SNDT Women's University, Mumbai

Bachelor Of Science
Home Science
(Nutrition & Dietetics)

B.Sc. In H.Sc. N&D

As Per NEP – 2020

Semester – I & II

Syllabus
(W.E.F. Academic Year 2025-26)

Terminologies

Vertical	Full-form/Definition	Remarks	Related to Major and Minor Courses
Major (Core)	Subject comprising Mandatory and Elective Courses, Major Specific IKS, Vocational Skill Courses, Internship/ Apprenticeship, Field Projects, Research Projects connected to Major	Minimum 50% of total credits corresponding to Three/Four - year UG Degree- Mandatory Courses	Related to the Major
Minor Course	Course from same or different Faculty	Minimum 18-20 Credits to be completed in the first three years of UG Programme	Related to the Minor
OEC	Open Elective Courses/ Generic courses	10-12 credits to be offered in I and/or II year. Faculty-wise baskets of OEC to be prepared	OEC is to be chosen compulsorily from faculty other than that of the Major
VSC	Vocational Skill Courses, including Hands on Training corresponding to the Major and/or Minor Subject	8-10 credits, to be offered in first three years, wherever applicable vocational courses will include skills based on advanced laboratory practical's of Major	Related to the Majoror Minor
SEC	Skill Enhancement Courses	06 credits, to be offered in I and II year, to be selected from the basket of Skill Courses approved by university	Related to the Major or Minor any relevant Skill
AEC	Ability Enhancement Courses	08 credits, to be offered in I and II year, English: 04 Credits to be earned in Sem - I, Modern Indian Language of 04 credits to be offered in II year	NA
VEC	Value Education Courses	Understanding India, Environmental science/education, Digital andtechnological solutions, Health & Wellness, Yoga education, sports, and fitness	NA

IKS	Indian Knowledge System	Generic IKS Course: basicknowledge of the IKS to be offered at First Year level	Major-Specific IKS Courses: advanced information about the major, part of the major credit to be offered at second- or third-year level
OJT	On-Job Training (Internship/Apprenticeship)	Corresponding to the Major Subject	Related to the Major
FP	Field projects	Corresponding to the MajorSubject	Related to the Major
CC	Co-curricular Courses	Health and Wellness, Yoga education sports, and fitness,Cultural Activities, NSS/NCC and Fine/ Applied/Visual/ Performing Arts	NA
CE	Community Engagement andservice		Related to Major
RP	Research Project	corresponding to the MajorSubject	Related to Major

Program Template

Programme Degree		B.Sc.
Specialization Major		Food Science & Nutrition
Faculty		Science & Technology
Parenthesis if any minor (Specialization)		Nutrition and Dietetics
Preamble		The Program lays a strong emphasis on a multidisciplinary, integrated approach that will enable students to build a variety of skills and a broad base of professional knowledge in the areas of food science, nutrition and dietetics. It encourages the development of scientific perspectives and a research attitude in students. The programme trains learners in exploring areas of human physiology, biochemistry, nutrition, and medical nutrition therapy and their relationships. At the end of the programme, learner will be able to work in varied sectors of food and nutrition, dietetics, nutrition education work government, non- government, research or learning organizations.
Programme Specific Outcomes (PSOs)		After completing this programme, Learner will -
	1.	Analyze composition of various foods and their relation to therapeutic conditions.
	2.	Recognize the changes that take place due to food processing.
	3.	Comprehend the fundamentals of human physiology, biochemistry, nutrition, and medical nutrition therapy and their relationships.
	4.	Educate people of all ages, groups and plan healthy diets.
	5.	Design nutrition education material and provide nutrition counseling to healthy and disease conditions.
Eligibility Criteria for Programme		Any woman who has successfully cleared 10+2 with Science/Home Science subjects from the recognized Boards by the Government of India/respective state or have required credits as per the government norms to be able to join undergraduate programme.
Intake for affiliated Colleges		30 (Batch size for Practical 15)

Structure with Course Title

B.Sc. In Home Science - Nutrition and Dietetics

SN	Courses	Type of Course	Credits	Marks	Int	Ext
	Semester I					
10030201	Basics of Nutrition and Dietetics- I (Th)	Major (Core)	2	50	50	0
		Major (Core)	2	50	50	0
		Major (Core)	2	50	50	0
10430211	Nutrition for Optimal Health (Th)	OEC	4	100	50	50
10430211	Basics of Nutrition and Dietetics (Pr)	VSC S1	2	50	50	0
10430211	Applied Science (Pr)	SEC	2	50	0	50
10810111	English For Academic Writing- Paper I (For Students of English Medium)	AEC (English) **(Any One)**	2	50	0	50
10810112	English Language and Literature- I (For Students of Non-English medium)					
11051111	Inception of India Knowledge System	IKS (Generic)	2	50	0	50
10952111	Introduction to Indian Constitution	VEC	2	50	0	50
11450121	Basics of National Service Scheme	CC **(Any One)**	2	50	50	0
11450221	National Cadets Corps. (NCC) Studies- I					
11450322	Health and Wellness					
11450421	Performing Arts Exploration					
			22	**550**	**300**	**250**

SN	Courses	Type of Course	Credits	Marks	Int	Ext
	Semester II					
20030211	Basics of Nutrition and Dietetics II (Th)	Major (Core)	2	50	0	50
		Major (Core)	2	50	0	50
		Major (Core)	2	50	0	50
		VSC S2	2	50	50	0
		VSC S3	2	50	50	0
20430211	Culinary Science (Pr)	OEC	4	100	50	50
20730201	Human Physiology (Pr)	SEC	2	50	50	0
20810111	English For Academic Writing- Paper II (For Students of English Medium)	AEC (English) **(Any One)**	2	50	0	50
20810112	English Language and Literature- II (For Students of Non-English medium)					
20952111	Environment Awareness	VEC	2	50	0	50
21450121	Volunteerism and National Service Scheme	CC **(Any One)**	2	50	50	0
21450221	National Cadets Corps. (NCC) Studies- II					
21450323	Yoga Education					
21450421	Fine Art					
			22	**550**	**250**	**300**

Exit with UG Certificate with 4 extra credits (44 + 4 credits)

Syllabus

Semester I

1.1 Major (Core)

Course Title	**Basics of Nutrition and Dietetics I (Th)**
Course Credits	2
Course Outcomes	After going through the course, learners will be able to
	1. Define basic concepts and terminology related to food, nutrition, health, and diet. 2. Explain the classification, functions, and significance of various nutrients. 3. Examine role of Nutrition in human health. 4. Analyze the importance of balanced diet for health. 5. Create and modify the meals therapeutically for specific people.
Module 1 (Credit 1) - Introduction to Food & Nutrition	
Learning Outcomes	After learning the module, learners will be able to
	1. Analyze the inter relationship of food and nutrition. 2. Evaluate the functions and deficiencies of macronutrients.
Content Outline	• **Introduction to Food & Nutrition** -Terms used in Nutrition & Health -Definitions of Food, Nutrition, Health, Diet, Balanced Diet, Malnutrition, Under nutrition, Over nutrition -Functions of food -Relationship between Food and Nutrition • **Classification of Nutrients** -Food Groups -Food Pyramid • **Recommended dietary allowances for Indians** • **Role of Macronutrients (functions, Sources and Deficiency in brief)** - Carbohydreates - Proteins - Fats
Module 2 (Credit 1) - Micronutrients & Water	
Learning	After learning the module, learners will be able to

Outcomes	1. Evaluate the functions and deficiencies of micronutrients. 2. Examine the role and importance of water in human health.
Content Outline	• **Role of Micronutrients (Functions, Sources and Deficiency in brief)** - Vitamins (Fat soluble: A,D, E, K, Water Soluble: B1,B2, B3, B6, ,B9, B12 and C) - Minerals (Calcium, Phosphorus, Iron, Iodine) • **Role of Water** - Functions - Water Balance - Dehydration and Role of ORS

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE):

1. Assignment on function, sources and deficiency symptoms of macro nutrients.
2. Assignment on function, sources and deficiency symptoms of micro nutrients.

References:

1. Agarwal, A., & Udipi, S. (2021). *Textbook of human nutrition* (2nd ed.). Jaypee Brothers Medical Publishers.
2. Joshi, S. A. (2021). *Nutrition and dietetics* (5th ed.). McGraw Hill.
3. Khanna, K., Gupta, S., Passi, S., Seth, R., Mahana, R., & Puri, S. (2016). *Textbook of nutrition and dietetics* (2nd ed.). Elite Publishing House.
4. Sharma, A. (2017). *Principles of therapeutic nutrition and dietetics*. CBS Publishers.
5. Srilakshmi, B. (2023). *Dietetics* (9th ed.). New Age International Publishers.
6. Srilakshmi, B. (2023). *Nutrition science* (8th ed.). New Age International Publishers.

1.4 Open Elective Courses/ Generic (OEC)

Course Title	Nutrition for Optimal Health (Th)
Course Credits	4
Course Outcomes	After going through the course, learners will be able to
	1. Comprehend the basic concepts in food, nutrition and health. 2. Explain the connection between food choices and overall health. 3. Analyze nutrition-related information and differentiate scientific evidence from misinformation or quackery. 4. Apply the concepts in food, nutrition while choosing safe and nutritious foods. 5. Evaluate the impact of modern dietary patterns and processed foods on health outcomes.
Module 1 (Credit 1) -Nutrition and Health	
Learning Outcomes	After learning the module, learners will be able to
	1. Predict the relationship between food choices and health outcomes. 2. Identify safe and nutritious foods. 3. Analyze Nutrition information as scientific or quackery.
Content Outline	**Nutrition and Health:** Relationship between food, nutrition and health Nutrition Transition and its effects Functions of food Factors affecting food consumption Nutrition Misinformation and Quackery
Module 2 (Credit 1) -Food Groups and Labeling	
Learning Outcomes	After learning the module, learners will be able to
	1. State the definitions and Classify foods into food groups. 2. Identify HFSS packaged foods using nutrition labels. 3. Apply my plate concept, food portioning.

Content Outline	**Basics of Nutrition:** Definitions: Foods, Diet, Nutrients, Nutrition, Optimum nutrition, Balanced diet, R.D.A., EAR, TUL, Malnutrition, Undernutrition, Over Nutrition Food Groups My Plate Concept Comprehension of Nutrition labels Food Portioning and Mindful eating
Module 3 (Credit 1) -Meal Planning	
Learning Outcomes	After learning the module, learners will be able to
	1. Predict the relationship between food choices and health outcomes. 2. Identify safe and nutritious foods and classify them in food groups. 3. Critique popular trends in foods and diets
Content Outline	Apply my plate concept, food portioning Case studies to discuss food choices and health outcomes Market survey and discussion on packaged foods.
Module 4 (Credit 1) - Nutrition and Health Promotion	

Learning Outcomes	After learning the module, learners will be able to 1. Analyze Nutrition information as scientific or quackery 2. Identify HFSS packaged foods using nutrition labels 3. Critique popular trends in foods and diets.
Content Outline	**Popular Trends in Foods and Diets: Myths and Facts** Super foods Nutrition and Immunity Gluten- free foods Lactose free foods Alkaline water Pros and Cons: GM Diet, Keto Diet, Mediterranean diet, DASH Diet, Intermittent Fasting Diet, Vegan Diet

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE):

Module 1 & 2:

Group discussions on the veracity of select nutrition information in public domain (Print/Virtual) through the lens of science backed information.

Module 3 & 4:

1. Assignment on use of food labels for identifying safe food.
2. Categorization of select foods by food groups.
3. Assignment on creating My Plate/Food portioning.
4. Presentations on critiquing select trends in food and diet.
5. Group discussions on Dietary Myths and Facts.

References:

1. Agarwal, A. and Udipi, S. (2021) *Textbook of Human Nutrition* (2nd ed). Jaypee Brothers Medical Publishers.
2. Dietary Guideline for Indians, A Manual (2024) NIN, Hyderabad.

3. Indian Food Composition Tables (2017), T. Longvah, R.Ananthan, K.Bhaskarachary, K.Venkaiah, NIN, Hyderabad.

4. Joshi ,Shubhangini. A.(2021). *Nutrition and Dietetics* (5th ed). McGraw Hill.

5. Khanna, K., Gupta, S., Passi,S., Seth,R.,Mahana, R. and Puri,S. (2016) *Textbook of Nutrition and Dietetics* (2nd ed.). Elite Publishing House.

6. Nutrition Requirements for Indians, (2020). A Report of the Expert Group, ICMR-NIN,MoHFW

7. My Plate for the Day (2020), ICMR-NIN

8. Sharma, Avantina.(2017). *Principles Of Therapeutic Nutrition and Dietetics.* CBS.

9. Srilaxmi, B. (2023). *Dietetics* (9th ed.). New Age International Private Limited.

10. Srilaxmi, B. (2023). *Nutriton Science* (8th ed.). New Age International Private Limited.

1.5 Vocational Skill Courses (VSC)

Course Title	**Basics of Nutrition and Dietetics (Pr.)**
Course Credits	**2**
Course Outcomes	After going through the course, learners will be able to
	1. Identify the relationship between diet, health, and disease. 2. Apply knowledge of nutrients and food groups in planning balanced diets. 3. Calculate energy and nutrient values of planned meals using food composition data. 4. Modify normal diets to suit the nutritional needs of different life stages and disease conditions. 5. Evaluate the adequacy and appropriateness of planned menus using exchange lists and nutritional guidelines.
Module 1 (Credit 1)- Menu Planning and Use of Exchange List	
Learning Outcomes	After learning the module, learners will be able to
	1. Plan balanced recipes based on specific nutrient requirements. 2. Calculate energy and key nutrient values in planned meals. 3. Use the food exchange list to develop flexible dietary plans. 4. Design menus for various physiological groups (adults, pregnancy, lactation, children).
Content Outline	Planning and Cooking for Energy, Proteins, Calcium, Iron, B-Complex, Vitamin C, Multinutrient Introduction to Food Exchange List Planning for Adult, Pregnancy and Lactation, School going Child.
Module 2 (Credit 1)- Therapeutic Diet Planning	
Learning Outcomes	After learning the module, learners will be able to
	1. Modify the normal diets to therapeutic diets. 2. Plan and prepare suitable meals for common health disorders. 3. Justify dietary modifications based on symptoms and nutritional requirements. 4. Assess the effectiveness of a modified therapeutic menu using nutrient calculations.
Content Outline	Basic Therapeutic Modification Planning and Cooking for: Infection and Fever Weight Management (Underweight and Overweight) GI disturbance (Diarrhea and Constipation) Anemia

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)
1. Planning recipes and calculation of nutrients
2. Modification of the normal diets to therapeutic diets

References:

1. Agarwal, A. and Udipi, S. (2021) Textbook of Hunam Nutrition(2nd ed). Jaypee Brothers Medical Publishers.
2. Joshi ,Shubhangini. A.(2021). *Nutrition and Dietetics* (5th ed). McGraw Hill.
3. Khanna, K., Gupta, S., Passi,S., Seth,R.,Mahana, R. and Puri,S. (2016) *Textbook of Nutrition and Dietetics* (2nd ed.). Elite Publishing House.
4. Sharma, Avantina.(2017). *Principles Of Therapeutic Nutrition and Dietetics.* CBS.
5. Srilaxmi, B. (2023). *Dietetics* (9th ed.). New Age International Private Limited.
6. Srilaxmi, B. (2023). *Nutriton Science* (8th ed.). New Age International Private Limited.

1.6 Skill Enhancement Courses (SEC)

Course Title	**Applied Science (Pr)**
Course Credits	2
Course Outcomes	After going through the course, learners will be able to
	1. Describe fundamental concepts of applied chemistry and biology. 2. Perform basic chemical procedures relevant to food and health sciences. 3. Examine and identify common microorganisms using standard microbiological techniques. 4. Apply microbiological knowledge to understand food spoilage and disease transmission. 5. Develop hands-on skills in using laboratory tools, techniques, and scientific processes.
Module 1 (Credit 1) - Applied Chemistry	
Learning Outcomes	After learning the module, learners will be able to
	1. Plan systematic work in the laboratory. 2. Identify and operate basic chemistry lab apparatus correctly. 3. Perform and explain acid-base neutralization reactions. 4. Demonstrate oxidation-reduction reactions using common reagents. 5. Measure and interpret pH of common solutions using indicators and meters; and viscosity of liquids using Oswald's viscometer.
Content Outline	• **Applied Chemistry** Introduction to chemistry lab & apparatus. 1) Neutralization of strong acid with strong base (HCl & NaOH) 2) Neutralization of weak base with strong acid (Na_2CO_3& H_2SO_4) 3) Neutralization of weak acid with strong base (Oxalic acid & NaOH) 4) Oxidation- reduction reaction (Oxalic acid & $KMnO_4$) 5) pH determination of various solutions: acid, base and neutral (two household example for each) Viscosity measurement: water, oil, shampoo by Oswald's viscometer
Module 2 (Credit 1) - Applied Biology	

Learning Outcomes	After learning the module, learners will be able to
	1. Handle and care for microscope and prepare slides. 2. Examine various micro-organisms. 3. Employ required skills to study micro-organisms. 4. Apply knowledge about micro-organisms in everyday life.
Content Outline	• **Applied Biology** 1) Study and care of microscope 2) Observation of motility of bacteria by Hanging drop method (*E.coli* / *Proteus*) 3) Observation of bacteria by the simple: monochrome staining method (Hay infusion culture or milk) 4) Gram staining of bacteria in buttermilk 5) To observe common pathogenic bacteria (any 6 – permanent slides) 6) Observation of fungi on different food materials 7) To observe common pathogenic protozoa (permanent slides of *Entamoeba histolytica* and *Plasmodium vivax*) 8) Study of medicinally important plants 9) Study of medicinally important plants (projects)

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE):

- Performing experiment in the Laboratory.
- Maintaining Laboratory Journal.
- Project on Medicinal Plants.

References:

1. Cecie .S and Christine A. (2014). *Biology: Concepts and Application* Edition 9. Brooks/ Cole Publishing Company.
2. Dr. RC Dubey and DK Maheshwari.(2023) *Practical Microbiology* 4th Edition, SChand Publications.
3. Dr. O P. Pandey, D N Bajpai and Dr. S. Giri. (2013). *Practical Chemistry* (revised edition) S chand Publishing.
4. Karen T and William T. (2019). *Basic Chemistry* 5th Edition. Publication- Pearson Education.
5. Malcolm Campbell A and Christopher J P. (2016). *Cell Structure and Functions*, Momentum Press.

6. Pelczar M.J, Chan E.C.S. Krieg N.R.(2023). *Microbiology* 5th Edition Tata Mcgraw Hill

Semester-II

2.1 Major (Core)

Course Title	**Basics of Nutrition and Dietetics II (Th)**
Course Credits	2
Course Outcomes	After going through the course, learners will be able to
	1. Evaluate the importance of balanced diet in human health. 2. Evaluate the impact of physiological changes on nutrient requirements. 3. Examine nutritional concerns and principles of planning for different age groups. 4. Apply principles of nutrition to plan diets for various age groups and physiological states. 5. Analyze therapeutic diets for common clinical conditions.
Module 1 (Credit 1) - Life cycle & Diet	
Learning Outcomes	After learning the module, learners will be able to
	1. Analyze physiological changes, special needs and health concerns of people at different stages of life. 2. Evaluate the role of modified diets in specific conditions.
Content Outline	• Balanced Diet • Diet during the Normal Life Cycle • Infancy to Adolescents • Pregnancy and Lactation • Adult and Geriatric • Introduction to Diet Therapy • Modification of normal diet to therapeutic diet • Routine Hospital Diets • Introduction to pre and post operative diets
Module 2 (Credit 1) - Diet Therapy	
Learning Outcomes	After learning the module, learners will be able to
	1. Evaluate the role of diet in health and disease. 2. Associate physiological changes in the specific diseases and health conditions.

Content Outline	• Diet Therapy for Infection and Fever • Diet Therapy for Weight Management (Underweight and Overweight) • Diet Therapy for GI disturbance (Diarrhea and Constipation) • Diet Therapy for Anemia

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE):

1. Visiting hospital and evaluating Routine Hospital Diets
2. Assignment on physiological changes in GI disturbances.

References:

1. Agarwal, A. and Udipi, S. (2021) Textbook of Hunam Nutrition (2nd ed). Jaypee Brothers Medical Publishers.
2. Joshi, Shubhangini. A. (2021). Nutrition and Dietetics (5th ed). McGraw Hill.
3. Khanna, K., Gupta, S., Passi,S., Seth,R.,Mahana, R. and Puri,S. (2016) Textbook of Nutrition and Dietetics (2nd ed.). Elite Publishing House.
4. Sharma, Avantina.(2017). Principles Of Therapeutic Nutrition and Dietetics. CBS.
5. Srilaxmi, B. (2023). Dietetics (9th ed.). New Age International Private Limited.
6. Srilaxmi, B. (2023). Nutrition Science (8th ed.). New Age International Private Limited.

2.6 Open Elective Courses/ Generic (OEC)

Course Title	**Culinary Science (Pr)**
Course Credits	4
Course Outcomes	After going through the course, learners will be able to
	1. Examine the nature and composition of food. 2. Explore role of different ingredients in food preparations. 3. Create acceptable food products with maximum retention of nutrients. 4. Develop culinary skills using various methods of cooking. 5. Evaluate and apply food safety, hygiene, and standardization practices in culinary operations.
Module 1 (Credit 1) - Introduction to Culinary Science	
Learning Outcomes	After learning the module, learners will be able to
	1. Apply basic culinary skills required in the kitchen. 2. Prepare soups, salads, beverages and starters
Content Outline	• Terms • Weights and Measures • Cooking Methods • Kitchen equipment, tools • Preliminary preparations • Safety and Hygiene practices in the kitchen • Role of Ingredients and Cooking Methods • Soups • Beverages • Salads • Starters
Module 2 (Credit 1) - Indian Cuisine	
Learning Outcomes	After learning the module, learners will be able to
	1. Prepare popular Indian regional dishes. 2. Demonstrate various traditional cooking methods and recipes. 3. Develop a better understanding of the various Indian cooking methods.
Content Outline	• Role of Ingredients and Cooking Methods • Snacks • Rice Preparations • Pulses and Legumes • Indian Breads • Indian Traditional Sweets

Module 3 (Credit 1) - Bakery and Desserts	
Learning Outcomes	After learning the module, learners will be able to
	1. Describe methods and techniques used in the preparation of bakery, pastry and confectionary 2. Describe and demonstrate the basic baking science, principles, ratios and techniques.
Content Outline	● Role of Ingredients and Cooking Methods ● Cakes ● Biscuits and Cookies ● Tarts and Pies ● Buns and Breads ● Soufflés, Pudding, Cheesecakes
Module 4 (Credit 1) - International Cuisine	
Learning Outcomes	After learning the module, learners will be able to
	1. Assess international cuisines by exploring traditional and indigenous ingredients, flavor components and cooking techniques. 2. Describe and demonstrate the international cuisine.
Content Outline	● Role of Ingredients and Cooking Methods ● Oriental ● Italian ● Lebanese ● Mexican ● Thai

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE):

1. Continuous assessment of practical performed by the student.
2. Review of recipes and project on food ingredients and preparation.

References:

1. Arora K. (2008). *Theory of Catering*, Frank Brothers
2. Jeremy MacVeigh, (2008). *International Cuisine Hardcover*, International Culinary Schools at the Art Institutes, Delmar Cengage Learning
3. Margaret, McWilliams (2015). *Food around the world*, Pearson
4. Parvinder S. Bali, (2012). *International Cuisine and Food Production Management* Paperback
5. Patricia Heyman, (2016). *International Cooking: A Culinary Journey* 3rd Edition, Pearson.

6. Singh V., Joshi A. (2019). *Art and Science of Culinary*, Notion Press.

7. Thangam Philip (2010). *Modern Cookery for Teaching & Trade* Vol. I 6th Edition. Orient Longman

2.7 Skill Enhancement Courses (SEC)

Course Title	**Human Physiology (Pr)**
Course Credits	2
Course Outcomes	After going through the course, learners will be able to
	1. Recall and explain the basic concepts of human physiology. 2. Illustrate the relationship between physiological systems and nutrition. 3. Describe and demonstrate the functioning of major physiological systems. 4. Perform basic physiological measurements and interpret the findings (e.g., blood pressure, blood group, hemoglobin). 5. Apply basic first-aid knowledge and use relevant tools and apps for health monitoring.
Module 1 (Credit 1) -Introduction to Human Physiology and Basic Tests	
Learning Outcomes	After learning the module, learners will be able to
	1. Identify and name the major bones of the human skeleton. 2. Perform simple clinical tests like estimation of haemoglobin and blood group and blood pressure etc and interpret the reports
Content Outline	1. Study of human skeleton and identification of bones. 2. Estimation of haemoglobin and understanding and interpretation of hemogram 3. Types of blood groups and Estimation of blood groups 4. Demonstrations of peripheral blood smear. Importance of complete blood count. 5. Measurement of pulse rate and blood pressure and interpretation. 6. Different apps and instruments 7. Measurement of blood glucose using glucometer and its interpretation and discussion 8. Discussion of normal components of urine. Test for abnormal components like sugar, albumin and acetone and discussion on diseases in which they are found.
Module 2 (Credit 1) - Understanding Body Systems and First Aid Basics	
Learning Outcomes	After learning the module, learners will be able to

	1. Administer first aid for common emergency situations. 2. Carry out the basic principles of home nursing.
Content Outline	1. FIRST AID a) Definition, aims, qualities of first aider, contents of first aid box. b) Different types of bandages and bandaging techniques. 2. WOUNDS a) Classification, dressing and management of hemorrhage- basic principles and discussion about bleeding from various parts of body. 3. FRACTURE a) Types, symptoms, management. b) Sprain and dislocation ***First Aid for*** - foreign bodies in eye, ear, nose, skin. ***First Aid for -*** fainting, burns, heat stroke, asthma, convulsions, electric shock and heart attack. ***First Aid for -*** common poisoning, dog bite, snake bite, bee-sting and scorpion bite. 4. BASIC PRINCIPLES OF HOME NURSING- a) Measuring body temperature, steam inhalation, body sponging, taking care of bed ridden patient and enema. b) Cardio pulmonary resuscitation

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE):

1. Individual measurement of body temperature, blood pressure, determination of blood group
2. Correlating measurements with health conditions.
3. Practicing first aid processes.

References:

1. First Aid, St .John's Ambulance Association
2. Guyton, A.C., Hall J.E. (2020). *Textbook of Medical Physiology*, Prism Books Pvt Ltd., Bangalore.
3. Hutchison (2017). *Clinical Methods: An Integrated Approach to Clinical Practice*, Elsevier.