

ORDINANCE OF ADVANCE DIPLOMA IN CLINICAL NUTRITION AND DIETETICS

(This course will start from the session 2006-2007)

- Title** The title of the Course shall be "**Advance Diploma in Clinical Nutrition and Dietetics.**
- Objectives** **The Course aims at the following objectives:**
(1) To facilitate the understanding of the preventive, promotive and curative role of diet in health.
(2) To enable students to make appropriate dietary modifications for various therapeutic conditions based on the patho-physiology of diseases.
(3) To impart knowledge and skills for effective diet counseling.
(4) To enable the students to make dietary modifications during physical training and sports conditions.
- Duration** The total duration of the Course shall be of one year, spread into two semesters.
- Seats** The total number of students to be admitted in the Course shall be 30
- Eligibility** Any graduate with Home Science (B.A./B.Sc.) or Biology with 50% marks for General Category and 45% marks for SC/ST Category shall be eligible for admission the Course
- Fees** Fee will be charged as per University fee Structure revised from time to time.
- Admission Policy** Students will be admitted on the basis of University Rules. Reservation policy of the University of Lucknow shall be followed.

Course Content

The Curriculum comprises of theory as well as Practical training of students. Theory includes various papers on nutritional requirements and dietary modifications during human life cycle and various disease and special conditions. These studies are backed by laboratory experiments, dissertation and internship in a health care set-up.

The one year duration of the Course is divided into two semesters. Each semester will have the following papers:

Semester-I will comprise of following four papers along with Practical work.

1. Human Physiology
2. Clinical Bio-chemistry
3. Principles of Nutrition and Meal Management
4. Diet Therapy.
5. Practical Work

Each theory paper will be of 100 marks. Practical work (including Viva-Voce) will carry 100 marks separately.

Semester-II will comprise of following three theory papers:

1. Community Nutrition and Epidemiology
2. Dietetic Techniques and Patient Counseling
3. Advance Clinical Nutrition
4. Dissertation
5. Internship

Besides these theory papers there will be one Dissertation/Project and Internship. The theory papers will be of 100 marks each whereas Dissertation/Project and Internship will also carry 100 marks each separately.

SEMESTER I

Human Physiology

Semester-I

Paper-I

- Unit-I** Definition of Anatomy and Physiology. General Anatomy of Human Body.
Cells, Tissues, Organs and Systems. Homeostatis.
- Unit-II** Structures and Functions of Various Organs and Systems:
Digestive system
Circulatory System
Respiratory System
Excretory System
Reproductive system
- Unit-III** Nervous System
Endocrine System
Blood, Blood Coagulation, Overview of Leukocyte Function
- Unit-IV** Fertilization and Intrauterine Developments
Human Life Cycle- concept, growth and development in various stages of life cycle.

Clinical Bio-chemistry

Semester-I

Paper-II

- Unit-I** Principles of Biochemistry and its Relevance to Human Nutrition.
Matabolism of Macro-nutrients, Carbohydrates, Proteins and Lipids, Nucleic Acids
- Unit-II** Role of various Enzymes in Health and Disease.
Impact of Hormones on General Health.
- Unit-III** Inborn Errors of Metabolism.
- Unit-IV** Changes During CHO, Protein and Lipid Metabolsim

Dysfunction.

Practical : Food Analysis Practical: Qualitative and Quantitative Estimation of Various Macro and Micro-nutrients.

Principles of Nutrition and Meal Management

Semester-I

Paper-III

Unit-I Definition and Interrelationship of Food, nutrition and Health. Macro-nutrients and Micro-nutrients; Classification, Functions, Sources, Daily requirements, Deficiency.

Unit-II Menu-Planning- Principles and Importance.

Unit-III Nutrition During the Life cycle- Infancy, Childhood, School Going Age, Adolescence, Childhood, Old age
Nutrition During Specific Physiological States: Pregnancy, Lactation.

Unit-IV Nutrition During Fever, Burns, Stress and Nutrition During Hyper Physical Activity such as Athletes and Sportsmen.

Diet Therapy

Semester-I

Paper-IV

Unit-I Principles of Dietetics, Preventive, Promotive and Curative Role of Dietetics in Health and Disease.

Unit-II Dietary Modifications Required in the following conditions:
Overweight and Underweight.
Fever and Infections
Lower and upper Gastro-intestinal tract disorders.
Liver, Biliary systems and Pancreatic disorders.

Unit-III Diabetes
Renal disorders : Renal Glomerulonephritis, Nephrotic Syndrome,

Acute and Chronic Renal Failure, Kidney Stone

Unit-IV Rheumatoid disorders
Hypertension and Cardio-vascular Diseases

Practical : Planning and preparation of Normal and therapeutic diets for various disease conditions.

SEMESTER-II

Community Nutrition and Epidemiology

Semester-II

Paper-I

Unit-I Nutritional Needs and Problems of Various Sections of the Community
Infancy and Childhood
Pregnancy and Lactation
Old age.

Unit-II Assessment of Nutritional Status, Various Methods and Their Relative Importance.
Nutrition Education

Unit-III Role of Various National and International Agencies involved in Promoting Health and Nutrition
Food Micro-biology- A General Concept

Unit-IV Various food and water borne diseases and their prevention

Dietetic Techniques and Patient Counseling

Semester-II

Paper-II

Unit-I Role and Importance of Dietician in a Health Care Set-up.

Unit-II Study of Various Pathological and Clinical Parameters in Health and Disease.

Unit-III Study of Psychological Problems Related to Various Diseases and Their Impact on Patient's Nutritional Status.

Unit-IV Various Techniques of Counseling in Terminally and Critically ill Patients.

Advance Clinical Nutrition

Semester-II

Paper-II

Unit-I Medical Nutritional therapy in the following Conditions: Sepsis, Trauma, Burns, Surgery, HIV Infection and AIDS, Neo-plastic Diseases, Pulmonary Diseases, Anemia, Neurological Disorders, Food Allergy, Food Intolerance and Mal-absorption Syndrome.

Unit-II Specialized Hospital diets-

- a. Enteral and Parenteral Nutrition for Various Disease Conditions.
- b. Role, Importance and Composition of Nutrients in the Preparations of Various Enteral and Parenteral formulae.

Unit-III Planning, Diets for Critically ill Patients.
Pediatric Dietetics.

Unit-IV Geriatric Dietetics: Nutritional requirements of the Elderly and Dietary Management to meet Nutritional Needs. Chronic Degenerative Diseases and Nutritional Problems of Elderly.

Project and Dissertation

Semester-II

Paper-IV

The Students will do an Advance Hospital Based Research Project. They will also do Specific Project on Hospital Case Studies.

Specialized Internship

Semester-II

Paper-V

An Internship programme of 2 months Duration will be taken up by the students in an Approved Government or Private Hospital.

1. Case Studies: The Students will Undertake Specialized Case Studies and Monitor the Role of Therapeutic Nutrition in the Management of the Disease.
2. Attendance, Performance and Evaluation by the Host Organization.
3. Internship Report and Presentation: Submission of an Internship report including information on host organization and its dietary departments, different hospital diets prescribed and served, policies followed by the hospital and maintenance of a daily work sheet.
4. Presentation of the Internship report

REFERENCES

1. M.S. Swaminathan: Essentials of Food and Nutrition, Vols. I, II & III.
2. M. Robinson: Normal and Therapeutic Nutrition
3. Sue Rodwell Williams: Nutrition in Health and Diseases.
4. Arthur C Guyton: A textbook of Medical Physiology.
5. C.C. Chatterjee: Medical Physiology
6. Harper: Biochemistry
7. M.C. Pant: Biochemistry
8. F.P. Antia & Abraham: Clinical Dietetics and Nutrition, 10th Edn., Churchill Livingstone, Edinburg, London.
9. C. Gopalan & Krishnaswamy: Nutrition in Major Metabolic Diseases, 2000 Edn. Oxford University Press, New Delhi.