</li> <li>○ Low cost nutritious dishes</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• Very short answer</li> </ul>
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Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			<p>Children, adolescents and elderly</p> <ul style="list-style-type: none"> <li>• Diet in pregnancy – nutritional requirements and balanced diet plan</li> <li>• Anemia in pregnancy – diagnosis, diet for anemic pregnant women, iron &amp; folic acid supplementation and counseling</li> <li>• Nutrition in lactation – nutritional requirements, diet for lactating mothers, complementary feeding/weaning</li> </ul>		
<b>VIII</b>	6(T)	Classify and describe the common nutritional deficiency disorders and identify nurses' role in assessment, management and prevention	<p><b>Nutritional deficiency disorders</b></p> <ul style="list-style-type: none"> <li>• Protein energy malnutrition – magnitude of the problem, causes, classification, signs &amp; symptoms, Severe acute malnutrition (SAM), management &amp; prevention and nurses' role</li> <li>• Childhood obesity – signs &amp; symptoms, assessment, management &amp; prevention and nurses' role</li> <li>• Vitamin deficiency disorders – vitamin A, B, C &amp; D deficiency disorders – causes, signs &amp; symptoms, management &amp; prevention and nurses' role</li> <li>• Mineral deficiency diseases – iron, iodine and calcium deficiencies – causes, signs &amp; symptoms, management &amp; prevention and nurses' role</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Charts/Slides</li> <li>• Models</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Very short answer</li> </ul>
<b>IX</b>	4(T) 7(L)	Principles of diets in various diseases	<p><b>Therapeutic diets</b></p> <ul style="list-style-type: none"> <li>• Definition, Objectives, Principles</li> <li>• Modifications – Consistency, Nutrients,</li> <li>• Feeding techniques.</li> <li>• Diet in Diseases – Obesity, Diabetes Mellitus, CVD, Underweight, Renal diseases, Hepatic disorders Constipation, Diarrhea, Pre and Post-operative period</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Meal planning</li> <li>• Lab session on preparation of therapeutic diets</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Very short answer</li> </ul>

X	3(T)	Describe the rules and preservation of nutrients	<b>Cookery rules and preservation of nutrients</b> <ul style="list-style-type: none"> <li>• Cooking – Methods, Advantages and Disadvantages</li> <li>• Preservation of nutrients</li> <li>• Measures to prevent loss of nutrients during preparation</li> <li>• Safe food handling and Storage of foods</li> <li>• Food preservation</li> <li>• Food additives and food adulteration</li> <li>• Prevention of Food Adulteration Act (PFA)</li> <li>• Food standards</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Charts/Slides</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Very short answer</li> </ul>
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Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
XI	4(T)	Explain the methods of nutritional assessment and nutrition education	<b>Nutritional assessment and nutrition education</b> <ul style="list-style-type: none"> <li>• Objectives of nutritional assessment</li> <li>• Methods of assessment – clinical examination, anthropometry, laboratory &amp; biochemical assessment, assessment of dietary intake including Food frequency questionnaire (FFQ) method</li> <li>• Nutrition education – purposes, principles and methods</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Demonstration</li> <li>• Writing nutritional assessment report</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Evaluation of Nutritional assessment report</li> </ul>
XII	3(T)	Describe nutritional problems in India and nutritional programs	<b>National Nutritional Programs and role of nurse</b> <ul style="list-style-type: none"> <li>• Nutritional problems in India</li> <li>• National nutritional policy</li> <li>• <i>National nutritional programs</i> – Vitamin A Supplementation, Anemia Mukta Bharat Program, Integrated Child Development Services (ICDS), Mid-day Meal Scheme (MDMS), National Iodine Deficiency Disorders Control Program (NIDDCP), Weekly Iron Folic Acid Supplementation (WIFS) and others introduced</li> <li>• Role of nurse in every program</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Very short answer</li> </ul>

<b>XII I</b>	2(T)	Discuss the importance of food hygiene and food safety  Explain the Acts related to food safety	<b>Food safety</b> <ul style="list-style-type: none"> <li>• Definition, Food safety considerations &amp; measures</li> <li>• Food safety regulatory measures in India</li> <li>– Relevant Acts</li> <li>• Five keys to safer food</li> <li>• Food storage, food handling and cooking</li> <li>• General principles of food storage of food items (ex. milk, meat)</li> <li>• Role of food handlers in foodborne diseases</li> <li>• Essential steps in safe cooking practices</li> </ul>	<ul style="list-style-type: none"> <li>• Guided reading on related acts</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Quiz</b></li> <li>• Short answer</li> </ul>
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**Foodborne diseases and food poisoning are dealt in Community Health Nursing I.**

**Distribution of teaching hours in Nutrition**

Strategy		Teaching hours
Didactic	Lecture cum Discussion	45
Non Didactic	Tutorial	3
	Lab hrs.	12
	Total hrs	60

**Topics & Outcomes in Nutrition**

Subjects	Number of Themes	Number of outcomes
Nutrition and Dietetics	13	47



**Distribution of theory hours (45)**

<b>SR NO</b>	<b>Theme</b>	<b>Topics</b>	<b>Teaching hrs.</b>
1	IntroductiontoNutrition	IntroductiontoNutrition	2 Hrs.
2	Carbohydrates	Carbohydrates	3Hrs.
3.	Proteins	Proteins	3 Hrs.
4.	Fats	Fats	2 Hrs.
5.	Vitamins	Vitamins	3 Hrs.
6.	Minerals	Minerals	3 Hrs.
7.	Balanceddiet	Balanceddiet	7 Hrs.
8.	Nutritionaldeficiencydisorders	Nutritionaldeficiencydisorders	6 Hrs.
9.	Therapeuticdiets	Therapeuticdiets	4 Hrs.
10.	Cookery rules and preservation of nutrients	Cookery rules and preservation of nutrients	3 Hrs.
11.	Nutritionassessmentandnutritioneducation	Nutritionassessmentandnutritioneducation	4Hrs.
12.	NationalNutritionalProgramsandroleofnurse	NationalNutritionalProgramsandroleofnurse	3 Hrs
13.	Foodssafety	Foodssafety	2hrs
	<b>TOTAL</b>		<b>45 Hrs.</b>

Unit No. & total hours	Objectives	Topic	Code No	Competency	Core competencies		Non core competencies	Hours
					Must know	Desirable to know	Nice to know	Hrs
<b>I- Introduction to Nutrition</b>  <b>2hrs</b>	At the end of unit students are able to  <b>Knowledge:</b> Understand and describe the concept of nutrition, nutrients and food .	<b>Introduction to Nutrition</b>	NUTR140:IISEM1.1	Explain the concept of Nutrition	<b>Concepts</b> <ul style="list-style-type: none"> <li>• Definition of Nutrition &amp; Health</li> <li>• Malnutrition – Under Nutrition &amp; Over Nutrition</li> <li>• Role of Nutrition in maintaining health</li> <li>• Factors affecting food and nutrition</li> </ul>			1/2 hr
			NUTR140:IISEM1.2	Describe the nutrients	<b>Nutrients</b> <ul style="list-style-type: none"> <li>• Classification</li> <li>• Macro &amp; Micronutrients</li> <li>• Organic &amp; Inorganic</li> <li>• Energy Yielding &amp; Non-Energy Yielding</li> </ul>			1/2 hr
			NUTR140:IISEM1.3	Classify food		<b>Food</b> <ul style="list-style-type: none"> <li>• Classification – Food groups</li> <li>• Origin</li> </ul>		1hr
<b>II- Carbohydrates</b>  <b>3hrs</b>	At the end of unit students are able to  <b>Knowledge</b> Understand and describe	<b>Carbohydrates</b>	NUTR140:II SEM2.1	Explain the carbohydrate	<ul style="list-style-type: none"> <li>• Composition – Starches, sugar and cellulose</li> <li>• Dietary sources</li> <li>• Functions</li> </ul>			1 hr

	composition and functions. Understand and explain the caloric requirement of various age groups. <b>Skill:</b> Able to calculate calories of food		NUTR140:II SEM2.2	Explain the energy	<b>Energy</b> <ul style="list-style-type: none"> <li>• Unit of energy – Kcal</li> <li>• Basal Metabolic Rate (BMR)</li> <li>• Factors affecting BMR</li> </ul>			<b>1hr</b>
			NUTR140:II SEM2.3	Illustrate the recommended daily allowance of carbohydrate		<ul style="list-style-type: none"> <li>• Recommended Daily Allowance (RDA)</li> </ul>		<b>1 hr</b>
<b>III- Proteins</b> <b>3hrs</b>	At the end of unit students are able to  <b>Knowledge:</b> Understand and describe composition and requirements of proteins.  <b>Attitude:</b> Use this knowledge in nursing practice.		NUTR140:II SEM3.1	Explain the protein	<ul style="list-style-type: none"> <li>• Composition</li> <li>• Eight essential amino acids</li> <li>• Functions</li> <li>• Dietary sources</li> </ul>			<b>2hrs</b>
			NUTR140:II SEM3.2	Illustrate the recommended daily allowance of protein		<ul style="list-style-type: none"> <li>• Protein requirements – RDA</li> </ul>		<b>1hr</b>
<b>IV- Fats</b> <b>2hrs</b>	At the end of unit students are able to  <b>Knowledge:</b> Understand and describe classification and requirements of fats. Understand and explain dietary sources, functions <b>Attitude:</b> Use this knowledge in		NUTR140:II SEM 4.1	Explain the fat	<ul style="list-style-type: none"> <li>• Classification – Saturated &amp; unsaturated</li> <li>• Calorie value</li> <li>• Functions</li> <li>• Dietary sources of fats and fatty acids</li> </ul>			<b>1hr</b>
			NUTR140:II SEM 4.2	Illustrate the recommended		<ul style="list-style-type: none"> <li>• Fat require</li> </ul>		<b>1hr</b>

	nursing practice			daily allowance of fat		ments – RDA		
<b>V- Vitamins</b> <b>3hrs</b>	At the end of unit students are able to  <b>Knowledge:</b> Classify the vitamins. Enlist the importance of vitamins.		NUTR140: IISEM5.1	Explain the vitamins	<ul style="list-style-type: none"> <li>• Classification– fatsoluble&amp;watersoluble</li> <li>• Fatsoluble– VitaminsA,D,E,andK</li> <li>• Water soluble – Thiamine(vitamin B1), Riboflavin (vitamin B2),Nicotinic acid, Pyridoxine (vitamin B6),Pantothenicacid,Folicacid, VitaminB12,Ascorbicacid(vitamin C)</li> <li>• Functions</li> <li>• Dietary Sources</li> </ul>			<b>2hrs</b>
			NUTR140: IISEM5.2	Illustrate the recommended daily allowance of vitamins		<ul style="list-style-type: none"> <li>• Requirements– RDAofeveryvitamin</li> </ul>		<b>1hr</b>
<b>VI- Minerals</b> <b>3hrs</b>	At the end of unit students are able to  <b>Knowledge:</b> Understand and describe the classification , functions and importance of minerals.		NUTR140:IISE M6.1	Explain the minerals	<ul style="list-style-type: none"> <li>• Classification – Majorminerals(Calcium,phosphorus,sodium,potassium andmagnesium)andTraceelements</li> <li>• Functions</li> <li>• DietarySources</li> </ul>			<b>2hr</b>
			NUTR140:IISE M6.2	Illustrate the recommended		<ul style="list-style-type: none"> <li>• Requirements– RDA</li> </ul>		<b>1hr</b>

				daily allowance of mineral				
<b>VII- Balanced diet 7hrs</b>	At the end of unit students are able to  <b>Knowledge:</b> Understand and describe importance of balance diet.  <b>Skill:</b> Prepare balance diet and able to Calculate the nutritive value of foods  <b>Attitude:</b> Use this knowledge in nursing practice		NUTR140:IISEM 7.1	Explain the balance	• Definition, principles, steps			½ hr
			NUTR140:IISEM 7.2	Explain meal planning / Menu planning	Nutrition across life cycle • Meal planning/Menu planning – Definition, principles, steps			½ hr
			NUTR140:IISEM 7.3	Describe the Infant and Young Child Feeding (IYCF) guidelines	• Infant and Young Child Feeding (IYCF) guidelines – breastfeeding, infant foods.			½ hr
			NUTR140:IISEM 7.4	Describe the Diet plan for Children, adolescents and elderly	• Diet plan for different age groups Children, adolescents and elderly			½ hr
			NUTR140:IISEM 7.5	Explain the Diet in pregnancy	• Diet in pregnancy – nutritional requirements and balanced diet plan			½ hr
			NUTR140:IISEM 7.6	Explain the Anemia in pregnancy	• Anemia in pregnancy – diagnosis, diet for anemic pregnant women, iron & folic acid supplementation and counseling			1 hr
			NUTR140:IISEM 7.7	Explain the Nutrition in lactation	• Nutrition in lactation – nutritional requirements, diet for lactating mothers, complementary feeding/weaning.			½ hr
			NUTR140:IISEM 7.8	Explain the RDA		• RDA – Definition, limitations, uses		½ hr
			NUTR140:IISEM	Illustrate the		• Food guides –		½

			7.9	food guide		BasicFourFoodGroups		hr
			NUTR140:IISEM 7.10	Describe the food exchange system			• FoodExchangeSystem	½ hr
			NUTR140:IISEM 7.11	Calculationofnutritivevalueoffoods			• Calculationofnutritivevalueoffoods	1hr
			NUTR140:IISEM 7.12	Explain the dietary fiber			• Dietaryfiber	½ hr
<b>VIII- Nutritionaldeficiencydisorders</b> <b>6hrs</b>	At the end of unit students are able to  <b>Knowledge:</b> Explain the nutritional deficiency disorders and describe nurse's role  <b>Attitude:</b> Use this knowledge in nursing practice		NUTR140:IISEM 8.1	Explain the Proteinenergy malnutrition	• Proteinenergy malnutrition – magnitudeof the problem, causes, classification, signs & symptoms, Severe acutemalnutrition (SAM), management &preventionandnurses'role			2hrs
			NUTR140:IISEM 8.2	Explain the Childhoodobesity	• Childhoodobesity– signs&symptoms,assessment, management & preventionandnurses' role			1hr
			NUTR140:IISEM 8.3	Explain the Vitamindeficiency disorders	• Vitamindeficiency disorders –vitaminA,B, C & D deficiency disorders – causes, signs & symptoms, management &preventionandnurses'role			2hrs
			NUTR140:IISE	Explain the		• Mineral deficiency		1hr

			M8.4	Mineral deficiency dis			diseases – iron, iodine and calcium deficiencies – causes, signs & symptoms, management & prevention and nurses' role		
<b>IX- Therapeutic diets</b> 4hrs	At the end of unit students are able to  <b>Knowledge:</b> Know the important of therapeutic diet. Explain the Principles of diets in various diseases.  <b>Skill:</b> Prepare therapeutic diet.  <b>Attitude:</b> Appreciate the importance of rules to be followed while cooking.		NUTR140:IISEM9.1	Explain the therapeutic diets	• Definition, Objectives, Principles			1 hr	
			NUTR140:IISEM9.2	Describe the diet in diseases	• Diet in Diseases – Obesity, Diabetes Mellitus, CVD, Underweight, Renal diseases, Hepatic disorders Constipation, Diarrhea, Pre and Post			1hr	
			NUTR140:IISEM9.3	Explain the modification in diet		• Modifications – Consistency, Nutrients			1hr
			NUTR140:IISEM9.4	Explain the feeding technique			• Feeding techniques		1hr
<b>X-</b>	At the end of unit		NUTR140:II	Explain the	• Cooking – Methods,			½	

<b>Cookery rules and preservation of nutrients</b> <b>3hrs</b>	<b>Knowledge:</b> Understand and describe rules of food keeping and preservation of nutrients.		SEM10.1	Cooking	Advantages and Disadvantages			hr
			NUTR140:II SEM10.2	Illustrate the Preservation of nutrients and Measures to prevent loss of nutrients during preparation	<ul style="list-style-type: none"> <li>• Preservation of nutrients</li> <li>• Measures to prevent loss of nutrients during preparation</li> </ul>			½ hr
			NUTR140:II SEM10.3	Describe the Safe food handling and Storage of foods	<ul style="list-style-type: none"> <li>• Safe food handling and Storage of foods</li> </ul>			½ hr
			NUTR140:II SEM10.4	Explain the food standards	<ul style="list-style-type: none"> <li>• Food standards</li> </ul>			½ hr
			NUTR140:II SEM10.5	Explain the Food preservation and Prevention of Food Adulteration Act (PFA)		<ul style="list-style-type: none"> <li>• Food preservation</li> <li>• Prevention of Food Adulteration Act (PFA)</li> </ul>		½ hr
			NUTR140:II SEM10.6	Explain the Food additives and food adulteration		<ul style="list-style-type: none"> <li>• Food additives and food adulteration</li> </ul>		½ hr



<b>XI- Nutritional assessment and nutrition education</b> <b>4hrs</b>	At the end of unit students are able to <b>Knowledge:</b> Explain the methods of nutritional assessment and nutrition education. <b>Skill:</b> Developed the skill to prepare nutritional assessment report.		NUTR140:IISEM 11.1	Explain the nutritional assessment	<ul style="list-style-type: none"> <li>Objectives of nutritional assessment</li> <li>Methods of assessment – clinical examination, anthropometry, laboratory &amp; biochemical assessment, assessment of dietary intake including Food frequency questionnaire (FFQ) methods</li> </ul>			2 hr
			NUTR140:IISEM 11.2	Explain the nutrition education		Nutrition education – purposes, principles and method		2 hr
<b>XII- National Nutritional Programs and role of nurse</b> <b>3hrs</b>	At the end of unit students are able to <b>Knowledge:</b> Understand and describe national feeding programmes and nutritional needs of special groups. <b>Attitude:</b> Educate client.		NUTR140:IISEM 12.1	Explain the Nutritional problem in India	<ul style="list-style-type: none"> <li>Nutritional problems in India</li> </ul>			1hr
			NUTR140:IISEM 12.2	Describe the National nutritional programs with role of nurse	<ul style="list-style-type: none"> <li>National nutritional programs – Vitamin A Supplementation, Anemia Mukh Bharat Program, Integrated Child Development Services (ICDS), Mid-day Meal Scheme (MDMS), National Iodine Deficiency Disorders Control Program (NIDDCP), Weekly Iron Folic Acid Supplementation (WIFS) and others introduced</li> <li>Role of nurse in every program</li> </ul>		1hr	

			NUTR140:IISEM12.3	Explain the National nutritional policy		• National nutritional policy		1 hr
<b>XIII- Foodsafety 2hrs</b>	At the end of unit students are able to <b>Knowledge:</b> know about food safety and storage. <b>Attitude:</b> Use this knowledge in nursing practice		NUTR140:IISEM13.1	Explain the food safety	<ul style="list-style-type: none"> <li>• Definition, Foodsafety considerations &amp; measures</li> <li>• Five keys to safer food</li> <li>• Foodsafety regulatory measures in India – Relevant Acts</li> <li>• Essential steps in safe cooking practices</li> </ul>			1 hr
			NUTR140:IISEM13.2	Explain the food storage	<ul style="list-style-type: none"> <li>• Food storage, food handling and cooking</li> <li>• General principles of food storage of food items (ex. milk, meat)</li> <li>• Role of food handlers in foodborne diseases</li> </ul>			1 hr

**TEACHING STRATEGY:**

Total Hours: 60

Theory Hours: 45

Lab Hours: 15

Theory**Continuous Assessment: 10Marks**

Sr. No	Assignments	Percentage of Attendance required	Allotted marks	Total Marks for attendance
1	Attendance	95-100%	2	2 marks
		90-94%	1.5	
		85-89%	1	
		80-84%	0.5	
		<80%	0	
		Number of assignments required	Marks	Total Marks allotted
2.i	Written Assignment	2	1X10	10
ii	Written assignment		1X10	10
3.i	Seminar/Individual presentation/Microteaching	2	1x6	6
ii	Seminar/Individual presentation/Microteaching		1x6	6
4	Group work/Work/Report(Writing nutritionalassessmentreport)	1	1x6	6
<b>Total</b>				<b>30/3=10Marks</b>

**Distribution of Non didactic hours (15)****Lab Hrs (12 Hrs)**

SR NO	Competency no	Competency	Domain	T-L Method	Teaching Hrs
1.	NUTR140:IISEM7.1	Preparation of balanced diet for different categories	K,S	Demonstration	3
2.	NUTR140:IISEM7.2	Calculation of Low cost nutritious dishes	K,S	Demonstration	3
3.	NUTR140:IISEM9.1	Preparation of therapeutic diets	K,S	Demonstration	6

**Modified Tutorials (03 Hours)**

S. No	Comp. no	TOPIC	Domain	T-L Method	Teaching Hrs
1.	NUTR140:IISEM10.5	Food preservation and Prevention of Food Adulteration Act (PFA)	K,S	Tutorials	1 Hour
2.	NUTR140:IISEM12.2	Describe the National nutritional programs with role of nurse	K,S	Tutorials	1 Hour
3.	NUTR140:IISEM13.1	Food safety regulatory measures in India – Relevant Acts	K,S	Tutorials	1 Hour

**Formative Assessment**

**1. Sessional Examinations: Theory: I**

**Name of the Institute: SRMM College of Nursing**

**Name of Examination: Second Semester/ B.Sc. Nursing Program**

**Semester II/Sessional I: Applied Nutrition & Dietetics**

**NUTR140: II -SEM/Primary/2021-2025**

	Must to Know (MK)	Desirable to know (DK)	Nice to know (NK)	Marks=30
Essay/Situation type (2) 1/2	(2) Level-I-1 Level-II-1			10Mx1=10M
Short(3) 2/3	(2) Level I-1 Level II-1	(1) Level I-1		5Mx2=10M
Very Short (4) 3/4	(2) Level I-1 Level II-1	(1) Level I-1	(1) Level-I-1	2Mx3=6M
MCQ (4) 4/4	(2) Level I-1 Level II-1	(1) Level I-1	(1) Level-1	1Mx4=4M
About 60:30:10 (MK:DK:NK) Level of Learning 80:20				<b>Total =30</b>

## 2. Sessional Examinations: Theory: II

Name of the Institute: SRMM College of Nursing

Name of Examination: Second Semester/ B.Sc. Nursing Program

Semester II/Sessional II: Applied Nutrition & Dietetics

NUTR140: II -SEM/Primary/2021-2025

	Must to Know (MK)	Desirable to know (DK)	Nice to know (NK)	Marks=50
Essay/Situation type (2) 1/2	(2) Level-I-1 Level-II-1			10Mx1=10M
Short(5) 4/ 5	(3) Level I-2 Level II-1	(2) Level I-1 Level I-1		5Mx4=20M
Very Short (7) 6/7	(4) Level I-3 Level II-1	(2) Level I-1 Level-II-1	(1) Level-I-1	6Mx2=12M
MCQ(8) 8/8	(5) Level I-4 Level II-1	(2) Level I-1 Level-II-1	(1) Level-1	1Mx8=8M
About 60:30:10 (MK:DK:NK) Level of Learning 80:20				<b>Total =50</b>

### c. Calculation of Internal Assessment (IA): Theory

- Total marks of two sessional examinations along with continuous assessment  $30\text{marks} \times 2 = 60 / 4 = 15$
- $10 + 15 = 25$  Marks
- Minimum required - 50 %

## 2. Summative Assessment

a. Theory:

**Name of the Institute: SRMM College of Nursing**

**Name of Examination: SecondSemester/ B.Sc. Nursing Program**

**Semester II/University Exam: Applied Nutrition & Dietetics**

**NUTR140: II -SEM/Primary/2021-2025**

	Must to Know (MK)	Desirable to know (DK)	Nice to know (NK)	Marks=50
Essay/Situation type (2) 1/2	(2) Level-I-1 Level-II-1			10Mx1=10M
Short(5) 4/ 5	(3) Level I-2 Level II-1	(2) Level I-1 Level I-1		5Mx4=20M
Very Short (7) 6/7	(4) Level I-3 Level II-1	(2) Level I-1 Level-II-1	(1) Level-I-1	6Mx2=12M
MCQ(8) 8/8	(5) Level I-4 Level II-1	(2) Level I-1 Level-II-1	(1) Level-1	1Mx8=8M
About 60:30:10 (MK:DK:NK) Level of Learning 80:20				<b>Total =50</b>

### **LIST OF RECOMMENDED BOOKS:**

- Anderson, Nutrition in nursing
- Anita E.P Clinical dietetics and nutrition
- Corrine H Robinson- Normal and therapeutic nutrition
- Patwardhan V.N., Nutrition in India
- Leena F Cooper., Nutrition in health and disease

