

FACULTY OF SCIENCES

SYLLABUS

FOR

PG DIPLOMA IN NUTRITION & DIETETICS (ONE YEAR COURSE) (FULL TIME) (SEMESTER: I - II)

Examinations: 2019-20



GURU NANAK DEV UNIVERSITY AMRITSAR

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PG DIPLOMA COURSE IN NUTRITION AND DIETETICS (SEMESTER SYSTEM)
(ONE YEAR COURSE) (FULL TIME)

SCHEME

SEMESTER – I

| No. | Subject | Teaching time/week | Marks of Paper | Papers | Duration of Paper |
|-----|---|--------------------|----------------|--------|-------------------|
| 1 | Physiology (Theory) | 4 Periods | 50 | 1 | 3 Hours |
| 2 | Community Nutrition (Theory) | 6 Periods | 75 | 1 | 3 Hours |
| 3 | Community Nutrition (Practical) | 4 Periods | 50 | 1 | 3 Hours |
| 4 | Institutional Food Administration (Theory) | 4 Periods | 75 | 1 | 3 Hours |
| 5 | Institutional Food Administration (Practical) | 6 Periods | 50 | | |
| | | Total: | 300 | | |

SEMESTER – II

| No. | Subject | Teaching time/week | Marks of Paper | Papers | Duration of Paper |
|-----|--|--------------------|----------------|--------|-------------------|
| 1 | Hygiene and Food Microbiology (Theory) | 4 Periods | 75 | 1 | 3 Hours |
| 2 | Diet Therapy and Applied Nutrition (Theory) | 6 Periods | 75 | 1 | 3 Hours |
| 3 | Diet Therapy and Applied Nutrition (Practical) | 6 Periods | 50 | 1 | 3 Hours |
| 4 | Social Welfare | 4 Periods | 50 | 1 | 3 Hours |
| 5 | Project | 4 Periods | 50 | | |
| | | Total: | 300 | | |

Project: Based on Diet Therapy and Community Nutrition Theory. Marks will be given by a panel of 4 experts.)

Internship: Students are required to undergo 3 months training in a hospital. Completion certificate compulsory for obtaining PG Diploma

Students opting for P.G. Diploma in Nutrition & Dietetics with B.Sc. (Medical) to appear in deficient paper of Basic Nutrition as per syllabus attached with B.Sc. Part-I (of Basic Nutrition & Meal Management Clinical Nutrition & Dietetics) & marks not be added to the P.G.

PG DIPLOMA COURSE IN NUTRITION AND DIETETICS (SEMESTER-I)
(ONE YEAR COURSE) (FULL TIME)

Physiology (Theory)

4 Periods/Week
Time: 3 Hours

Max. Marks: 50

Instructions for the Paper Setters:

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION-A

1. Review of cell structure and functions of inclusion bodies.

2. Cardio Vascular System :

Basic properties of the heart, cardiac output, blood pressure and factors affecting it and hypertension.

SECTION-B

3. Physiology of Kidneys :

Mechanism of urine formation and the role of the kidneys in water and electrolyte balance.

SECTION-C

4. Physiology of the digestive system :

Secretory and digestive function of the salivary glands, the stomach, the pancreas, the liver and intestine. Mechanism of absorption of carbohydrates, proteins and fats.

SECTION-D

5. Physiology of endocrine glands :

Functions of the Thyroid, parathyroid, adrenal cortex, adrenal medulla, pancreas, pituitary glands and different syndromes resulting from medules, hypo or hyperactuchy.

Books Recommended:

1. Bloom, W. And Fawcett, D.W.A. Text Book of Histology W.B.Saunders of Company,1968.
2. Guyton, AC, Text Book of Medical Physiology W.B. Saunders & Company.
3. Strand, F.L. Modern Physiology. Macmillan Publication.
4. Davidson, B. And Smith E., Text Book of Physiology and Biochemistry, 1972.

PG DIPLOMA COURSE IN NUTRITION AND DIETETICS (SEMESTER-I)
(ONE YEAR COURSE) (FULL TIME)

Community Nutrition (Theory)

6 Periods/Week
Time: 3 Hours

Max. Marks: 75

Instructions for the Paper Setters:

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Community Nutrition:

SECTION-A

1. Nutrition and National Development.
2. Major Nutritional Problem. Economic of Nutrition.
3. Factors Affecting Food Consumption, Malnutrition.
 - a) Agricultural production and socio-economic and psychological factors related to malnutrition and family size and composition. Biology of malnutrition, dietary pattern, Food intake, food waste, custom habits prejudices and aversions, ignorance of nutritional needs.
 - b) Measures to overcome malnutrition. Application of basic principles of nutrition to improve the dietary practices of communities. Needs for an integrated approach to solve problems of malnutrition. Increase in food production (green and white revolution) use of new unconventional foods.
 - c) Nutrition adaptation.
4. Economic of sanitation of food nutrition – loss of food nutrients on contamination with chemical poisons, parasitic and microbial.

SECTION-B

5. Nutrition and infection.
6. National and international organization engaged in foods and nutrition activities.
 - a) National : Role of voluntary agencies and state programmes. Community Development and extension programmes. State nutrition councils and bureaus, contribution of ministries of agriculture and health, ICMR, NIN, CSIR, CFTRI and ICAR.
 - b) International: FAO, WHO, UNICEF.

SECTION-C

7. Assessing the food and nutritional problems in the community. Methods for assessment of (c) nutritional status of an individual and community :-
 - (a) Direct Assessment: Clinical sign, nutritional anthropometry, biochemical tests, biophysical methods.
 - (b) Indirect Assessment: Vital statistics nutritionally relevant diseases, assessment of ecological survey, technique of diet and nutrition survey.

PG DIPLOMA COURSE IN NUTRITION AND DIETETICS (SEMESTER-I)
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8. Objectives and operations of feeding programmes in the country:-
 - (a) Pre-School feeding programmes.
 - (b) School lunch programmes.
 - (c) Programmes for other vulnerable sections of population.

SECTION-D

9. Nutrition Education: Study of existing daily dietary pattern in relation to socio-economic and Psychological aspects, importance of nutrition education for the community, technique, nutrition education through reading programmes. Training workers in nutrition education and feeding integration of nutrition education with extension work.
10. Principles of planning, executing and evaluating the nutrition education programmes.
11. Food Adulteration: Laws governing the food standards. Common methods of detecting food adulteration at home
12. Current Nutrition Programmes – Provision for nutrition in the IXth five years plan.

PG DIPLOMA COURSE IN NUTRITION AND DIETETICS (SEMESTER-I)
(ONE YEAR COURSE) (FULL TIME)

Community Nutrition (Practical)

4 Periods/Week
Time: 4 Hours

Max. Marks: 50

1. Planning and conducting nutrition education programmes (Project).
2. Evolving and standardization of cheap, nutrition recipes using various food suitable for vulnerable groups.
3. Surveys (class project).
4. Preparation and use of projected and non-projected teaching aids for imparting nutrition education programmes.

Books Recommended:

1. Biology of Nutrition – Elements 1972, Plenum Press.
2. Applied Nutrition – Rajalakshmi R.
3. Nutrition in India – Patwardhan V.N.
4. Nutrition and physical fitness – Bougert L.J.
5. Nutrition evaluation of food processing, Roberts Haris, John Wiley and Sons, New York and London.

PG DIPLOMA COURSE IN NUTRITION AND DIETETICS (SEMESTER-I)
(ONE YEAR COURSE) (FULL TIME)

Institutional Food Administration (Theory)

4 Periods/Week
Time: 3 Hours

Max. Marks: 75

Instructions for the Paper Setters:

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION-A

1. Review of different types of institutional food service operation – Commercial and non-commercial.
2. **Meal Planning in Institution:** Basic factors in institutional meal planning. Menu types of service portion control. Maintenance of standard serving methods, techniques of preparation of food in large quantity, food habits, food costs, maintenance, use of waste foods. Standardisation of common food preparation.

SECTION-B

3. **Organization:** Theories of organization, different types.
4. **Management:** Definition and function. Tools of management – Organization chart, job analysis, job specification, job evaluation and worksheet, decision making, communication process and methods.

SECTION-C

5. **Personnel Management:** Types of personnel required, personnel relationship, methods of recruitment, welfare provision for employees – health, safety, recreation. Meal of employees labour and food laws.
6. **Principle Resources:** Money – use of money, factors affecting cost control – cost concepts, types, element. Importance of cost control, methods of purchasing and requisition and inventory. Use of ledgers and basic knowledge of trading (profit and loss account and balance sheet).

SECTION-D

7. **Physical Plant:** Location floor plans space allowances, kitchen unit, storage units, serving unit and dish washing etc. work simplification.
8. **Equipment:** Types of equipment criteria for their choice, efficiency in their operation and care.

PG DIPLOMA COURSE IN NUTRITION AND DIETETICS (SEMESTER-I)
(ONE YEAR COURSE) (FULL TIME)

Institutional Food Administration (Practical)

6 Periods/Week

Marks: 50

1. Preparation of recipes suitable for Cafeteria.
2. Standardization and Cost calculation of recipes selected for Cafeteria.
3. Each student will run a Cafeteria and perform assigned duty in each cafeteria that will beevaluated. Manager will submit a report of each cafeteria.

Note: There will be no external exam. Each cafeteria and duty will carry marks and marks will be send by concerned teacher.

PG DIPLOMA COURSE IN NUTRITION AND DIETETICS (SEMESTER-II)
(ONE YEAR COURSE) (FULL TIME)

Hygiene and Food Microbiology (Theory)

4 Periods/Week
Time: 3 Hrs.

Max. Marks: 75

Instructions for the Paper Setters:

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION-A

1. **Hygiene:** A brief introduction to industrial hygiene, environment, sanitation and publichealth.
2. Control of infection in catering establishment.
 - (a) Prevention of spread: Notification, isolation and quarantine.
 - (b) Immunity types and their effect.
 - (c) Disinfecting types of disinfection – Concurrent and terminal : methods of disinfectionand different surfaces and materials – floor, walls, utensils, crockery, cutlery, clothing,wedding rooms, water closets, physical, chemical and mechanical methods.

SECTION-B

Microbiology:

1. Discovery and brief history of microbiology, sub disciplines of microbiology.
2. Antimicrobiology Agents: Antibiotics, germicides, antiseptics, qualification of antimicrobialaction.

SECTION-C

3. Sources of harmful bacteria and their methods of transmission.
4. Bacterial food poisoning characteristics of bacteria, sources of infection in susceptible, food,sign and symptoms of the following:-
 - (a) Salmonella FP
 - (b) Staphylococcal FP
 - (c) Clostridium perfirenges FP
 - (d) Clostridium botulinum FP

SECTION-D

6. General types of food spoilage and food preservation.

PG DIPLOMA COURSE IN NUTRITION AND DIETETICS (SEMESTER-II)
(ONE YEAR COURSE) (FULL TIME)

Diet Therapy and Applied Nutrition (Theory)

6 Periods/Week
Time: 3 Hrs.

Marks: 75

Instructions for the Paper Setters:

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION-A

Drug – Nutrient interaction.

1. Principles of therapeutic diets.

- (a) Introduction – Intravenous feeding, soft, liquid and post operative feedings. Modifications of Diet. Surgical conditions.
- (b) Diets in Fever and Infections–Types, metabolism in fevers, general dietary considerations. Diet in Typhoid , Tuberculosis
- (c) Calories – Undernutrition, overnutrition.

SECTION-B

Gastro intestinal diseases – Peptic ulcer spastic and stomic constipation, diarrhoeas, Ulcerative colitis–symptoms and dietary treatment, Sprue-coeliac diseases, Lactose intolerance dietary treatment

Liver disease – jaundice, cirrhosis and hepatic coma, gall bladder disease (cholecystites and (d) chololithesis and pancreatitis)

(e) Kidney disease – Nephritis, nephrotic syndrome acute and chronic renal failure, Urinary calculi kidney failure and Dialysis

SECTION-C

(f) Metabolic disorder – Diabetes

(g) Chronic disorder like gout.

(h) Cardiovascular disease – Hypertension and heart disease (Artherosclerosis,Hyperlipidemia)

(i) Elimination diets in allergy.

SECTION-D

Nutrition and Cancer.

Nutrition and AIDS and skin diseases.

PG DIPLOMA COURSE IN NUTRITION AND DIETETICS (SEMESTER-II)
(ONE YEAR COURSE) (FULL TIME)

Diet Therapy and Applied Nutrition (Practical)

6 Periods/Week

Marks: 50

1. As related to theory planning preparation and serving diets for all the conditions mentioned in the theory keeping in mind the economic, regional and cultural factors. Family nutrition counselling.
2. Students are required to undergo 3 months training in a hospital certificate to be obtained from the hospital.
3. Innovation of atleast 2 recipes for therapeutic conditions e.g. diabetes, hypertension etc.

Books Recommended:

- (i) Davidson and Passmor – Human Nutrition and Dietetics.
- (ii) Whole and Good Heart – Modern Nutrition in Health and Disease.
- (iii) Cooper, Barber and Micholl – Nutrition in health and disease.
- (iv) Anita – Nutrition in health and disease.

PG DIPLOMA COURSE IN NUTRITION AND DIETETICS (SEMESTER-II)
(ONE YEAR COURSE) (FULL TIME)

Social Welfare (Theory)

4 Periods/Week
Time: 3 Hrs.

Marks: 50

Instructions for the Paper Setters:

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION-A

1. Concept of Social Welfare:

- (a) Meaning, Importance.
- (b) Social welfare as distinguished from social work, social service, social reform and socialaction.

SECTION-B

2. Broad fields of social welfare.

- (a) Family and child welfare
- (b) Medical and psychiatric welfare
- (c) Correctional service

SECTION-C

3. Social welfare agencies and institutions involved in social welfare :

- (a) Social welfare administration
- (b) Functioning of central and state government.
- (c) Ministeries and departments of social welfare
- (d) Trends in social welfare administration
- (e) Central social welfare board
- (f) Kasturba Gandhi National Memorial Trust

SECTION-D

- (g) Bhartiya Grameen Mahila Sangh
- (h) All India women's conference
- (i) Women's voluntary service
- (j) The all India conference of social work
- (k) The home science association of India
- (l) Local Organization – Official and non-official, involved in social welfare.

PG DIPLOMA COURSE IN NUTRITION AND DIETETICS (SEMESTER-II)
(ONE YEAR COURSE) (FULL TIME)

Books for References:

1. Clarke, Helen, Principles and Practices of Social work, Acolaton, Century-crofts, Ince, New York, 1947.
2. Young Husband, Eileon, Social work and Social Change, George Allan and Unwin Ltd., Ruskin House Museum Street, London, 1964.
3. Fariodlander, Walter, A Concept and Methods of Social Work, Prentice Hall of India (Pvt).Ltd., New Delhi, 1964.
4. E. Wilson, Everett, E. and Convener, Merrill B. The Field of Social work, Henry Holt and Company, New York, 1958.
5. Nagpaul, Hans, The study of India society, Sociological Analysis of Social Welfare and Social Work Education, S. Chand and Co. Pvt. Ltd., New Delhi.