

S.M.PATEL COLLEGE OF HOME SCIENCE
(AN AUTONOMOUS INSTITUTE AFFILIATED WITH SARDAR PATEL UNIVERSITY)

Post Graduate Programme (Self-Finance)

Course Structure with effect from: 2024-2025 (NEP-2020)

M.Sc. (Home Science) Semester: I

M.Sc In Public Health and Nutrition

Sr. No.	Core/ Elective	Course No	Title	T/ P	Credits Per Week	Contact hrs/ week	Exam Duration in hrs	Marks		
								Internal	External	Total
Core Course										
1	C	PHA01CPHN01	Concept and Principles of Public Health Nutrition	T	4	4	3	50	50	100
2	C	PHA01CPHN02	Nutritional Epidemiology	T	4	4	3	50	50	100
3	C	PHA01CPHN03	Nutritional Assessment and Techniques	T	4	4	3	50	50	100
4	C	PHA01CPHN04	Nutritional Assessment and Techniques	P	2	4	2	25	25	50
5	C	PHA01CPHN05	Community Nutrition	T	2	2	01:30	25	25	50
6	C	PHA01CPHN06	Community Nutrition	P	2	4	2	25	25	50
Elective Course										
7	E	PHA01EPHN01	Sustainable Food Security	T	2	2	01:30	25	25	50
8	E	PHA01ERMD01	Entrepreneurship Management	T	2	2	01:30	25	25	50
Total					20	24	13	135	315	450

Note : 1) : C- Core course, E- Elective course



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M.Sc. (Home Science) Semester: I



Post-Graduation in Public Health and Nutrition (M.Sc.-H.Sc.) Semester (I)

Course Code	PHA01CPHN01	Title of the Course	Concept and Principles of Public Health Nutrition (Theory)
Total Credits of the Course	4	Hours per Week	4

Course Objectives	<ol style="list-style-type: none"> To learn national nutritional problems, national and international contributions towards nutrition improvement in India. To educate students about global nutrition issues. To be familiar with various approaches to public health nutrition programmes and policies.
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Unit	Course Content	Weightage* (%)
1.	Public Health Nutrition and Health Care System – An Overview Concept, Principles and importance of public health nutrition Current public health issues and problems Levels of health care and Health care system in India Role of public nutritionist in national development Health - definition, dimensions, determinants, indicators Community health care	15
2.	Nutrition for Global Developmental Priority Understanding the dual burden of malnutrition Global burden of death and disease United Nations (UN) Decade of Action on Nutrition (2016 - 2025) Nutrition at centre stage of Sustainable Development Goals (SDGs), 12 of the 17 Goals require good nutrition to be met – an overview	20
3.	Assessment of nutritional status in Community settings Methods of nutritional assessment -ABCD technique, Dietary assessment – family diet survey, Assessment of dietary intake of individuals, qualitative diet surveys, institutional diet surveys, food balance sheet.	15
4.	Approaches for Improving Nutrition and Health Status of the Community (a) Health based interventions including immunization, provision of safe drinking water/ sanitation, prevention and management of diarrhoeal diseases. Other health services such as de-worming, pharmaceutical supplements (IFA, VAS etc) (b) Food based interventions including food fortification, dietary	25

	<p>diversification, supplementary feeding and biotechnological approaches.</p> <p>(c) Education based interventions including growth monitoring and promotion (GMP), health / nutrition related social and behaviour change communication.</p>	
5.	<p>Role of national and International Organizations to combat malnutrition</p> <p>International organizations concerned with food and nutrition</p> <p>(a) Food and Agriculture Organisation (FAO)</p> <p>(b) World Health Organisation (WHO)</p> <p>(c) United Nations Children Fund (UNICEF)</p> <p>(d) Co-operative for Assistance and relief everywhere (CARE)</p> <p>(e) Action for Food Production (AFPRO)</p> <p>(f) Child Welfare Services (CWS)</p> <p>National organizations concerned with Food and Nutrition-</p> <p>(a) Indian Council of Medical Research (ICMR)</p> <p>(b) Indian Council for Agricultural Research (ICAR)</p> <p>(c) Central Health Education Bureau (CHEB)</p> <p>(d) Central Social Welfare Board (CSWB)</p> <p>(e) State Social Welfare Board (SSWB).</p>	25

Teaching-Learning Methodology	Lecture, Questions-Answer, Discussion, Brainstorming, Observational method, Use of ICT
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per R.AUG.HSC. -4)	25%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance	25%
3.	Semester End Examination (As per R.AUG.HSC. -7)	50%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Understand the concept and current concerns of Public Health Nutrition.
2.	Comprehend the National Health Care Delivery System.
3.	Get exposed to sustainable development goals.
4.	Understand the causes and consequences of nutritional problems in the community.
5.	Orient students towards concept of food and nutrition security and critical appraisal of the current scenario.

References	
Sr. No	References
1	Gulani, K.K(2005). <i>Community Health Nursing</i> . 1st Edition. Kumar Publishing House. New Delhi. Pp – 662 to 664.
2	Beaton, G. H and Bengoa, J. M. (Eds) (1996) <i>Nutrition in Preventive Medicine</i> , WHO.
3	Gibney M.J., Margetts, B.M., Kearney, J. M. Arab, I. (Eds) (2004) <i>Public Health Nutrition</i> , NS Blackwell Publishing.
4	Gopalan, C. (Ed) (1987) <i>Combating Under nutrition – Basic Issues and Practical Approaches</i> , Nutrition Foundation of India.
5	Kaufman, M. (2007) <i>Nutrition in promoting the public health strategies, principles and practice</i> , Jones and Bartlett Publishers.
6	WHO. United Nations Decade of Action on Nutrition. http://www.who.int/nutrition/decade-of-action/en/
7	Global targets 2025 http://www.who.int/nutrition/global-target-2025

On-line resources to be used if available as reference material
On-line Resources
Relevant entries on Wikipedia and Encyclopaedia Britannica



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M.Sc. (Home Science) Semester: I

Post-Graduation in Public Health and Nutrition
(M.Sc.-H.Sc.) Semester (I)

Course Code	PHA01CPHN02	Title of the Course	Theory- Nutritional Epidemiology
Total Credits of the Course	04	Hours per Week	04

Course Objectives	<ol style="list-style-type: none"> 1. To understand the concept of health from the individual and community perceptive. 2. To know the importance of epidemiology and demography in health. 3. To know factors affecting health and nutritional status of individuals and community. 4. Gain insight into the national nutritional problems and their implications.
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Unit	Description	Weightage* (%)
1.	<p>Health, Public health, demography and Nutritional Epidemiology</p> <p>(a) Health and dimensions of health and Public health.</p> <p>(b) Demography and its applications</p> <p>(a) Epidemiology – Definition, aim, Introduction to Epidemiology and Branches of Epidemiology: Types of Epidemiology</p> <p>(c) Study of the epidemiologic approach-time distribution, place, person & methods of epidemiology, Prevention and levels of prevention, vital statistics.</p>	20
2.	<p>Epidemiological studies and Screening for disease</p> <p>(a) Types of study- epidemiological studies, ecological studies, cross-sectional studies, cohort studies, case- control studies, experimental studies. Study design- sampling, study size and power Measurement of exposure and outcome, Measuring diet- disease (exposure-outcome) association and interpretation</p> <p>(b) Screening for disease</p> <p>Iceberg phenomenon of disease, Concept of screening, uses, Types- mass screening, High risk/ selective screening, multiphase screening; criteria for screening- based on disease and test to be applied.</p>	20
3.	<p>Community water and waste management.</p> <p>(a) Importance of water to the community etiology and effects of toxic agents, water borne infections agents, sources of water, safe drinking water/portability and test for portability.</p> <p>(b) Community waste and waste disposal-sewage disposal and treatment, solid waste and disposal, liquid waste disposal. (an over view)</p>	20
4.	<p>Community food protection.</p> <p>(a) Epidemiology of food borne diseases, modes of transmission, control measures and prevention.</p> <p>(b) Vector control, rodent control, modes of transmission, control measures and prevention.</p>	20

5.	<p>MDG/ SDG Goals & WHO Nutrition Targets Related to Public Health/Nutrition :</p> <p>(a) Sustainable Development Goals and its importance, Sustainable Development Goals in India</p> <p>(b) Millennium Development Goals</p> <p>(c) Impact of SDG & MDG</p> <p>(d) WHO Nutrition targets to be achieved by 2025</p> <p>(e) Institutional framework for implementing MDG/ SDG & Nutrition targets in India and the role of different stake holders</p> <p>(f) National & State progress on health & nutrition related goals & targets</p> <p>(g) Possible required/alternative strategies for accelerating achieving specific SDG's & Nutrition targets</p> <p>(h) National food security act : Poshan Abhiyaan (National Nutrition Mission)</p> <p>(i) Non Communicable Disease (NCD) targets</p>	20
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Teaching-Learning Methodology	<p>The course will be delivered through a combination of active learning strategies. These will include:</p> <p>Lecture, Group Discussion, Quizzes, Expert talk, Audio video aids and active classroom-based discussion</p>
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per R.AUG.HSC. -4)	25%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance	25%
3.	Semester End Examination (As per R.AUG.HSC. -7)	50%

Course Outcomes: Having completed this course, the learner will be able to	
Sr. No.	
1.	Demonstrate knowledge and understanding of the wider determinants of health and ill-health.
2.	Explores the key aspects of the dietary and nutritional causes of disease at the population level
3.	Demonstrate knowledge and understanding of the roles of people and agencies who undertake work in the promotion of public health.
4.	Identify and explain how various organizations contribute to carrying out public health's core functions, essential services, and assess the components of the public health infrastructure.

References	
Sr No	References
1.	Willett W. Nutritional Epidemiology, Oxford University Press. 2013.
2.	Park K. Textbook of Preventive and Social Medicine, Banarsidas Bhanut Publishers, Jabalpur. 2011.
3.	Gibney MJ, Magarets BM, Kearney JM and Lenore A. Public Health Nutrition, Blackwell Publishing Co, UK. 2004.
4.	Willett W. Nutritional Epidemiology, Oxford University Press. 2013.
5.	Sari Edelstein. Nutrition in Public Health. A Hand book for Developing programs and Services. Jones and Barlett Publishers, Canada. 2006.
6.	United Nations Millennium Developmental Goals, www.un.org millennium goals

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M.Sc. (Home Science) Semester: I

Post-Graduation in Public Health and Nutrition
(M.Sc.-H.Sc.) Semester (I)

Course Code	PHA01CPHN03	Title of the Course	Theory- Nutritional Assessment and Techniques
Total Credits of the Course	04	Hours per Week	04

Course Objectives	<ol style="list-style-type: none"> 1. Understand the concept of nutritional status and its relationship to health. 2. Learners will be able to interpret tests used for lipid profile and glycemic control. 3. Learners will be able to carry out and interpret the assessment of dietary/nutrient intakes. 4. Learners will be able to conduct assessment of physical activity and energy expenditure. 5. Know aims, objectives, methods used for assessment of nutritional status.
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Unit	Description	Weightage*(%)
1.	Assessment of Nutritional Status : (a) Nutritional status assessment and surveillance meaning, need, and importance (b) Measurement of weight and height (c) Assessment of nutritional status for adults, young and older children (d) Calculation of BMI and Interpretation Use of WHO reference standards Wasting, stunting, underweight, severe and moderate malnutrition, Thinness (e) Calculation of z-scores	20
2.	(a) Circumference Measurements: chest, head, mid arm. Waist, hip and ratios wherever applicable to children and adults (b) Body Composition <ol style="list-style-type: none"> i. Use of skinfold ii. Bioelectric impedance iii. Dual X-ray Absorptiometry (DEXA) iv. Calculation of body fat 	20
3..	Dietary intake assessment (a) Food frequency questionnaire (b) A 24 hour diet recall and record - Weighment method (c) Assessment of energy expenditure <ol style="list-style-type: none"> i. Indirect calorimetry - use of ergometer, treadmill, heart rate monitoring ii. Recording physical activities iii. Factorial estimation of energy expenditure: MET, PAL, Study of food labels- calculation of DV 	20

4.	Biomarkers of Metabolism - Methods and interpretation of following markers: (a) Fasting and Postprandial Blood Glucose estimation, OGTT, Glycosylated Haemoglobin (b) Glycemic index and glycemic load, Insulin index (c) Serum lipid levels	20
5.	(a) Direct Nutritional Assessment of Human groups- Clinical signs-need, importance, identifying signs of PEM, Vit A, Anemia, Iodine deficiency. (b) Interpretation of descriptive list of clinical signs. Nutrition Anthropometrics-need and importance, standards for references, techniques of measuring height, weight, head, chest and arm circumference, interpretation of these measurements and use of growth charts, Growth monitoring : steps and advantages (c) Biochemical tests Biophysical methods	20

Teaching-Learning Methodology	The course will be delivered through a combination of active learning strategies. These will include: Lecture, Group Discussion, Quizzes, Expert talk, Audio video aids and active classroom-based discussion
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per R.AUG.HSC. -4)	25%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance	25%
3.	Semester End Examination (As per R.AUG.HSC. -7)	50%

Course Outcomes: Having completed this course, the learner will be able to	
Sr. No.	
1.	Evaluate the different body composition analysis techniques for nutritional assessment
2.	Apply the correct methods for anthropometric measurements.

References	
Sr No	References
1.	Escott-Stump, S. (2008): Nutrition and Diagnosis Related Care, Williams and Wilkins Frisancho, A. R. (2008).
2.	Anthropometric standards: an interactive nutritional reference of body size and body composition for children and adults (p. 335).
3.	Jelliffe D.B.(1966): Assessment of nutritional status of the community, WHO
4.	Saln D R Lockwood R Scrimshaw N S (1981) Methods for the evaluation of the Impact and Nutrition Programme U N University.

5.	Gopaldas T and Seshadri S (1987) Nutrition monitoring and assessment, Oxford University press.
6.	Gopalan C. Nutritional and Health Care, Nutrition foundation of India, special publication series.
7.	Mason J B Habicht J P Tabatabai H Valverde V (1984): Nutritional Surveillance WHO.

On-line resources to be used if available as reference material
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Course Code	PHA01CPHN04	Title of the Course	Practical- Nutritional Assessment and Techniques
Total Credits of the Course	02	Hours per Week	04

Course Objectives	<ol style="list-style-type: none"> 1. Identify appropriate sampling methods, measurement 2. Understand the relationship between nutritional status and anthropometric measurements/ Health.
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Unit	Description	Weightage*(%)
1.	To assess the nutritional status by use of anthropometric measurements: Measurement of child's height and weight.	10
2.	Interpretation of data in weight for age, height for age, weight for height.	10
3..	Circumference measurements-head, chest, mid upper arm, waist-hip ratio. Measurements of fat using skin fold thickness.	10
4.	Clinical assessment of PEM, Vitamin A, Anemia, B complex vitamins	10
5.	Identification of Severe Acute Malnutrition (SAM) and Moderate Acute Malnutrition (MAM)	10
6.	Formulating tool, collection of Data, estimation of Intake by different dietary methods.	10
7.	Assessment of BMI for Adolescents	10
8.	Comparison with norms and interpretation of the nutritional assessment data and its significance-Weight for age, height for age, weight for height,	10
9.	Diet Chart preparation of a person suffering from	10
10.	Field visits for surveillance system used in nutrition and health programmes.	10

Teaching-Learning Methodology	The course will be delivered through a combination of active learning strategies. These will include: Lecture, Group Discussion, Quizzes, Expert talk, Audio video aids and active classroom-based discussion
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per R.AUG.HSC. -4)	25%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance	25%
3.	Semester End Examination (As per R.AUG.HSC. -7)	50%

Course Outcomes: Having completed this course, the learner will be able to	
Sr. No.	
1.	Evaluate the different body composition analysis techniques for nutritional assessment
2.	Apply the correct methods for anthropometric measurements.

References	
Sr No	References
1.	Escott-Stump, S. (2008): Nutrition and Diagnosis Related Care, Williams and Wilkins Frisancho, A. R. (2008).
2.	Anthropometric standards: an interactive nutritional reference of body size and body composition for children and adults (p. 335).
3.	Jelliffe D.B.(1966): Assessment of nutritional status of the community, WHO
4.	Saln D R Lockwood R Scrimshaw N S (1981) Methods for the evaluation of the Impact and Nutrition Programme U N University.
5.	Gopaldas T and Seshadri S (1987) Nutrition monitoring and assessment, Oxford University press.
6.	Gopalan C. Nutritional and Health Care, Nutrition foundation of India, special publication series.
7.	Mason J B Habicht J P Tabatabai H Valverde V (1984): Nutritional Surveillance WHO.
8.	WHO module on growth monitoring reference model https://www.who.int/tools/child-growth-standards

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M.Sc. (Home Science) Semester: I



Post-Graduation in Public Health and Nutrition (M.Sc.-H.Sc.) Semester (I)

Course Code	PHA01CPHN05	Title of the Course	Community Nutrition (Theory)
Total Credits of the Course	4	Hours per Week	4

Course Objectives	<ol style="list-style-type: none"> 1. This course aims to equip students with a comprehensive understanding of public health nutrition 2. To explore contemporary issues in public health nutrition and strategies to enhance community nutritional well-being.
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Unit	Course Content	Weightage* (%)
1.	<p>Undernutrition</p> <ol style="list-style-type: none"> (a) Types and Causes <ol style="list-style-type: none"> i. Stunting, wasting, and micronutrient deficiencies. ii. Inadequate dietary intake, poor absorption, and socioeconomic factors as causes. (b) Consequences and Metabolic Alterations <ol style="list-style-type: none"> i. Physical and cognitive impacts across life stages. ii. Impaired nutrient utilization and hormonal changes. (c) Role of Nutrients in SAM <ol style="list-style-type: none"> i. Role of proteins, carbohydrates, vitamins, and minerals in SAM recovery. (d) Undernutrition, Infection, and Immunity <ol style="list-style-type: none"> i. Link between Undernutrition and infection susceptibility. ii. Discuss how malnutrition weakens immunity, increasing infection risks. (e) Starvation vs. Undernutrition <ol style="list-style-type: none"> i. Differentiate physiological effects and causes. ii. Highlight starvation's focus on fasting versus Undernutrition's broader dietary deficiencies. 	20
2.	<p>Micronutrient Malnutrition: Vitamin A, Iron, and Iodine</p> <ol style="list-style-type: none"> (a) Role and Management of Micronutrients (b) Micronutrient Functions in Health and Disease Biological Basis and Management of Deficiencies Regimen and Frequency of Supplementation Carrier Salts and Bioavailability Concerns and Efficacy Balance (c) Fortification of Foods with Micronutrients Vehicles, Form, Dose, and Bioavailability Concerns of Toxicity from Multiple Fortified Foods 	20

	<p>(d) Impact of Micronutrients on Health Vitamin A: Growth, Infection, Morbidity, and Immunity Synergy with Iron Advantages of Bundling with Deworming Supplementation in Pregnancy: Recommendations and Caution</p> <p>(e) Iron: Physical Work Capacity and Cognition</p> <p>(f) Iodine: Growth, Cognition, and Thyroid Disorders Deficiency, Assessment, and Indicators</p> <p>(g) Dietary Approaches to Tackle Micronutrient Malnutrition</p>	
3.	<p>Micronutrients: Zinc, Sodium, Potassium, and Others</p> <p>1. Zinc, Sodium, and Potassium</p> <ul style="list-style-type: none"> • Role in Growth, Diarrhea, and Electrolyte Balance • Deficiency, Assessment, and Recommended Dosages • Hypertension and Population Strategies • Low Osmomolar ORS Composition <p>2. Other Micronutrient Deficiencies</p> <ul style="list-style-type: none"> • Ascorbic Acid and B Complex Vitamins <ul style="list-style-type: none"> • Functions, Interrelationships, and Deficiencies • Energy and Protein Metabolism • Types of Anemia and Neural Tube Defects • Vitamin D and Calcium <ul style="list-style-type: none"> • Bone Health and Management Guidelines • Approaches to Combat Deficiency • Interrelationship and Assessment • Toxicity and Recommended Intake Levels 	20
4.	<p>(a) Current National policies in India focused on improving nutritional and health status (National Nutrition Policy & Gujarat state Nutrition Policy and national/state plan of action)</p> <p>(b) Current National Nutrition Programs – Objectives Target Groups, Monitoring System, Mode of Implementation, Administrative Setup, Coverage, Compliance, Newer Initiatives</p> <p>i. Integrated Child Development Services Scheme Universalization of ICDS</p> <p>ii. Mid-Day/ Nutritious meal Program</p> <p>iii. National Nutritional Anemia Control Program, National Iron Plus initiative</p> <p>iv. National Program to control Iodine deficiency disorders</p> <p>v. Vitamin A prophylaxis programmes</p> <p>vi. Diarrhoeal Disease Control Programme</p> <p>vii. Janani Suraksha Yojana/ IGMSY/ Chiranjeevi Yojana</p>	20
5.	Non Communicable Diseases	20

Teaching-Learning Methodology	Lecture, Questions-Answer, Discussion, Brainstorming, Observational method, Use of ICT
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per R.AUG.HSC. -4)	25%

2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance	25%
3.	Semester End Examination (As per R.AUG.HSC. -7)	50%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Understand nutrition problems existing in the community. Gain insight into the principles and contemporary challenges of Public Health Nutrition.
2.	Acquire a thorough understanding of the National Health Care Delivery System.
3.	Explore the interplay between population dynamics, economic factors, and malnutrition, and their implications for national development.
4.	Examine the root causes and effects of nutritional issues within communities
5.	Develop familiarity with the concept and importance of food and nutrition security.

References	
Sr. No	References
1	Jelliffe, D. B., & World Health Organization. (1966). <i>The assessment of the nutritional status of the community (with special reference to field surveys in developing regions of the world)</i> . World Health Organization.
2	Saln, D. R., Lockwood, R., & Scrimshaw, N. S. (1981) <i>Methods for the evaluation of the Impact and Nutrition Programme</i> U N University.
3	Rutchie, J. A. S. (1967): <i>learning better nutrition</i> , FAO Rome.
4	Gopalan, S., Ganesh, K., & Patnaik, R. (1998). Nutrition Foundation of India. <i>Special Publication Series</i> , (5), 155.
5	Beghan, I. M. & Dajardan, B. (1988) <i>A guide to Nutritional Status Assessment</i> WHO Geneva.,
6	Gopaldas, T., & Seshadri, S. (1987). <i>Nutrition, monitoring, and assessment</i> . Oxford University Press.
7	Mason, J. B., Habicht, J. P., Tabatabai, H., & Valverde, V. (1984). <i>Nutritional surveillance</i> . WHO.

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M.Sc. (Home Science) Semester: I

Post-Graduation in Public Health and Nutrition
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Course Code	PHA01CPHN06	Title of the Course	Community Nutrition (Practical)
Total Credits of the Course	2	Hours per Week	4

Course Objectives	<ol style="list-style-type: none"> 1. This course aims to equip students with a comprehensive understanding of public health nutrition 2. To explore contemporary issues in public health nutrition and strategies to enhance community nutritional well-being.
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Unit	Course Content	Weightage* (%)
1	Planning low cost protein rich diets for the under privileged section	10
2	Planning low cost energy rich diets for the affected community	10
3	Planning low cost vitamin A rich diets for the affected community	10
4	Studying the Ongoing programme of ICDS, evaluating and report writing	10
5	Studying the Ongoing Eat Right Movement, evaluating and report writing	10
6	Studying the Ongoing National Iron Plus Initiative programme, evaluating and report writing	10
7	Studying the Ongoing Vitamin A prophylaxis programme, evaluating and report writing	10
8	Studying the Ongoing programme of Anemia Mukh Bharat, evaluating and report writing	10
9	Studying the Ongoing Diarrhoeal Disease Control Programme, evaluating and report writing	10
10	Studying the Ongoing Mid Day Meal Programme, evaluating and report writing	10

Teaching-Learning Methodology	Lecture, Questions-Answer, Discussion, Brainstorming, Observational method, Use of ICT
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per R.AUG.HSC. -4)	25%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance	25%
3.	Semester End Examination (As per R.AUG.HSC. -7)	50%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Understand nutrition problems existing in the community. Gain insight into the principles and contemporary challenges of Public Health Nutrition.
2.	Acquire a thorough understanding of the National Health Care Delivery System.
3.	Explore the interplay between population dynamics, economic factors, and malnutrition, and their implications for national development.
4.	Examine the root causes and effects of nutritional issues within communities
5.	Develop familiarity with the concept and importance of food and nutrition security.

References	
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1	Jelliffe, D. B., & World Health Organization. (1966). <i>The assessment of the nutritional status of the community (with special reference to field surveys in developing regions of the world)</i> . World Health Organization.
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5	Beghan, I. M. & Dajardan, B. (1988) <i>A guide to Nutritional Status Assessment</i> WHO Geneva.,
6	Gopaldas, T., & Seshadri, S. (1987). <i>Nutrition, monitoring, and assessment</i> . Oxford University Press.
7	Mason, J. B., Habicht, J. P., Tabatabai, H., & Valverde, V. (1984). <i>Nutritional surveillance</i> . WHO.

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(AN AUTONOMOUS INSTITUTE AFFILIATED WITH SARDAR PATEL UNIVERSITY)

Post Graduate Programme (Self-Finance)

Course Structure with effect from: 2024-2025 (NEP-2020)

M.Sc. (Home Science) Semester: I



Post-Graduation in Public Health and Nutrition (M.Sc.-H.Sc.) Semester (I)

Course Code	PHA01EPHN01	Title of the Course	Theory - Sustainable Food Security
Total Credits of the Course	2	Hours per Week	2

Course Objectives	<ol style="list-style-type: none"> 1. The students will first gain an understanding of the food security and its interrelationship with the environment and climate through its linkages with arable agricultural systems. 2. The students will then learn how global climate change, environmental pollution and natural resources management influences the key components of food security. 3. They will also learn ways of adapting to the changing climate and environment and how this can aid in achieving food security and sustainability through science and technological advancements, policy economic and social intervention.
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Unit	Course Content	Weightage* (%)
1.	<ol style="list-style-type: none"> (a) Sustainability-meaning, concept, goals and challenges of sustainable development. (b) Dimensions of sustainable development: Social, spiritual, economic, educational security (c) Climate Change and Food Security <ol style="list-style-type: none"> i. Impact of climate change on agriculture and food systems ii. Adaptation and mitigation strategies for sustainable food production iii. Resilience-building measures in the face of climate variability 	15%
2.	<ol style="list-style-type: none"> (a) Factors affecting sustainability of community resource management, Programme sustainability and financial sustainability (b) Food security and nutrition definition, who are food insecure and malnourished, gender issues in attaining food and nutrition security. 	25%
3.	<ol style="list-style-type: none"> (a) Sustainable food security at country and state level- (b) Conceptual frame work of food security, availability of food accessibility of food consumption and utilization of food (c) Food security policy and status of macro food security in India (d) Socio economic characteristics leading to vulnerability and food insecurity (e) Development initiative imparting food security Nature and status of food insecurity at house hold level 	35%

4.	(a) Food assistance and Nutrition improvement programme- (b) Current levels of food security and role of food assistance (c) Food assistance for human development (d) Food assistance for increasing agricultural production and generating income. (e) Food assistance for women for enhancing household food security. (f) Financing food assistance (g) NFSA act	25%
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Teaching-Learning Methodology	Lecture, Questions-Answer, Discussion, Brainstorming, Observational method, Use of ICT
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per R.AUG.HSC. -4)	25%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance	25%
3.	Semester End Examination (As per R.AUG.HSC. -7)	50%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Understand nutrition problems existing in the community. Gain insight into the principles and contemporary challenges of Public Health Nutrition.
2.	Acquire a thorough understanding of the National Health Care Delivery System.
3.	Explore the interplay between population dynamics, economic factors, and malnutrition, and their implications for national development.
4.	Examine the root causes and effects of nutritional issues within communities
5.	Develop familiarity with the concept and importance of food and nutrition security.

References	
Sr. No	References
1	Sustainable Food Security P.K. Jain, B. S. Hansra (2010) Mittal Publication New Delhi, ISBN 9788183243568
2	Sustainable Agriculture, Food Security and Climate Change, Singh Parmeet, Publisher: Daya Publishing House, ISBN: 9788170357735, 9788170357735
3	Food Security, Nutrition and Sustainability, Publisher: Taylor & Francis Ltd, ISBN: 9781849713870, 9781849713870
4	https://www.fsinplatform.org
5	"Food Security and Climate Change" edited by Shyam Singh Yadav , CRC press 2020

6	Sustainable Diets: Linking Nutrition and Food Systems" edited by Barbara Burlingame and Sandro Dernini was published in 2010. It was published by FAO (Food and Agriculture Organization of the United Nations).
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On-line resources to be used if available as reference material
On-line Resources
Relevant entries on Wikipedia and Encyclopaedia Britannica



S. M. PATEL COLLEGE OF HOME SCIENCE

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Course Structure with effect from: 2024-2025 (NEP-2020)

M.Sc. (Home Science) Semester: I



Post-Graduation in Public Health and Nutrition (M.Sc.-H.Sc.) Semester (I)

Course Code	PHA01ERMD01	Title of the Course	Theory-Entrepreneurship Management
Total Credits of the Course	02	Hours per Week	02

Course Objectives:	<ol style="list-style-type: none"> To develop a foundational understanding of entrepreneurship, its role in the economy, and the key processes involved in launching and growing a new venture. To equip students with the skills to identify and evaluate business opportunities, particularly those relevant to women entrepreneurs. To bring creativity and innovation in developing effective business models for sustainable ventures. To explore various specializations within entrepreneurship, allowing students to identify areas of interest for further exploration.
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Course Content		
Unit	Description	Weightage*(%)
1.	Introduction to Entrepreneurship Management- (a) Defining Entrepreneurship and the Entrepreneurial Process (b) The Role of Entrepreneurs in Economic Development (c) Identifying Entrepreneurial Traits and Opportunities (d) Innovation and Creativity in Business	25
2.	Women Entrepreneurship (a) Historical context and contemporary issues of gender in business ownership. (b) The impact of women entrepreneurs on economic development and social change. (c) Identifying entrepreneurial traits and opportunities relevant to women. (d) Work-life balance strategies and building support networks.	25
3.	Business Model Development (a) Understanding the Business Model Canvas (b) Value Proposition, Customer Segments, and Customer Relationships (c) Channels, Revenue Streams, and Cost Structures	25

4.	(a) Social Entrepreneurship and Sustainable Business Practices (b) Family Business Management (c) Technology Entrepreneurship and Innovation Management	25
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Teaching-Assignments, Learning	Lecture, PowerPoint Presentations, ICT enabled Teaching, Individual/group projects, Group discussions, Guest speakers, Quizzes Methodology, blackboard and chalk.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per R.AUG.HSC. -4)	25%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance	25%
3.	Semester End Examination (As per R.AUG.HSC. -7)	50%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Explain the core concepts of entrepreneurship and the entrepreneurial process.
2.	Identify key entrepreneurial traits and assess their own potential for success in entrepreneurial ventures.
3.	Gain knowledge of the historical and contemporary challenges faced by women entrepreneurs
4.	Understand the impact of women entrepreneurs on economic development and social change.

Suggested References:	
Sr. No.	References
1.	Khanna, S.S. (2003). <i>Entrepreneurship Development</i> . New Delhi: S. Chand and Co Ltd.
2.	Desai, V. (1994). <i>Dynamics of Entrepreneurial development</i> . Mumbai: Himalaya Publishing House.

3.	Gupta, C.B. & Srinivasan, N.P. (2000). <i>Entrepreneurship Development in India</i> . New Delhi: Sultan Chand & Sons.
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Online Resources
https://socialinnovationacademy.org/
https://news.gcase.org/2011/10/24/what-is-entrepreneurial-management
https://en.wikipedia.org/wiki/Entrepreneurship
