

DEPARTMENT OF NUTRITION & DIETETICS

VALUE ADDED COURSE

Semester	Course Code	Course Title	Hours
III	22UNDVAC1	HOME GARDENING	30

Course outcomes:

At the end of the course, students will be able to

- CO.1 Learn about the basics of kitchen gardening
- CO.2 Learn the propagation techniques and layout of kitchen garden
- CO.3 Prepare manure and bio-fertilizer
- CO.4 Develop the practical knowledge on effect of chemical fertilizers, weed and pest management
- CO.5 Know the Plantation methods and hands-on training by Horticulture Department

UNIT – I Basic Concepts of Kitchen Gardening

6 Hours

- 1.1. Soil: Identification of types of soil.
- 1.2. Methods of Irrigation: Modes or methods of applying water to crops- uncontrolled or wild flooding, free flooding, border irrigation, check basin irrigation, furrow irrigation, sprinkler irrigation, drip irrigation and surge irrigation – merits and demerits of each irrigation system.
- 1.3. Cropping systems and Farming systems: Systems of farming- Wet land, Gardenland and dry Land Farming systems- Factors affecting choice of crop and varieties – Types of cropping systems – Mono cropping, multiple cropping, inter cropping, sequential cropping – Multi species and multi-tier cropping.

UNIT – II Types of Plants, Propagation Techniques and Layout of kitchen Gardening

- 2.1. Plants – types of plants – Herbs, Shrubs, Creepers, Climbers and trees.
- 2.2. Propagation techniques: Definition – Advantages and limitations – Stem cuttings – Simple layering and Air layering – Inarching and Epicotyl grafting – Shield and Patch budding- Tissue Culture.
- 2.3. Selection and layout of kitchen gardening: Factors to be considered in selection and layout of a kitchen gardening – Physical, climatic, economic and social factors – designs and layout of kitchen garden – home, terrace, school and college.

UNIT-III Organic Manures and Bio –fertilizers

6 Hours

- 3.1. Manures: Definition – Classification – Bulky Organic Manures (BOM) and Concentrated Organic Manures (COM).
- 3.2. Preparation of different types of compost including industrial waste, kitchen waste, coir waste, press mud – Vermicompost – Green manures (GM) and Green Leaf Manures (GLM) – their Benefits and significance.
- 3.3. Bio - fertilizers and their types – Application of Bio - Fertilizers.

UNIT-IV Chemical Fertilizers, Weed and Pest Management

6 Hours

- 4.1. Chemical Fertilizers: Fertilizers – classification – sources of fertilizers – Straight, mixed and complex fertilizers – Harmful effect of chemical fertilizers – soil, plant animal and human.

4.2. Weed Management: Definition-classification of weeds - Characteristics of weeds –Dissemination of weeds – #Harmful and beneficial effects of weeds# - Principles of weed management - Methods of weedmanagement –control ofinvasive weeds.

4.3. Pest Management: Physical, biological and Chemicalmethods - Integrated Pest Management (IPM)– Resurgence of insects with reference to insecticides application – pheromones, its uses in insect pest control. Pest management during harvesting and post harvesting.

UNIT-V Plantation methods and Horticulture Scheme

6 Hours

5.1. Introduction: Importance- classification and types of vegetable garden-Handling Methods-perennial vegetables, greens and salad crops: cultivation of drumstick, curry leaf and Amaranthus.

5.2. Cole crops and cucurbits: cultivation of pumkin, water melon, snake gourd, bitter gourd and ribbed gourd- Bulb root and vegetables: Cultivation of Onion, Garlic, Radish-Solanaceous vegetables: Cultivation of Brinjal, Tomato, Chillies, Lady's finger, Cluster bean, and French beans.

5.3. Schemes and Hands-on training by Horticulture Department.

#.....# Self Study

TEXT BOOKS:

1. Sahai,V.N. Fundamentals of Soil, Kalyani Publishers, New Delhi, 1990.
2. Palaniappan.S.P. and K. Annadurai.(1999). Organic Farming Theory and Practice. Scientific Publishers (India), Jodhpur
3. Das, P.C. Manures and Fertilizers, Kalyani Publishers, New Delhi, 1993
4. Hosmani, M.M. Integrated weed management in field crops, HosmaniPublishers, Dharward, 1995.
5. Rao, V.S. Principles of weed science. Oxford and IBH, New Delhi, 1983.
6. Sivanappan, R.K. and Karaigowder. Irrigation and Drainage, Popular BookDepot, Chennai, 1997.
7. Panwar, V.P.S. Agricultural Insect Pests of Crops and their control. Kalyani Publishers, New Delhi, 2000.
8. Hartmann, H.T. and D.E.Kester. Plant propagation, Englewood cliffs, NewJersey, Printice Hall, 1975.
9. Bose, T.K. Fruits of India – Tropical and subtropical, Nayaprakash, Calcutta, 1986.
10. Shanmugavelu, K.S. Viticulture in India. Agro Botanical Publishers, 1989.
11. Tripathi, D.P. Mushroom Cultivation, Oxford and IBH Publishing Co.Pvt.Ltd. New Delhi, 2017.

Semester	Course Code	Course Title	Hours
V	22UNDVAC2	TOOLS FOR NUTRITION EDUCATION	30

Course Outcomes:

At the end of the course, students will be able to:

- CO.1 Learn effective communication techniques.
- CO.2 Plan, organize and conduct nutrition education program
- CO.3 Organize general nutrition awareness program in a community.
- CO.4 Conduct awareness program on health related to nutrition
- CO.5 Use effectively nutrition education through multimedia

UNIT I NUTRITION EDUCATION AND COMMUNICATION 6 Hours

Nutrition Education –Definition, Process of Nutrition Education –Analysis of situation and problem, Objectives and solutions, Teaching plan of work, Evaluation of the teaching, Reconsideration. **Communication**– Definition, Communication Process- Sender, Receiver, Message, Channels of Communication, Feedback.

UNIT –II ORGANIZING AND PLANNING PROGRAMS ON NUTRITION & HEALTH 6 Hours

Organizing Group Discussions, Rapport building during Home visits, Demonstration on preparation and inclusion of nutritious food, Preparation of charts, posters, flash cards, pictures and digital photographs on healthy foods. Planning and organising folk songs, drama, dance and puppet shows for the community

UNIT-III CONDUCTING AWARENESS PROGRAMS RELATED TO NUTRITION & HEALTH 6 Hours

Preparation of power point presentation on health issues, Script writing for news papers, radio programs or television programs, Recording programs for Television shows. Organising Exhibitions and displaying exhibits related to health and nutrition, Observation and participation in programs related to nutrition through Audio / video conference, Conducting awareness program through short films/ documentary.

UNIT –IV NUTRITION EDUCATION FOR THE COMMUNITY 6 Hours

Selection of Area, developing rapport with the community participants, organizing community programs, preparation of interview schedule and observation sheet for collection of data in a community, Identification of the target group- women, adolescent girls/boys and school going children. Conduct of educational program through different methods involving the target groups in the Community and Anganwadi centers.

UNIT –V USE OF MULTIMEDIA IN NUTRITION EDUCATION

6 Hours

Using multimedia – face book and instagram, Mobile technology- digital video and editing, Preparation of web-based modules – preparation of e-content, e-mail and group mail. Preparation of audio, video and animation shows on subject matter.

TEXT BOOKS

- 1.B.Srilakshmi, “Nutrition Science”, New age International (P) limited, publishers(2016) Fifth Edition
2. K.Park “Preventive and social Medicine” M/s BanarsidasBhanot Publishers (2017) Twenty fourth edition.
3. Dhama , O.P and Bhatnagar O.P.,(1999) Education and Communication for Development, Oxford and IBH Publishing Co.Pvt. Ltd, New Delhi.
4. Gupta,D.K., (2006), Mass Communication in Information Era, Rajat Publication, New Delhi.
- 5.Shanthi Govind, S., (2010), Tamil Selvi G. Menambigai, J. Extension Education Rural Development, Agrobias Publishing, Jodhpur.
- 6.A.Adivi Reddy, “Extension Education” Sree Lakshmi press (1993) Fifth edition.
7. Kumar K.J., (1999), Mass communication in India, Jaico Publishing House,Madras.

Semester	Course Code	Course Title	Hours
III	22PNDVAC1	COUNSELLING SKILLS FOR DIETITIAN	30

Course Outcomes:

At the end of the course, students will be able to

- CO.1 Acquire skills in planning nutrition support
- CO.2 Get skills in the diet counselling.
- CO.3 Gain knowledge in Psychology in counselling
- CO.4 Apply the principles of nutrition assessment for different age group
- CO.5 Create nutritional aids and web platform for patients care

Unit: I-Nutritional support and diet counselling process

6 Hours

- 1.1 Nutrition to support-Definition, optimum health, balanced diet, my plate. Food guide pyramid model for diabetics, heart disease, cancer, obesity. Functional food to support health. Demo on value added product for above conditions.
- 1.2 Diet Counselling process: Definition, need, principles, approaches, planning and action for infants, malnutrition, children's, adolescents, adults, Pregnancy, and old age. Sports Nutrition – Sports Nutrition Counselling.

Unit: II- Diet Counselling

6 Hours

- 2.1 Diet Counselling –definition (BDA,1994) , Qualities of a dietitian, A Counselling approach, basic skills requirement in diet counselling- Interviewing, counselling and consulting, client of counsellors, steps in the counselling process-Assessment, planning, Implementation and evaluation.
- 2.2 Factors influencing diet counselling: Psychological-food choices, food likes and dislikes, learning style, cultural issues, and socioeconomic status. Psychosocial evaluation-food-related attitudes and behaviours. Sociological evaluation, including cultural practices, housing, cooking facilities, financial resources, and support of family and friends

Unit: III-Psychology in counselling

6 Hours

- 3.1 Psychology – definition for psychology, counselling psychology, Nutritional psychology.
- 3.2 Emotion perception in eating pattern: Types of emotion, Application of emotion perception in nutrition adherence, Mood stages and eating behaviour, solution for managing emotional eating.

Unit: IV-Nutritional Assessment

6 Hours

- 4.1 Anthropometry Measurements: Height, weight, head circumference, body mass index (BMI), body circumferences to assess for adiposity (waist, hip, and limbs), and skinfold thickness, IBW-with comparison to standards for children, adolescents and adults. Identification of risk groups (random and purposive).

- 4.2** Biochemical and clinical assessment.-Assessment of clinical manifestation and interpretation of biochemical data for disease and disorders. Preparation of case studies for selected health disorder (diabetes, heart disease, cancer, obesity) and Nutritional deficiency (malnutrition, anaemia, vitamins)
- 4.3** Dietary assessment-(a) measuring food consumption at the household level: Food account method, household food record method, household 24-h recall method. (b) methods of measuring food consumption of individuals-twenty four hour recall methods, repeated 24-h recall, estimation of food record, weighed food records, dietary history, food frequency questionnaire.

Unit: V- Nutritional Education and counselling Aids

6 Hours

- 5.1** Counselling Education- Hospitalized patients (adults, paediatric, elderly and handicapped), adjusting and adopting to individual needs. Outpatients (adults, paediatric, elderly and handicapped), submission of case study report (for any one condition)-patients records, reporting finding, applying findings, resources and aids for education and counselling, Terminating counselling, Education for individual patients
- 5.2** Teaching aids used by dietitians- Chart, leaflets, posters, preparation of teaching material (Using food exchange list) for patients suffering from Digestive disorder, hypertension, Diabetes, Atherosclerosis & hepatitis and cirrhosis. Creating web platform for selected condition

Texts Book

1. Srilakshmi B., Dietetics, Seventh Edition, New Age International (P) Ltd. Publishers, Chennai, 2011
2. Shils M.E, Olson J.A, Shike M., & Ross A.C., Modern Nutrition in Health & Disease, Tenth Edition, Lippincott Williams and Wilkins, 2006.
3. Mahan L.K and Arlin M.T, Food and the Nutrition care process, Thirteenth Edition, W.B. Saunders Company, London, 2012
4. Judy Gable., Counselling Skills for Dietitians, Second Edition, Blackwell Publishing Ltd, Singapore, 2007
5. Corinne H. Robinson & Marilyn R. Lawler, Normal and Therapeutic Nutrition, Sixteenth Edition, Macmillan Publishing co., inc, London, 1982
6. Melinda C. Blackman, & Colleen A. Kvaska, MS., Jones and Bartlett Publication, Canada, 2011