

SUMANDEEP VIDYAPEETH

(Declared as Deemed to be University under Section 3 of the UGC Act 1956)

Accredited by NAAC with a CGPA of 3.53 out of four-point scale at 'A' Grade

At & Post Piparia, Tal: Waghodia 391760 (Gujarat) India.

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CURRICULUM

PG Diploma in CLINICAL NUTRITION

Attested CTC

Vice-Chancellor

Sumandeep Vidyapeeth

An Institution Deemed to be University

Vill. Piparia, Taluka: Waghodia.

Dist. Vadodara-391 760. (Gujarat)

2019



INTRODUCTION

Scope

The quality of paramedical care has improved tremendously in the last few decades due to the advances in technology, thus creating fresh challenges in the field of healthcare. It is now widely recognized that health service delivery is a team effort involving both clinicians and non-clinicians, and is not the sole duty of physicians and nurses. Professionals that can competently handle sophisticated machinery and advanced protocols are now in high demand. In fact, diagnosis is now so dependent on technology, that paramedical and healthcare professionals are vital to successful treatment delivery.

Effective delivery of healthcare services depends largely on the nature of education, training and appropriate orientation towards community health of all categories of health personnel, and their capacity to function as an integrated team, with a range of skills and expertise, play key roles within the National Health Service, working autonomously, in multi-professional teams in various settings. All of them are first-contact practitioners and work across a wide range of locations and sectors within acute, primary and community care.

Learning goals and objectives for allied and healthcare professionals

The Department of Clinical Nutrition, SBKS MI & RC endeavors to develop a post graduate diploma Nutritionist who will be able to:

- Gain expertise in Medical Nutrition Therapy and can serve in hospitals, Clinics and community at large.
- Review, assess, and modify nutritional treatment plans and conduct patient assessments and administer treatment plans.
- Understand and apply emerging trends, directions and studies regarding dietary guidelines
- Communicate effectively with individuals and groups, and members of the health team in order to promote effective interpersonal relationship and teamwork.
- Demonstrate skills in teaching to individuals and groups in clinical/community health settings.
- Participate effectively as members of the health team in health care delivery system.
- Demonstrate leadership and managerial skills in clinical/community health settings.
- Provide qualified nutritionist to cope with advancement in medical science and technology.
- Be efficient in teaching to nutrition students as well as providing direct patient care.

This course will fulfil the eligibility requirements for RD Exam for students having B.Sc.(Foods and Nutrition/ Food Sciences/Home Science)

Attested CTC Program outcomes

The students of PG Diploma in Clinical Nutrition after the completion of this programme gain expertise in Medical Nutrition Therapy and can serve in hospitals, Clinics and community at large.

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After the completion of programme they are able to review, assess, and modify nutritional treatment plans and conduct patient assessments and administer treatment plans. They are able to understand and apply emerging trends, directions and studies regarding dietary guidelines. They are able to train and develop professionals with expertise in medical nutrition management for services in hospitals and clinics.

Ethics and accountability

Students will understand core concepts of clinical ethics and law so that they may apply these to their practice as healthcare service providers. Program objectives should enable the students to:

- Describe and apply the basic concepts of clinical ethics to actual cases and situations
- Recognize the need to make health care resources available to patients fairly, equitably and without bias, discrimination or undue influence
- Demonstrate an understanding and application of basic legal concepts to the practice
- Employ professional accountability for the initiation, maintenance and termination of patient-provider relationships
- Demonstrate respect for each patient's individual rights of autonomy, privacy, and confidentiality

Commitment to professional excellence

The student will execute professionalism to reflect in his/her thought and action a range of attributes and characteristics that include technical competence, appearance, image, confidence level, empathy, compassion, understanding, patience, manners, verbal and non-verbal communication, an anti-discriminatory and non-judgmental attitude, and appropriate physical contact to ensure safe, effective and expected delivery of healthcare.

Eligibility for admission:

B.Sc.(Foods and Nutrition/ Food Sciences/Home Science) / M.B.B.S. /BDS/ B.H.M.S. / B.A.M.S/B. Pharm /BPT/B.Sc (Biochemistry/Microbiology) / B.Sc (Nursing) or equivalent degrees.

Duration of the course:

Duration of the course is 1 year + 3 months internship.

Attendance:

A candidate has to secure minimum 80% attendance in overall with at least-

1. 75% attendance in theoretical
2. 80% in Skills training (practical) for qualifying to appear for the final examination.

No relaxation whatsoever, will be permissible to this rule under any ground including indisposition etc.

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Assessment:

Assessments should be completed by the academic staff, based on the compilation of the student's theoretical & clinical performance throughout the training programme. To achieve this, all assessment forms and feedback should be included and evaluated. Student must attain at least 50% marks in each Theory, Internal assessment and Practical independently / separately for each individual subject.

Course of Instruction

POST GRADUATE DIPLOMA IN CLINICAL NUTRITION (PGDCN)				
SUBJECT CODE	SUBJECTS	LECTURE HOURS	PRACTICAL/SMALL GROUP TEACHING/TUTORIALS/ INTEGRATED LEARNING (HOURS)	TOTAL (HOURS)
	CORE SUBJECTS			
PAPD001.1	Advanced Nutrition	60	-	60
PAPD001.2	Medical Nutrition Therapy	60	120	180
PAPD001.3	Nutritional Biochemistry	30	30	60
PAPD001.4	Human Physiology	30	-	30
PAPD001.5	Public Health Nutrition	40	60	100
	ELECTIVE SUBJECTS			
PAPD001.6	Food Service Management	-	60	60
PAPD001.7	Research Project			
	Formative assessment and Term Examinations		-	20
	TOTAL	220	270	510

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Scheme of Examination

SUBJECT CODE	SUBJECTS	EXAMINATION PATTERN		
		Internal	Final	TOTAL
Core Subjects				
PAPD001.1	Advanced Nutrition	30	70	100
PAPD001.2	Medical nutrition therapy	30	70	100
PAPD001.3	Nutritional biochemistry	30	70	100
PAPD001.4	Human Physiology	30	70	100
PAPD001.5	Public Health Nutrition	30	70	100
	Lab Course I (MNT)	Practical- 30		50
	Lab course II (Biochemistry)	Viva- 10		50
	Lab Course III (Public Health Nutrition)	Journal- 10		50
Elective Subjects				
PAPD001.6	Food Service Management	Project/Research Report - 30		50
PAPD001.7	Research Project	Presentation- 10		
		Viva – 10		

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PG Diploma in Clinical Nutrition

PAPD001.1 Advanced Nutrition

60 Hours

Unit 1: Pediatric Nutrition

- Growth and Development
- Nutritional Considerations of Infants
- Nutritional Considerations of Children
- Growth Monitoring
- Childhood Obesity
- Under nutrition PEM

Unit 2: Ageing and Geriatric Nutrition

- Physiological changes
- Bone health
- Osteoporosis
- Rheumatoid Arthritis Osteoporosis
- Nutritional Support

Unit 3: Nutrient and Drug Interactions

- Basic Concept
- Effect of Nutrition on Drugs
- Drug Effects on Nutritional Status

Unit 4: Food Intolerances and Food Allergy

- Food Combinations
- Adverse food reactions
- Prevention
- Treatment and Management
- Prevention

Unit 5: Food Psychology

- Mechanisms of hunger, satiety and satiation
- Nutrition In Eating Disorders
- Anorexia Nervosa
- Bulimia Nervosa
- Binge Eating Disorders, Pica

Unit 6: Nutrition and Dental Health

- Structure, development and maturation
- Dental caries
- Recent advances in role of Nutrition in dental health

Unit 7: Nutrition and Neurological Disorders

Alzheimer's disease

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- Epilepsy
- Migraine
- Multiple Sclerosis
- Neurotrauma
- Spine trauma
- Parkinson's disease
- Feeding problems of patients with neurological disorders.

Unit 8: Nutrition In Cancer

- Risk factors
- Metabolic Alterations and Nutritional Problems related to Cancer
- Nutritional requirements of Cancer patients related to Cancer Therapy
- Cancer Prevention

PAPD001.2 Medical Nutrition Therapy (MNT)

110 Hours

Unit 1: Normal and Therapeutic Diets

- Basic Concepts of
- Normal Diet
- Nutrition through life cycle
- Physiological conditions
- Therapeutic Adaptation of Normal Diet
- Routine Hospital Diets
- Special feeding methods

Unit 2: Nutrition and Infection

- Metabolic changes during infection
- Typhoid fever
- Tuberculosis
- HIV Infection and AIDS

Unit 3: MNT in Obesity And Underweight

- Causes
- Health Risk
- Dietary Treatment
- Psychotherapy

Unit 4: MNT in Diseases Of Gastro Intestinal Tract

- Common Intestinal Disorders -
- Gastritis, GERD, Peptic Ulcer
- Ulcerative colitis
- Inflammatory Bowel Diseases

Unit 5: MNT in Liver disease

- Hepatitis
- Cirrhosis of Liver
- Diseases of Gall Bladder
- Diseases of Pancreas

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Unit 6: MNT in Kidney Diseases

- Glomerulonephritis
- Nephrotic Syndrome
- Acute Renal Failure,
- Chronic Renal Failure
- End Stage Liver Diseases
- Urolithiasis

Unit 7: Diseases Of Metabolic Disorders

- Diabetes Mellitus
- Gout

Unit 8: MNT in Cardiovascular Diseases

- Coronary Heart Diseases (CHD)
- Prevalence
- Risk Factors
- Pathophysiology
- Dyslipidemia
- Atherosclerosis
- Hypertension
- Angina Pectoris
- Myocardial infarction
- Congestive Cardiac Failure

Lab course:

- Standardization of recipes and portion sizes
- Dietetic techniques patient counseling
- Preparation of therapeutic diets
- High risk management
- Diet in gastro intestinal diseases
- Diet in liver diseases
- Diet in cardiovascular diseases
- Diet in Kidney Diseases
- Diet in disease of metabolic disorder such as Diabetes mellitus and gout
- Diet in Stress, Burns, cancer, surgery
- Techniques for obtaining relevant information- patient history, individual and group counseling
- Developing IEC ,Formulation of Nutritional messages
- Clear liquid diet, full fluid, soft and normal diet.
- Elemental diets, parental and enteral nutrition
- Formulation of diets
- Low cholesterol and Low sodium diet for CVD, hypertension, Progressive diet modification for cardiac surgeries.
- Protein and mineral modification in renal diseases

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Unit 1: Carbohydrates

- Definition
- classification, biological role of carbohydrates
- Metabolism- Digestion and absorption, Glycolysis, Krebs cycle, Electron Transport Chain, Gluconeogenesis, Glycogenesis, Glycogenolysis, HMP pathway
- Disorders related to Carbohydrate metabolism.

Unit 2: Proteins

- Definition, classification, biological role of amino acids and proteins
- Biological value of protein,
- Metabolism- Digestion and absorption, Transamination, Deamination, Metabolism of Ammonia, Urea cycle ,
- Disorders related to Protein/amino acid metabolism

Unit 3: Lipids

- Definition, classification, biological role of fatty acids and lipids
- Metabolism- Digestion and absorption , Oxidation of Fatty acids, Metabolism of lipoproteins and ketone bodies and their significance Cholesterol metabolism
- Disorders related to Lipid metabolism

Unit 4: Vitamins

- Definition
- Classification, functions
- Role of vitamins in metabolism, deficiency diseases.

Unit 5: Minerals

- Definition
- Classification, functions
- Role of minerals in metabolism, deficiency diseases

Unit 6: Water and Electrolyte balance

Water and Electrolyte balance and related disorders

Unit 7: Acid Base balance

Acid Base balance- Role of buffers, lungs and kidney in maintaining acid base and related disorders

Unit 8: Enzymes

- Definition
- Classification
- mechanism of enzyme action, specificity of enzymes
- Types of enzymes
- Factors affecting enzyme activity, Coenzymes
- Enzymes in clinical diagnosis.

Lab Course:

Estimation of serum calcium

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- Estimation of Blood Glucose
- Estimation of Blood Urea
- Estimation of Serum Creatinine
- Estimation of Bilirubin
- Estimation of Serum protein
- Estimation of Hemoglobin
- Urine analysis
- Estimation of SGOT
- Estimation of SGPT

PAPD001.4 Human Physiology

30 Hours

Unit 1: Digestive System

Brief study of the anatomical organization of the digestive tract and process of digestion, absorption and assimilation of food

Unit 2: Circulatory System

Heart Structure and working of heart, Determination of Blood pressure, Cardiac cycle, cardiac output, heart rate Lymphatic system-Composition & Formation, organs involved, functions of lymph

Unit 3: Hematology

Introduction to blood, Composition and functions of blood, Mechanism of blood coagulation, blood group systems

Unit 4: Defense mechanisms of the body

First line, second and third line of defense, active immunity, passive immunity, Factors affecting immunity

Unit 5: Respiratory System

Basic anatomy of the respiratory system, Process of respiration, Disorders

Unit 6: Urinary System

Structure and functions of organs of urinary system, Composition of normal and abnormal urine

Unit 7: Endocrine system

Definition, Classification, Mechanism of action, functions and disorders of hormones of pituitary gland, thyroid gland, parathyroid gland, adrenal gland and pancreas

Unit 8: Nervous system

- Structure of Neuron, Transmission of nerve impulse
- Organs of Central Nervous system & their functions
- Peripheral Nervous system
- Autonomic system
- Reflex action

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Unit 1: Public Health Nutrition

- Concept
- Scope
- Future projections
- Health care
- Role of public nutritionists in health care delivery

Unit 2: Nutritional Problems in India

- Protein Energy Malnutrition- Kwashiorkar and Marasmus
- Micronutrient Deficiencies –Anemia, IDD, Fluorosis
- Vitamin Deficiencies

Unit 3: Assessment of Nutritional Status

- Population sampling
- Anthropometry
- Clinical assessment
- Biochemical assessment
- Dietary assessment

Unit 4: Nutrition Monitoring and Nutrition Surveillance

- Nutrition Monitoring and its Current programmes
- Nutrition Surveillance System

Unit 5: National Nutrition Programmes

- Integrated Child Development Services (ICDS) Programme
- Nutrient Deficiency Control Programme
- Supplementary Feeding Programme
- Food Security Programme Strategies to Combat National Nutritional Problems

Unit 6: Nutrition and Health Education

- Definition
- Importance
- Channels of nutrition education
- Nutrition education methods
- Planning for Nutrition and Health Education
- Techniques of Nutrition Education
- Role of Nutrition Education Programs in eradication of malnutrition

Practical:

- Assessment of Nutritional Status
- Measuring ,recording and plotting on growth charts
- Use of growth reference/standards (field work)
- **Attested CTC**
- Diet Survey
- Developing IEC ,Formulation of Nutritional messages for community awareness(human values)
individual and group counseling- Anemia, NCDs, malnutrition

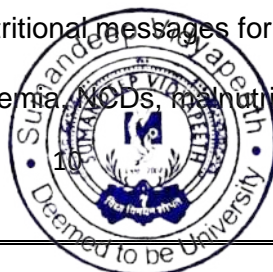
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Unit 1: Food Service Management

- Types of Food service establishments
- Principles of Management
- Functions of Management
- Planning of a layout

Unit 2: Menu Planning

- Importance of menu planning
- Types of menu planning
- Steps in menu planning and its evaluation

Unit 3: Food Purchasing and Storeroom Management

- Mode of purchasing
- Methods of purchasing
- Receiving
- Storage Space
- Storage Room Management

Unit 4: Food Production- Planning and Control

- Production Forecasting
- Production Scheduling
- Production Control
- Standardized Recipes

Unit 5: Quantity Food Production

- Basic cookery procedures
- Types of Equipments

Unit 6: Food Delivery And Service Systems

- Methods of food delivery systems
- Centralized and decentralized
- Types of food service systems

Unit 7: Personnel Management

- Leadership
- Functions and qualities of leadership
- Manpower Planning,
- Recruitment and Selection,
- Placement and Induction,
- Performance Appraisal,
- Training and development.

Unit 8: Food Hygiene and Sanitation

- Sanitation in food services
- 3E's of safety
- Food safety

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- Hygienic food handling

CODE OF PROFESSIONAL CONDUCT

INTRODUCTION

The Code of Professional Conduct is designed and set out as guidance for the clinical practitioner within the relationship that exists with every patient receiving health care.

Essential to that relationship is the patient's trust in the practitioner. This trust hangs upon the patient's assurance of being the practitioner's first concern during their clinical encounter, and upon the patient's confidence that the care received will be competent, whether in diagnosis, therapy or counseling.

STANDARD OF PRACTICE AND CARE

Patients are entitled to the highest standard of practice and care. The essential elements of this are professional competence, good relationships with patients and colleagues and observance of professional ethical obligations.

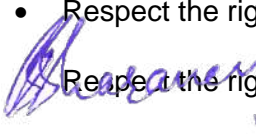
In providing care you must therefore:

- Recognize the limits of your professional competence.
- Be willing to consult colleagues
- Keep clear, accurate and contemporaneous patient records which report the relevant findings.
- Keep colleagues informed.
- Pay due regard to the efficacy and the prudent use of resources.
- Be competent, truthful, and accurate, when reporting on investigations.
- Be competent when giving or arranging treatment.

Patient's rights

- Listen to patients and respect their views.
- Treat patients politely and considerately.
- Respect patients' privacy and dignity.
- Give information to patients in a way they can understand.
- Respect the right of patients to be fully involved in decisions about their care.
- Respect the right of patients to refuse treatment or to take part in teaching or research,

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reporting the refusal to the person requesting the procedure.

- Respond to complaints promptly and constructively.
- Ensure that your views about a patient's life style, culture, beliefs, race, colour, sex, sexuality, age, social status, or perceived economic worth, do not prejudice the service you give.

CONFIDENTIALITY

Patients have a right to expect that you will not pass on any personal information which you learn in the course of your professional duties, unless they agree

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