

UNIVERSITY OF MYSORE
Bstd. 1916

Vishwavidyalaya Karyasoudha
Crawford Hall, Mysuru- 570 005

No.AC2(S)/35/2025-26

Dated: 30.09.2025

Notification

Sub:- Syllabus and Scheme of Examinations for "Clinical Nutrition and Dietetics" under B.Sc. Programme (I & II Semester) from the Academic year 2025-26.

Ref:-1. Decision of Board of Studies in Home Science (UG) meeting held on 30.09.2025.

2. Approval of the hon'ble Vice-chancellor dated 30.09.2025.

The Board of Studies in Home Science (UG) which met on 30.09.2025 has resolved to recommend the introduction of the Syllabus and Scheme of Examinations of "Clinical Nutrition and Dietetics" under B.Sc. Programme (I & II Semester) Home Science (UG) from the Academic year 2025-26.

Pending approval of the Faculty of Science & Technology and Academic Council meetings the above said Syllabus and Scheme of Examinations are hereby notified.

The Syllabus and Scheme of Examinations content may be downloaded from the University website www.uni-mysore.ac.in.


Registrar
Registrar
University of Mysore
Mysore

To:

1. All the Principals of affiliated Colleges of University of Mysore, Mysore.
2. The Registrar (Evaluation), University of Mysore, Mysuru.
3. The Chairman, BOS/DOS in Home Science, Yuvaraja's College, Mysore.
4. The Dean, Faculty of Science & Technology, DOS in Botany, MGM.
5. The Director, PMEB, Manasagangothri, Mysore.
6. Director, College Development Council, Manasagangothri, Mysore.
7. The Director, ICD, MGM-Request to publish this Notification along with Syllabus in University website.
8. The Deputy Registrar/Assistant Registrar/Superintendent, Administrative Branch and Examination Branch, University of Mysore, Mysuru.
9. The PA to Vice-Chancellor/ Registrar/ Registrar (Evaluation), University of Mysore, Mysuru.
10. Office Copy.

UNIVERSITY OF MYSORE

Bachelor's Degree Programme (State Education Policy)
"Clinical Nutrition and Dietetics" one of the optional for the 1st
and 2nd Semesters

Semester	Course No.	Course category	Theory /Practicals	Credits	Title of the paper	Marks	
						SA	IA
I	CND	DSC	Theory	3	Basics of Human Physiology	80	20
			Practicals	2	Basics of Human Physiology	40	10
II	CND	DSC	Theory	3	Principles of Human Nutrition	80	20
			Practicals	2	Principles of Human Nutrition	40	10



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**SYLLABUS: B Sc. CLINICAL NUTRITION AND DIETETICS
SEMESTER –I**

DSC-A: Basics of Human Physiology

Credits: 5 (L:T:P = 3:0:2) (Theory +Practicals)

HOURS : 48 + 64 = 112Hrs

Objectives:

1. To enable the students to understand the structure and functions of various organs of the body.
2. To understand endocrine and reproductive physiology.
3. To comprehend the Physiology and digestion and Excretion.
4. To explain the physiology of respiration and sensory organs.
5. To develop practical skills in physiology.

Basics of Human Physiology -Theory

Credits : 3:0:0=03 Credits & 3Hrs per week

Total 48Hrs

CONTENTS

UNIT1-Introduction to Human Body

10Hrs

-
- A. Definition of Anatomy and Physiology, cell organelles and tissues.
 - B. Skeletal system –Functions ,types of bones, growth of long bone .
 - C. Sense Organs-Tongue, Nose, Ear, Eye and Skin-Structure and function
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Unit-2-Digestive System and Circulatory System

14Hrs

Digestive System

- A. Principal organs of the Digestive system: Structure and function - Mouth (Tongue, Teeth, Oesophagus, Stomach, Small Intestine, Large Intestine
- B. Principal accessory Organs: Structure and Function-Salivary glands, Liver, Gall bladder, Pancreas
- C. Process of digestion and absorption.

Circulatory System–

- A. Blood - composition, RBC, WBC, Platelets – structure, formation and function, coagulation of blood, blood groups and Rh factor.
- B. Heart – structure and function, circulation of blood and blood pressure

UNIT :3 Respiratory system and Excretory System.

8 Hrs

Respiratory system-

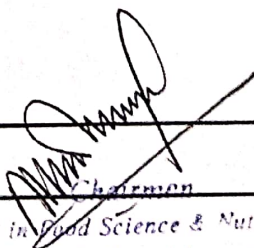
- A. Structure of lungs
- B. Gaseous exchange
- C. Tissue respiration

Excretory System

- A. Structure and functions of Kidney and Nephron.
- B. Composition of urine
- C. Formation of urine, Glomerular filtration rate.

Unit 4– Reproductive System, Nervous system and Endocrine System

16Hrs


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Reproductive System

- A. Male reproductive system – Structure and functions, Female reproductive system – Structure and functions, Menstrual cycle, Puberty, Menopause, Mammary gland
B. Nervous system (in brief)

Endocrine System - Structure and functions – hypo and hypersecretory effect of pituitary, thyroid, parathyroid and the adrenal glands, Islets of Langerhan

Course Outcomes: At The end of the course the student should be able to

1. Gain the basic Knowledge of human anatomy and physiology
2. Define the main structures composing human body
3. Explain Structure and functions of cells, tissues and organs, systems of the human body
4. Relatively structures and functions of tissue
5. Provides excellent preparation for careers in the health professions and / or biomedical research.

Pedagogy: Regular Lecturers, Demonstrations, Exercises on observation and follow up with group Discussions, case studies, ICT enabled teaching and learning experience in terms of video Lessons and documentary films shows.

Basics Of Human Physiology–Practicals

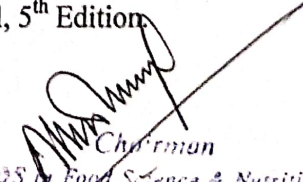
Credits : 0:0:2=04Hrs per week 4hrs/week

Total - 64Hrs

1. Identification of different type of tissue slides
2. Bleeding and clotting time (both methods)
3. Blood groups and Rh factor
4. Estimation of hemoglobin (Sahli's method)
5. Enumeration of RBC, WBC, Differential count of WBC
6. Determination of blood pressure (under various positions)– demonstration
7. Spotters-Instruments, reagents and Cellular component of Blood
8. Visit to anatomy / pathology units if permission is granted.

References:

1. Lehninger, *Principles of Biochemistry*, W.H. Freeman and Co Ltd, 8th Edition. 2021
2. CC. Chatterjee, *Human Physiology*, CBS publishers, 13th edition. 2020
3. H.S. Ravikumar Patil et al., *A textbook of Human Physiology*, Wiley, 2020
4. Guyton and Hall, *Textbook of Medical Physiology*, Elsevier, 14th Edition. 2020
5. K Sambulingam, *Essentials of Medical physiology*, Jaypee Publishers 3rd edition. 2019
6. Barrett et al., *Gannong's Review of Medical Physiology*, McGraw Hill, 26th Edition, 2019
7. Cindy L. Stanfield, *Principles of Human Physiology*, Pearson publishers, 6th Edition. 2017
8. Copper, Geoffrey, M, *The Cell- A Molecular Approach*, Oxford University Press, 6th Edition. 2013
9. Gary G Mathews, *Cellular Physiology of Nerve and Muscle*, Wiley Balckwell, 4th Edition. 2002
10. Thomas Devlin, *Textbook of Biochemistry with Clinical correlations*, John Wiley and Sons, 1999
11. A.J. Vander, et al., *Human Physiology: The mechanisms of Body functions*, McGraw-Hill, 5th Edition 1990


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SEMESTER -II
DSC - B Principles of Human Nutrition
Credits: 5 (L:T:P = 3:0:2) (Theory +Practicals)
HOURS : 48 + 64 = 112Hrs

Objectives:-

1. To understand the basic principles and importance of nutrition in human health.
2. To study nutrients – their sources, functions, requirements, and deficiencies.
3. To learn digestion, absorption, metabolism, and energy balance.
4. To understand balanced diets and nutritional needs at different stages of life.
5. To gain awareness of common nutritional problems and promote healthy eating practices.

Principles of Human Nutrition -Theory

Credits : 3:0:0=03 Credits & 3Hrs per week

Total 48Hrs

Unit 1: Definition of food, nutrition, health ;

12Hrs

- A. Introduction: Food and its relation to Health, objectives in the study of Nutrition
- B. RDA for various nutrients, age, gender, Physiological state
- C. Energy: Definition, forms of energy, units of measurements, physiological fuel value of energy, determination of energy value of foods
- D. BMR - Definition, Determination and factors affecting energy requirements, diet induced thermogenesis (SDA)
- E. Functions, requirements, sources of water, Electrolytes.

Unit 2: Macronutrients

14Hrs

- A. Protein — Classification, functions, digestion and absorption (in brief), RDA, sources and deficiencies.
- B. Carbohydrate - Classification, functions, digestion and absorption (in brief) RDA, sources and deficiencies. Dietary fiber — types and functions.
- C: Fat — Classification, functions, digestion. and absorption (in brief), RDA, sources and deficiencies.

Unit 3: Micronutrient — Vitamins

12Hrs

- A. Fat soluble vitamins (A, D, E, K) — function, RDA, sources, deficiency and excess
- B. Water soluble vitamins: Thiamin, Riboflavin, Niacin, B6, B12, Folic acid, Biotin and Vitamin C: functions, RDA, food sources, deficiencies and excess

Unit 4: Micro nutrient, Minerals

10Hrs

- A. Macro minerals - Calcium, Phosphorous and Magnesium, Sodium. Chlorine: Functions, absorption, RDA, sources and deficiencies.
- B. Micro minerals ~ Iron, Zinc, Fluorine and Iodine: Functions, absorption, RDA, sources and deficiencies.



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Course Outcomes:-

1. Explain the principles of human nutrition and the role of nutrients in health.
2. Identify and classify nutrients, their sources, functions, and deficiency disorders.
3. Understand the processes of digestion, absorption, metabolism, and energy balance.
4. Evaluate dietary requirements and plan balanced diets for different age groups and conditions.
5. Analyze common nutritional problems in India and suggest preventive measures.
6. Apply nutrition knowledge to promote healthy eating and lifestyle practices.

Pedagogy (Teaching–Learning Methods)

1. Lectures & Discussions – To explain basic concepts, nutrients, and their role in health.
2. Visual Aids – Use of charts, models, PowerPoint, and videos to illustrate digestion, metabolism, and food sources.
3. Classroom Activities – Nutrient classification exercises, quiz, and group discussions on balanced diet.
4. Practical Sessions – Simple dietary assessment, calculation of BMI, energy needs, and meal planning.

Principles Of Human Nutrition–Practicals

Credits : 0:0:2=04Hrs per week 4hrs/week

Total - 64Hrs

1. Food groups: calculation of mean energy, carbohydrates, protein, fat and dietary fiber content of foods using ICMR Tables. Preparation of a table for all the food groups and identification of their role to Indian diet.
2. Standardization of household measures and hand measures- dry and liquid measures.
3. Identification and preparation of macro and micro nutrient dense recipes and calculation of nutrient contents for the same.
4. Determination of edible portions of fruits and vegetables as purchased from the market. Calculation of percent edible portion and its nutrient content.

References:

1. Mudambi S R and Rajagopal MV, *Fundamentals of Foods, nutrition & Diettherapy*, New Age International Publishers, 6th Edition. 2020
2. Bamji, M.S, *Textbook of Human Nutrition*, Oxford & IBH Publishing Co Pvt. Ltd, 4th Edition. 2019
3. Srilakshmi B, *Dietetics*, New Age International Publishers, 8th Edition. 2019
4. Swaminathan, M, *Hand book of Food and Nutrition*, The Bangalore Press, 5th Edition. 2018
5. Srilakshmi B, *Nutrition Science*, New Age International Publishers, 6th Edition. 2017
6. Longvah T Anathan R, Bhaskarachary, and Venkaiahk, *Indian food composition table*, NIN.ICMR, 2nd Edition. 2017
7. Gibney M.J, *Nutrition and Metabolism*, Wiley-Blackwell, 2003
8. Carolyn D. Berdanier, *Advanced Nutrition, Macronutrients*, CRC press, 2nd Edition 2000
9. Emma S. Weigley, *Robinson's Basic Nutrition and Diet Therapy*, Pearson publication, 1st Edition. 1996

Assessment Pattern

Theory-10+10+80=100	Practical- 5+5+40=50
Internal assessment(20=10+10)	Internal assessment(10=5+5)
C1:Test (10)	C1:Record/Report/Assignment(5) C2:
C2:Seminar/Assignment(10)	Practical test (5)
Semester End Examination	Semester End Examination- 40Marks
C3: SEE -80Marks	C3:PracticalProper(Record/Report+Viva+ Performance)

Theory Question Paper Pattern- 80Marks

Part- A

(6X2=12)

Answer all the questions:

Question from 1 to 6

Part-B

(6X3=18)

Answer any Six of the following questions:

Question from 7 to 14

Part-C

(4X5=20)

Answer any Four of the following questions

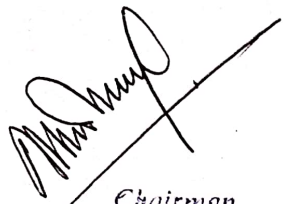
Question from 15 to 20

Part-D

(3X10=30)

Answer Three of the following questions:

Question from 21 to 25


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