

**Subject No. 3**  
**NUTRITION AND DIETETICS**

Total Hours: 45

Theory Hours: 30

Lab. Hours: 15

**AIM:**

This course is designed to provide the students with a wide knowledge of dietetics in the Indian setting, that the practice of teaching optimum and realistic dietary planning can become an integral part of nursing practice.

**OBJECTIVES:**

At the end of the course, the students are able to:

1. Explain the principles and practices of nutrition and dietetics.
2. Plan therapeutic diets in the different settings.
3. Identify nutritional needs of different age group and plan diet accordingly.
4. Prepare meals using different methods utilizing cookery rules.

**COURSE CONTENT:**

**Unit I - Introduction to Nutrition and Dietetics:**

- **Introduction to nutrition and dietetics**
- Balanced diet, factors on which it depends. Factors to be considered in planning Guides available for planning.
- **Food Hygiene, preparation and preservation** Review of nutrients – micro & macro. **Specifications in Macro and Micro Nutrients**

**Unit II - Introduction to Diet Therapy:**

- Introduction. **Routine hospital diets.**
- Therapeutic diet under each unit i.e. cardiovascular diseases, gastrointestinal diseases, renal disorders, Endocrine and metabolic disorders, **Allergy, Infections and fevers**, Pre and post operative stage, Deficiency diseases and malnutrition, overweight and underweight.

**Unit III - Infant and Child Nutrition:**

- Feeding of normal infants: factors to be considered in planning, Nutritional requirements, feeding of premature infants, Factors to be considered in planning and nutritional requirement.
- Supplementary feeding of infants: Advantage and method of introduction. **Weaning effects on mother and child.** Psychology of infant and child feeding.
- **Feeding the sick child. Diet in diseases of infancy and childhood.**
- Deficiency – malnutrition, under nutrition, other nutrients deficiency.
- Feeding pre-school child: nutritional needs, factors to be considered in planning diets. Problems in feeding School Lunch Programme, Advantages, Need in India.

**Unit IV - Community Nutrition:**

- Need for community nutrition programme.
- Nutritional needs for special groups: infant, child, adolescent, Pregnant and lactating mother and old people.
- **Substitutes for non-vegetarian foods. Selection of cheap and nutritious foods. Nutrition education needs and methods-** Methods of assessing nutritional status of individual / group / community. **Current nutritional problems and national programmes** (mid day meal etc.)

## **PRACTICAL:**

### **I. Methods of cooking and cookery rules:**

- Simple preparation of beverages, soups, cereals and pulses, eggs, vegetables, meat, multipurpose food snacks.
- Menu Plans.

### **II. Preparation of supplementary food for infants:**

- Food for toddlers. **Food adulteration and fortification, food additives**
- Low cost nutritious dishes for vulnerable groups.
- Dietary case study of patient on special diet and planning of low cost dietary instructions for home adaptations.
- Planning of therapeutic diet.

## NUTRITION AND DIETETICS

| <i>Unit No.<br/>with total<br/>hours</i>                     | <i>Objectives</i>   | <i>Contents with distributed hours</i>  |              |              |  |                  |  |            |
|--|---|---|--------------|--------------|--|------------------|--|------------|
|  |   | <i>Must know 60%</i>  |              |              | <i>Desirable to know 30%</i>   |                  | <i>Nice to know 10%</i>  |            |
| I<br>(08 hours)  | At the end of unit students are able to<br><b>Knowledge:</b> Understand and describe various types of diets and important of nutrition.<br><b>Skill:</b> Plan the diet in a various disease conditions.<br><b>Attitude:</b> Dietary hobbies of the clients. | <ul style="list-style-type: none"> <li>• <b>Introduction to Nutrition and dietetics.</b></li> <li>• Balanced diet, factors on which it depends.</li> <li>• Review of nutrients – micro &amp; macro. <b>Specifications in Macro and Micro Nutrients</b> (5 hours)</li> </ul> |              |              | <ul style="list-style-type: none"> <li>• Factors to be considered in planning. (2 hour)</li> </ul> |                  | <ul style="list-style-type: none"> <li>• Guides available for planning.</li> <li>• <b>Food Hygiene, preparation and preservation (1 hour)</b></li> </ul> |            |
| <b>INTRODUCTION</b>  |   |   |              |              |  |                  |  |            |
| <b>Course outcome</b>  |   | <b>Program outcome</b>  |              |              |  |                  |  |            |
|  |   | Clinician/Nurse educator  | Professional | Communicator | Leader and member of the health care team and system   | Lifelong learner | Critical thinker   | Researcher |
|  |   | PO1   | PO2          | PO3          | PO4  | PO5              | PO6  | PO7        |
| CO1: Define Nutrition & Dietetics                            |   | 03  | 03           | 03           | 03   | 03               | 03   | 03         |
| CO2: Define Balanced diet                                    |   | 03  | 03           | 03           | 03   | 03               | 03   | 03         |
| CO3: Enlist various factors depending upon the balanced diet |   | 03  | 03           | 03           | 03   | 03               | 03   | 03         |
| CO4: Classify the macro and micro Nutrients.                 |   | 03  | 03           | 03           | 03   | 03               | 03   | 03         |
| CO5: Enlist factors to be considered in planning             |   | 03  | 03           | 03           | 03   | 03               | 02   | 03         |

|                  |   |  |              |              |  |  |                  |   |
|------------------|---|--|--------------|--------------|--|--|------------------|---|
|                  | CO6:Enlist which type of guides available for planning  | 03   | 03           | 03           | 03   | 03   | 03               | 03  |
|                  | CO7: define food hygiene.   | 03   | 03           | 03           | 03   | 03   | 03               | 03  |
|                  | CO8:Explain preparation & preservation of food  | 03   | 03           | 03           | 03   | 03   | 02               | 02  |
| II<br>(08 hours) | At the end of unit students are able to<br><b>Knowledge:</b> Know the important of therapeutic diet.<br><b>Skill:</b> Prepare therapeutic diet.<br><b>Attitude:</b> Appreciate cultural values. | Introduction:<br><ul style="list-style-type: none"> <li>Therapeutic diet under each unit i.e. Cardiovascular diseases, Gastrointestinal diseases, Renal disorders, Endocrine and metabolic disorders, Pre and post operative stage <b>(3 hours)</b></li> <li>Deficiency diseases and malnutrition, overweight and underweight (3 hrs)</li> </ul> |              |              |  | <ul style="list-style-type: none"> <li><b>Therapeutic diet of Allergy, Infections and fevers (1 hour)</b></li> </ul> |                  | <ul style="list-style-type: none"> <li><b>Routine hospital diets. (1 hour)</b></li> </ul> |
|                  | <b>Introduction:<br/>Therapeutic diet</b>   |  |              |              |  |  |                  |   |
|                  | <b>Course outcome</b>   | <b>Program outcome</b>   |              |              |  |  |                  |   |
|                  |   | Clinician/Nurse educator   | Professional | Communicator | Leader and member of the health care team and system | Lifelong learner   | Critical thinker | Researcher  |
|                  |   | PO1  | PO2          | PO3          | PO4  | PO5  | PO6              | PO7   |
|                  | CO1: Define Therapeutic diet  | 03   | 03           | 03           | 03   | 03   | 03               | 03  |
|                  | CO2: Explain the therapeutic diet of cardiovascular diseases & Gastrointestinal diseases  | 03   | 03           | 03           | 03   | 03   | 03               | 03  |

|                                  |   |  |    |                          |  |              |   |   |                  |            |
|----------------------------------|---|--|----|--------------------------|--|--------------|---|---|------------------|------------|
|                                  | CO3: Explain the therapeutic diet of renal disorder & endocrine disorder.   | 03   | 03 | 03                       | 03   | 03           | 03  | 03  |                  |            |
|                                  | CO4: Explain the therapeutic diet of metabolic disorder & pre –post operative stage   | 03   | 03 | 03                       | 03   | 02           | 03  | 02  |                  |            |
|                                  | CO5: Illustrate the therapeutic diet of deficiency diseases & malnutrition  | 03   | 03 | 03                       | 03   | 03           | 03  | 03  |                  |            |
|                                  | CO6: Illustrate the therapeutic diet of overweight & underweight.   | 03   | 03 | 03                       | 03   | 03           | 03  | 03  |                  |            |
|                                  | CO7: Plan one day menu patient suffering for infection & fever  | 03   | 03 | 03                       | 03   | 03           | 03  | 03  |                  |            |
|                                  | CO8: Explain routine hospital diet  | 03   | 03 | 03                       | 03   | 03           | 03  | 03  |                  |            |
| III<br>(08 hours)                | At the end of unit students are able to<br><b>Knowledge:</b> Understand and describe nutritional requirements of children and feed them.<br><b>Skill:</b> Prepare various types of foods for children.<br><b>Attitude:</b> Appreciates likings and disliking of children. | <ul style="list-style-type: none"> <li>Feeding of normal infants: factors to be considered in planning, Nutritional requirements.</li> <li>Supplementary feeding of infants: Advantage and method of introduction.</li> <li>Deficiency – malnutrition, under nutrition, other nutrients deficiency.</li> <li><b>Weaning effects on mother and child.</b></li> <li><b>Feeding the sick child. Diet in diseases of infancy and childhood (4 hour)</b></li> </ul> |    |                          | <ul style="list-style-type: none"> <li>Psychology of infant and child feeding.</li> <li>Feeding pre-school child: nutritional needs, factors to be considered in planning diets. Problems in feeding School Lunch Programme, Advantages, Need in India (3 hour)</li> </ul> |              |   | <ul style="list-style-type: none"> <li>Feeding of premature infants, Factors to be considered in planning and nutritional requirement (1 hr)</li> </ul> |                  |            |
| <b>Feeding of normal infants</b> |   |  |    |                          |  |              |   |   |                  |            |
| <b>Course outcome</b>            |   |  |    | <b>Program outcome</b>   |  |              |   |   |                  |            |
|                                  |   |  |    | Clinician/Nurse educator | Professional   | Communicator | Leader and member of the health care team and | Lifelong learner  | Critical thinker | Researcher |

|  |     |     |     | system |     |     |     |
|--|-----|-----|-----|--------|-----|-----|-----|
|  | PO1 | PO2 | PO3 | PO4    | PO5 | PO6 | PO7 |
| CO1: Define infancy, Exclusive breast feeding and weaning. | 03  | 03  | 03  | 03     | 03  | 03  | 03  |
| CO2: Illustrate the nutritional requirement of infant.     | 03  | 03  | 03  | 03     | 03  | 03  | 03  |
| CO3:Enlist the advantages of breast feeding.               | 03  | 03  | 03  | 03     | 03  | 03  | 03  |
| CO4: Enlist the recommendation for breast feeding          | 03  | 03  | 03  | 03     | 03  | 03  | 03  |
| CO5: Enlist the contraindication of breast feeding         | 03  | 03  | 03  | 03     | 03  | 03  | 03  |
| CO6:Explain Artificial or top feeding                      | 03  | 03  | 03  | 03     | 03  | 03  | 03  |
| CO7:Define weaning.  | 03  | 03  | 03  | 03     | 03  | 03  | 03  |
| CO8:Explain the principles of weaning                      | 03  | 03  | 03  | 03     | 03  | 03  | 03  |
| CO9:Enlist the feeding problems of infant                  | 03  | 03  | 03  | 02     | 03  | 03  | 03  |
| CO10-Explain the feeding of sick child                     | 03  | 03  | 03  | 03     | 03  | 03  | 03  |

|  |   |   |   |   |  |                     |                     |            |
|--|---|---|---|---|--|---------------------|---------------------|------------|
| IV<br>(06 hours)   | <p>At the end of unit students are able to</p> <p><b>Knowledge:</b> Understand and describe national feeding programmes and nutritional needs of special groups.</p> <p><b>Skill:</b> Develop ability to teach individuals and families to prepare low cost nutritive foods.</p> <p><b>Attitude:</b> Appreciates socio cultural and economic background of individual and families.</p> | <ul style="list-style-type: none"> <li>• Need for community nutrition programme.</li> <li>• Nutritional needs for special groups: infant, child, adolescent</li> <li>• Pregnant and lactating mother and old people.</li> <li>• <b>Selection of cheap and nutritious foods.</b></li> <li>• <b>Nutrition education needs and methods.</b></li> <li>• <b>Current nutritional problems and national programmes (mid day meal etc). (3 hour)</b></li> </ul> | <ul style="list-style-type: none"> <li>• Methods of assessing nutritional status of individual / group / community. (2 hour)</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Substitutes for non-vegetarian foods. (1 hour)</b></li> </ul> |  |                     |                     |            |
| <b>Community nutrition programme.</b>  |   |   |   |   |  |                     |                     |            |
| <b>Course outcome</b>  |   | <b>Program outcome</b>  |   |   |  |                     |                     |            |
|  |   | Clinician/<br>Nurse<br>educator   | Professional  | Communi<br>cator  | Leader and<br>member of<br>the health<br>care team<br>and system | Lifelong<br>learner | Critical<br>thinker | Researcher |
|  |   | PO1   | PO2   | PO3   | PO4  | PO5                 | PO6                 | PO7        |
| CO1:Enlist the community nutrition programme.                                  | 03  | 03  | 03  | 03  | 03   | 03                  | 03                  |            |
| CO2: Explain the nutritional needs Infant , Child & adolescence .              | 03  | 03  | 03  | 03  | 03   | 03                  | 03                  |            |
| CO3: Explain the nutritional needs of pregnant , lactating mother & old people | 03  | 03  | 03  | 03  | 03   | 03                  | 03                  |            |
| CO4:Explain the nutrition problem  | 03  | 03  | 03  | 03  | 03   | 03                  | 03                  |            |
| CO5:Enlist the method of nutritional assessment.                               | 03  | 03  | 03  | 02  | 03   | 02                  | 03                  |            |
| CO6:Explain the substitutes for non vegetarian foods.                          | 03  | 03  | 03  | 02  | 03   | 03                  | 02                  |            |

## DISTRIBUTION OF LAB HOURS (Total Lab Hours 15)

|  |   |
|--|---|
| <b>I. Methods of cooking and cookery rules:</b><br>1. Simple preparation of beverages, soups, cereals and pulses, eggs, vegetables, meat, multipurpose food snacks.<br>2. Menu Plans.  | 7 |
| <b>II. Preparation of supplementary food for infants:</b><br>• Food for toddlers. <b>Food adulteration and fortification, food additives</b><br>1. Low cost nutritious dishes for vulnerable groups.<br>2. Dietary case study of patient on special diet and planning of low cost dietary instructions for home adaptations.<br>3. Planning of therapeutic diet. | 8 |

### TEACHING STRATEGY:

Total Teaching Hours: 45

Lecture: 30 Hours

Practical (Lab work):15 Hours

### TEACHING METHODS:

- Lecture, Demonstration, Group Discussion, Simulation, Preparation of various therapeutic diets in the kitchen (Nutrition Lab.) & **Modified Tutorial**

### ASSIGNMENTS:

#### Theory and Practical:

##### Theory

| Sr. No | Assignments                                     | No./Quantity | Marks Per Assignment | Total Marks |
|--------|---|--------------|----------------------|-------------|
| 1      | Therapeutic Diet plan for one patient from ward | One          | 20                   | 40          |
| 2      | Home assignment                                 | One          | 20                   |             |

### A. V. AIDS:

- Over head Projector, L.C.D, Computer assisted learning, Flip charts, Posters, Simulated Kitchen, Black Board.

### LIST OF RECOMMENDED BOOKS:

- Clinical dietetics and Nutrition –Antia and Philip
- Nutritive Value of Indian foods –Gopalan
- Krause’s food, Nutrition and Diet therapy, Mahan
- Nutrition and Diet therapy –Williams