

Maulana Abul Kalam Azad University of Technology, West Bengal
(Formerly known as West Bengal University of Technology)
Syllabus of B.Sc. (Dietetics and Nutrition)
Effective from academic session 2023–2024

Semester-V

FYBDN 501 Nutrition & Life Cycle: 3credits,

Course Objectives:

1. To impart basic knowledge about the nutrition, energy, growth and development
2. To manage nutrition during Pregnancy, Lactation, Infancy, Children etc.
3. To learn nutritional management skills for human beings.

Course Outcomes (COs):

Sl. No.	Course Outcome (CO)
1	Make use of basic knowledge about nutrition.
2	Test for the nutritional requirements.
3	Explain energy in human nutrition.
4	Develop knowledge of growth and development
5	Understand, remember, and apply the knowledge and skills required for monitoring the growth

Unit I

8hrs

Nutrition during Pregnancy and lactation:

- a) Physiological stages of pregnancy b) Effect of Nutritional status on Pregnancy outcome c) Nutritional Requirements d) Guide for eating during pregnancy) Complications of pregnancy and their dietary Implications.
Lactation: Physiology b) Nutritional Requirements, breast feeding an infant.

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Unit II **8hrs**

- A. Nutrition during Infancy:** a) Physiologic Development b) Nutritional Requirements
c) Milk for Infants-Composition of human and cow's milk, formulas d) **Complementary foods**-weaning pattern, composition, general principles in feeding infants, special feeding problems Nutritional requirements of Toddlers (1-3years).
- B.** Nutrition in the Care of the Low-Birth weight Infant:
- C.** Characteristics of low-birth weight Infant, small for date babies, pre-term babies Use of growth chart.

Unit III: **8hrs**

Nutrition of Preschool and School going children a) Growth and Development b) Nutritional Requirements c) Factors influencing food intake d) Nutritional Concerns

Unit IV **8hrs**

Nutrition in Adolescence: a) Growth and Development-Physiologic changes b) Nutritional Requirements c) Situations with special needs.

Unit V **8hrs**

Nutrition in adults of different activity levels and income groups.

FYBDN 591 Nutrition & Life Cycle (Practical)

2 credits, Total-20hours + 20 self-paced practice hours

1. Preparation of Complementary Feeds for Infants-weaning foods (Cost Specific)
2. Planning and preparation of a day's diet for a school going child with special emphasis on Packed Lunches.
3. Planning and preparation of a day's diet for an adolescent girl/boy.
- Planning and preparation of a day's diet for an adult man/woman (sedentary/moderate/ heavyworker)
4. Planning a day's diet for Pregnant Woman

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Reference Book:

1. Antia, F.P. (2005): Clinical Nutrition and Dietetics, Oxford University Press, Delhi Gordon M Ward law (1999) Perspectives in Nutrition 4thed.WCB/McGraw Hill. International edition.
2. Mahan, L.K., Arlin, M.T. (2000): Krause's Food, Nutrition and Diet therapy, 11th edition, W.B.Saunders Company, London.
3. Passmore, R and Davidson S (1986) Human Nutrition and Dietetics. Living stone Publishers.
4. Robinson, C.H; Lawler, M.R. Chenoweth, W.L; and Garwick, A.E (1986): Normal and Therapeutic Nutrition, 17th Ed., MacMillan Publishing Co
5. Shil's M E, Alfon J A, Shike M (1994) Modern Nutrition In health and Diseases 8th ed. Shubhangini A Joshi (2002): Nutrition and Dietetics 2nd edition, Tata Mc Graw-Hill Publishing Company Limited, New Delhi.
6. Srilakshmi, B. (2005): Dietetics, 5th edition, New Age International (P) Limited Publishers, New Delhi
7. Williams's (1989): Nutrition and diet Therapy. 6th edition. Times Mirror/Mosby College Publishing, St. Louis

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FYBDN 502: Diet Therapy I:3 credits,
Total-30 hours + 15 Tutorial hours

Course Objectives:

1. To learn about diet therapy for different common diseases.
2. To learn diet management for common diseases.

Sl. No.	Course Outcome (CO)
1	Apply the basic concepts of diet therapy.
2	Make use of concept of the Team approach to health care.
3	Demonstrate the concept of the Routine Hospital Diets.
4	Compare the concept of the Diets for different febrile conditions.
5	Infer the concept of the Etiological factors, symptoms, and Management
6	Illustrate, apply, and assess the knowledge and skills required for implementation of dietary management for the diseases of the liver and biliary system as well as cardiovascular diseases.

Unit I

2hrs

A. Basic Concepts of Diet Therapy

Nutrition Care Process: Definition of MNT, Nutritional Assessment (ABCD), Nutritional Diagnosis, Nutrition Intervention, Monitoring & Evaluation of Nutritional Care.

B. Modifications of the Normal Diet

2hrs

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General or Regular, Adequate or House Diet, Soft Diet, Liquid Diets- Clear Liquid Diet, Full Liquid Diet, Mode of Feeding- Enteral or Oral Route- Enteral (via) tube feeding Parenteral – Peripheral Vein Feeding, Total Parenteral Nutrition (TPN)

Unit II **5hrs**

A. Nutrition during Febrile Disorders:

- a) Classification of fevers b) Metabolism c) General Dietary Considerations
- d) Acute & chronic fevers -Typhoid, Tuberculosis, Malaria

B Nutrition for Weight Management **5hrs**

Assessment of obesity – BMI, Waist Hip-Ratios, Skin folds Thickness

Etiology – Genetic Factors, Physiological Factors, Behavioral factors Metabolism in obesity – Basal Metabolism, Treatment – Dietary Management, Fad diets and their consequences, Underweight – Etiology, Health hazards, Treatments.

Unit III

Nutrition in Gastrointestinal Disorders **5hrs**

Peptic Ulcer Disease – Etiology, Symptoms, Dietary Management

Intestinal Diseases – irritable bowel syndrome (IBS), Constipation, Diarrhea

Diseases of the Small Intestine – Celiac Disease – Gluten Sensitive Enteropathy, Tropical Sprue, Lactose Intolerance

Inflammatory Bowel Disease - Crohn's Disease, Ulcerative Colitis

C. Nutrition in Diseases of the Liver **5hrs**

Hepatitis: Types, Etiology, Symptoms, Treatment Cirrhosis: Etiology, Clinical Symptoms, Treatment, Hepatic Encephalopathy: Etiology, Clinical Symptoms, Treatment Diseases of the Gallbladder: (brief) Cholecystitis and Cholelithiasis

D. Nutrition in Cardiovascular Disorders **6hrs**

Atherosclerosis – Introduction, Etiology, Multiple Risk Factors, Treatment, Diet and Feeding Pattern, Food to

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be avoided and included.

Acute Cardiovascular Disease – MI – Dietary Management Chronic Coronary Heart Disease – CHF –Dietary Management.

Hypertension – Classification, Risk Factors, Symptoms, Dietary Management

FYBDN 592 Diet Therapy I
2 credits, Total-20hours

1. Modification of diet according to consistency
 2. Planning and preparation of diets for diarrhea & constipation
 3. Planning and preparation of diets for febrile conditions - Typhoid, Tuberculosis and Malaria
 4. Planning and preparation of diets for obese and underweight patients
 5. Planning and preparation of diet for Peptic Ulcer patients
- Planning and preparation of diet for viral hepatitis and cirrhosis of liver
Planning and preparation of diet for hypercholesterolemia
6. Planning and preparation of diet for hypertensive patients

Reference

1. Antia, F.P. (2005): Clinical Nutrition and Dietetics, Oxford University Press, Delhi Mahan, L.K.,Arlin, M.T. (2000): Krause's Food, Nutrition and Diet therapy, 11th edition, W.B.Saunders Company,London.
2. Robinson,C.H;Lawler,M.R.Chenoweth,W.L;and Garwick,A.E(1986):Normal and Shubhangini A Joshi (2002): Nutrition and Dietetics 2nd edition, Tata McGraw-Hill Publishing Company Limited,NewDelhi.
3. Srilakshmi,B.(2005):Dietetics,5th edition, New Age International(P) Limited Publishers, New Delhi
4. Therapeutic Nutrition,17th Ed., Mac Millan Publishing Co
5. Williams's (1989): Nutrition and diet Therapy.6th edition. Times Mirror/Mosby College Publishing,St.Louis