

Syllabus and Curriculum
of
Diploma in Clinical and therapeutic nutrition
course

Uttar Pradesh State Medical Faculty, Lucknow.

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OBJECTIVES OF THE COURSE

To prepare a clinical and therapeutic nutrition Technician who –

- Has comprehensive knowledge of food items and their nutrition value.
- Can customize diet plan as per individual needs.
- Can prescribe diet in various medical and surgical diseases.
- Can guide preparing, processing and storage of food items.
- Can help in packaging of food items.
- Can participate in community nutritional programmes.

Outline of Curriculum
of
Diploma in Clinical and therapeutic nutrition course

FIRST YEAR

THEORY (Classes: 9 AM to 12 Noon)

First paper : Syllabus covers -

1. Basic human Anatomy and Physiology.
2. Nutritional Biochemistry

Second paper : Syllabus covers -

1. Food service management.
2. RDA and nutritional value of common food items.

PRACTICAL (Classes: 1 PM to 4 PM)

Practical classes will be after lunch; from 1 PM to 4 PM.

Students must present in the hospital/ kitchen for practicals.

Following subjects must be taught; though there will not be any exam from these-

1. Basic Computer skills.
2. Basic English.
2. **Soft skills like** - Interpersonal relationship skills & moral education.

Outline of Curriculum
of
Diploma in Clinical and therapeutic nutrition course

SECOND YEAR

THEORY (classes:9 AM to 12 Noon)

First paper : Syllabus covers -

1. Dietetics and diet counseling (Therapeutic nutrition)

Second paper : Syllabus covers -

1. Public nutrition.
2. Clinical nutrition.

SECOND YEAR

PRACTICAL (classes:9 AM to 12 Noon)

Practical exams syllabus should cover-

- Calculation of nutrition value of all food items.
- Calculation of nutrition requirement as per age & gender.
- Calculation of nutritive requirement in various diseases.
- Prescribing diet in various ailments.
- Observation of healthy processing, cooking & dispersing of food.

ELIGIBILITY CRITERIA FOR ADMISSION & DURATION OF THE COURSE

COURSE DURATION:-

- It is 2 years, **full time** Diploma Course.

ELIGIBILITY:-

- Candidate must have passed 12th with
Physics, Chemistry, Biology

Or

Physics, Chemistry, Maths

with 35% marks in Intermediate exams.

(From UP board or any other recognised board).
- Candidate must have completed age of 17 years of age as on 31st December of admission year. There is no maximum age limit for the admission.

SCHEDULE OF EXAMINATION

FIRST YEAR

<u>Paper</u>	<u>Subjects</u>	<u>Mark</u>	<u>Internal Assessment Marks</u>	<u>Total Marks</u>	<u>Pass Marks</u>	<u>Duration of Exam.</u>
<u>First Paper Theory</u>	1.Basic human Anatomy and Physiology. 2.Nutritional Biochemistry	75	25	100	50	3 Hours
<u>Second Paper Theory</u>	1.Food service management. 2.RDA and nutritional valueof common food items.	75	25	100	50	3 Hours
<u>Practical</u>	Oral and practical	75	25	100	50	3 Hours

SCHEDULE OF EXAMINATION

SECOND YEAR

<u>Paper</u>	<u>Subjects</u>	<u>Mark</u>	<u>Internal Assessment Marks</u>	<u>Total Marks</u>	<u>Pass Marks</u>	<u>Duration of Exam.</u>
<u>First Paper Theory</u>	1. Dietetics and diet counseling (Therapeutic nutrition)	75	25	100	50	3 Hours
<u>Second Paper Theory</u>	1. Public nutrition. 2.Clinical nutrition.	75	25	100	50	3 Hours
<u>Practical</u>	Oral and practical.	75	25	100	50	3 Hours

SCHEDULE OF COURSE

(List of holidays, Total hours, Subject wise allotment of hours)

- **List of Holidays:-**

Sundays	- 52 days
Summer vacation	- 10 days
Winter vacation	- 10 days
Gazetted holidays	- 23 days
Preparatory holidays	- 10 days
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Total Holidays	- 105 days
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- **Total Hours :-**

Theory classes per day	- 3 Hours
Practical classes per day	- 3 Hours
Total hours per day	- 6 Hours
Total days & hours in One year (after deduction of holidays)	- 260 days or - 1560 Hours

SCHEDULE OF COURSE

Subject wise allotment of hours

FIRST YEAR

Theory (780 Hours) Practical (780 Hours)

<u>First Paper Theory</u>	1.Basic human Anatomy and Physiology.	100 Hrs
	2.Nutritional Biochemistry	200 Hrs
<u>Second Paper Theory</u>	1.Food service management.	200Hrs
	2.RDA and nutritional value of common food items.	200 Hrs
<u>Third Paper Practical</u>	Oral and practical.	780 Hrs
<u>Theory: Other Subjects</u> (These subjects must be taught, though there will not be any exam from these)	1.Basic Computer skills.	30 Hrs
	2.Basic English.	30 Hrs
	3.Soft skills like - Interpersonal relationship skills & moral education	10 Hrs

SCHEDULE OF COURSE

Subject wise allotment of hours

SECOND YEAR

Theory (780 Hours) Practical (780 Hours)

<u>First Paper Theory</u>	1.Dietetics and diet counseling (Therapeutic nutrition)	450 Hrs
<u>Second Paper Theory</u>	1. Public nutrition.	130 Hrs
	2. Clinical nutrition.	200
<u>Third Paper Practical</u>	Oral and practical.	780 Hrs

Diploma in Clinical and therapeutic nutrition course

PAPER 1st Theory	Topics	Hours.
1.Basic human Anatomy and Physiology.	1. Organization of human body: cell, tissue, tissue system, organ and organ system.	20 Hrs
	2. Basic structure and functioning of Digestive system.	10 Hrs
	3. Basic structure and functioning of respiratory system.	10 Hrs
	4. Basic structure and functioning of excretory system.	10 Hrs
	5. Basic structure and functioning of cardiovascular system.	10 Hrs
	6. Basic structure and functioning of endocrine system.	10 Hrs
	7. Basic structure and functioning of nervous system.	10 Hrs
	8. Basic structure and functioning of hematological system.	05 Hrs
	9. Basic structure and functioning of lymphatic system.	05 Hrs
	10. Basic structure and functioning of defense system.	05 Hrs
	11. Basic structure and functioning of reproductive system	05 Hrs

Details of Curriculum for First Year
Diploma in Clinical and therapeutic nutrition course

PAPER 1st Theory	Topics	Hours.
2.Nutritional Biochemistry	1. Carbohydrates: classification, physical and chemical properties ,sources, biological role, metabolism, deficiency diseases, inborn errors and metabolic disorders	30 Hrs
	2. Proteins: classification, physical and chemical properties ,sources, biological role, metabolism, deficiency diseases, inborn errors and metabolic disorders	30 Hrs
	3. Lipids : classification, physical and chemical properties ,sources, biological role, metabolism, deficiency diseases, inborn errors and metabolic disorders	30 Hrs
	4. Vitamins: classification, physical and chemical properties ,sources, biological role, metabolism, deficiency diseases, inborn errors and metabolic disorders	30 Hrs
	5. Minerals: classification, physical and chemical properties ,sources, biological role, metabolism, deficiency diseases, inborn errors and metabolic disorders	30 Hrs
	6. Inter relation between carbohydrates, proteins, fats.	20 Hrs
	7. Hormones: Classification, mechanism of action, functions and disorders.	20 Hrs

Details of Curriculum for First Year
Diploma in Clinical and therapeutic nutrition course

PAPER 2nd Theory	Topics	Hours.
1. Food service management.	1. Food service management: types of food service establishments, Principle of Management, Functions of Management, Planning of a layout.	25 Hrs
	2. Menu Planning: Importance of menu planning, Types of menu planning, Steps in menu planning and its evaluation.	25 Hrs
	3. Food purchasing and storeroom management: Mode of purchasing, Methods of purchasing, Receiving, Storage Space, Storage room Management.	25 Hrs
	4. Food Production-Planning and control: Production forecasting, Production scheduling, Production control, Standardized Recipes.	25 Hrs
	5. Quantity food production: Basic cookery procedures, Types of Equipments.	25 Hrs
	6. Food Delivery and service systems: Methods of food delivery systems, Centralized and decentralized, Types of food service systems.	25 Hrs
	7. Personnel Management: Leadership, Functions and qualities of leadership, Manpower Planning, Recruitment and Selection, Placement and Induction, Performance appraisal, Training and development.	25 Hrs
	8. Food Hygiene and sanitation: Sanitation in food services, 3E's of safety, Food safety, Hygienic food handling.	25 Hrs

Details of Curriculum for First Year
Diploma in Clinical and therapeutic nutrition course

PAPER 2nd Theory	Topics	Hours.
2.RDA and nutritional value of common food items.	1. RDA of adult man, adult woman, RDA in different age groups of children, adolescence, pregnancy, breast feeding.	50 Hrs
	2. Nutrition values of common food items e.g. cereals. Pulses, legumes, vegetables, fruits, dry fruits, milk and milk items, human milk, egg, fleshes, oils, sugar and jaggery, condiments and spices.	50 Hrs

Curriculum
for
Practical :- First Year
Diploma in Clinical and therapeutic nutrition course

	Topics
Practical	Observer ship for-
	<ul style="list-style-type: none"> • Calculation of nutrition value of all food items.
	<ul style="list-style-type: none"> • Calculation of nutrition requirement as per age & gender.
	<ul style="list-style-type: none"> • Calculation of nutritive requirement in various diseases.
	<ul style="list-style-type: none"> • Prescribing diet in various ailments.
	<ul style="list-style-type: none"> • Observation of healthy processing, cooking & dispensing of food.

Details of Curriculum for Second Year
Diploma in Clinical and therapeutic nutrition course

PAPER 1st Theory	Topics	Hours.
1.Dietetics and diet counseling (Therapeutic nutrition)	1. Therapeutic diets: Basic concept, Therapeutic adaptation of normal diet, Factors considered, Routine Hospital Diets, Mode of feeding methods, Role of dietitian in the hospital and community, Patient care and counseling.	40 Hrs
	2.Diet in fever: Nutrition and Infection, Metabolic changes during infection, Typhoid fever, Tuberculosis, HIV Infection and AIDS.	40 Hrs
	3.Diet in weight imbalance and counseling: Obesity and underweight, Causes, Health risk, Dietary treatment, Psychotherapy.	40 Hrs
	4.Diet in diseases of gastro intestinal tract and counseling: Upper GI Tract disorders- Disorders of esophagus, Disorders of stomach, Lower GI Tract disorders- Common intestinal disorders, Disorders of small intestine, Intestinal Brush border enzyme deficiencies, Inflammatory bowel diseases, Disorders of large intestine.	60 Hrs
	5.Diet in liver diseases and counseling: Hepatitis, Cirrhosis of liver, Hepatic coma, Diseases of gall bladder, Diseases of Pancreas.	40 Hrs
	6.Diet in kidney diseases and counseling: Glomerulonephritis, Nephrotic syndrome, Acute Renal failure, Chronic renal failure, End stage kidney diseases, Urolithiasis.	50 Hrs
	7.Diseases of metabolic disorder and counseling: Diabetes mellitus, Gout.	50 Hrs
	8.Diet in cancer & counseling: Risk factors, Metabolic alterations and nutritional problems related to cancer, Nutritional requirements of cancer patients related to cancer therapy, Cancer prevention.	50 Hrs
	9.Diet in cardiovascular diseases & counseling: Coronary heart diseases(CHD) Prevalence, Risk factors, Pathophysiology, Dyslipidemia, Atherosclerosis, Hypertension, Angina pectoris, Myocardial infarction, Congestive cardiac failure.	80 Hrs

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**Details of Curriculum for Second Year
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PAPER 2nd Theory	Topics	Hours.
1.Public nutrition.	1. Public nutrition: Concept, Scope, Future projections, Health care, Role of public nutritionists in health care delivery.	15 Hrs
	2. Nutritional problems in india:- Protein energy malnutrition, Micronutrient deficiencies, Vitamin deficiencies.	25 Hrs
	3. Assessment of nutritional status: Population sampling, Anthropometry, Clinical assessment, Biochemical assessment, Dietary assessment.	25 Hrs
	4. Nutrition monitoring and nutrition surveillance: Nutrition monitoring and its current programmes, Nutrition surveillance system.	20 Hrs
	5. National nutrition programmes: Integrated child development services(ICDS) programme, Nutrient deficiency control programme, Supplementary feeding programme, Food security programme.	15 Hrs
	6. Strategies to combat national nutritional problems: Introduction, Diet or food based strategies, Nutrient based strategies, Immunization.	10 Hrs
	7. 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.	20 Hrs

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PAPER 2nd Theory	Topics	Hours.
2. Clinical nutrition.	1. Pediatric nutrition: Growth and development, Nutritional considerations of LBW infants & children, Child hood obesity and under nutrition.	30 Hrs
	2. Ageing and osteoporosis: Physiological changes, Bone health, Osteoporosis, Rheumatoid arthritis, Nutritional support.	20 Hrs
	3. Nutrient and drug interactions: Basic concept, Effect of nutrition on drugs, Drug effect on nutritional status.	30 Hrs
	4. Food intolerances and food allergy: Adverse food reactions, Treatment and Mangement, Prevention.	20 Hrs
	5. Nutrition and cancer: Carcinogenesis and mutagenesis, Development of cancer, Metabolic alterations during cancer.	30 Hrs
	6. Nutrition and dental health: Structure, development and maturation.	20 Hrs
	7. Nutrition and neurological disorders: Parkinsons disease, Alzheimers disease, Epilepsy, Migraine, Multiple sclerosis, neurotrauma, spine trauma, feeding problems in patients with neurological diseases	50 Hrs

Curriculum
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Practical :- Second Year
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Practical exams syllabus should cover-

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