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POST GRADUATE DIPLOMA COURSE IN APPLIED NUTRITION AND DIETETICS
SEMESTER

Regulations

1. Eligibility for admission to the course

Any graduate of this university or any other university recognised by the syndicate as equivalent there to is eligible for admission to the course.

2. Duration of the course:

The duration of the course shall be one academic year consisting of two semesters. The first semester starts on 1st July and ends on 15th of December. The second semester starts on 16th January and ends on 15th May. The students will be posted in the hospital/field one and half a month from 15th of May to 30th of June.

3. Eligibility for Diploma:

No candidate shall be eligible for the Diploma who has not undergone the prescribed course and has not passed the qualifying examination.

4. Requirements of attendance:

A candidate ~~shall be eligible for the course~~ will be permitted to appear for the university examination at the end of the each semester if

- a. He/She secures not less than 75% of attendance in the total working days of the course.
- b. He/She earns a progress certificate of the head of the institution of having satisfactorily completed the course of study prescribed by the regulation and.
- c. His/Her conduct has been satisfactory.

5. Course of study and scheme of examination

Subjects	Duration of examination hrs	Internal marks	External marks	Total marks
<u>FIRST SEMESTER</u>				
1. Public Health	3	40	60	100
2. Principles of Nutrition	3	40	60	100
3. Dietetics	3	40	60	100
		120	180	300
<u>SECOND SEMESTER</u>				
4. Community Nutrition & Nutrition Education	3	40	60	100
5. Catering and Accountancy	3	40	60	100
6. Practical	3	50	50	100
7. Project Report (concurrent Field Training)	-	50	50	100
8. Viva-Voce	-	-	100	100
		100	100	5

6. Examination when held:

The examination will be held at the end of each semester.

7. PASSING MINIMUM:

- a. A candidate shall be declared to have passed the written paper/practical/project report, if he obtains not less than 50 percent of marks in the external assessment as well as in the aggregate of both internal and external assessments put together.
- b. A candidate shall be declared to have passed in the viva-voce, if he obtains ~~ixnxnxseparate minimum marks for the internal assessment~~ not less than 50 percent of marks in the external assessment.
- c. There is no separate minimum marks for the internal assessment.

8. FAILED CANDIDATES

- a. A candidate who has failed in a written paper/papers in the first semester-examination can re-appear only for the failed written paper/papers along with the second semester examination.
- b. A candidate who has failed in the written paper/papers/practical/project report/viva-voce examination in the second semester examination can re-appear only for the failed written paper/papers/practical project report/viva-voce examination along with the first semester examination at the subsequent appearance.
- c. The internal assessment marks already obtained by the candidate shall be carried over.

9. INTERNAL ASSESSMENT:

The internal assessment marks will be the marks awarded by the college/institution offering the course.

10. RESULTS AND CLASSIFICATIONS:

- a. Results will be declared after every University examination in each semester and the marks obtained by the candidates will be forwarded to them through the institution.
- b. Classification of successful candidates shall be declared at the end of the second semester.
- c. A candidate who has passed in all the subject of examination of first and second semesters whether in one appearance or more appearances shall be declared to have passed in FIRST CLASS, if he/she secures not less than 60 percent of marks on the aggregate of all the subject put together including the internal marks.
- d. A candidate who has passed in all the subject of first and second semesters whether in one appearance or more appearances shall be declared to have passed with DISTINCTION, if he/she secures not less than 75 percent of marks on the aggregate of all the subjects put together including the internal marks.

11. PROJECT REPORT:

- a. The project report should be prepared according to the guidelines prescribed.
- b. This will be valued by the external examiners appointed by the university.
- c. This should be submitted to the university at the end of April and in case of candidates who have appeared the same along with the first semester should be submitted to the university at the end of November.

12. VIVA-VOCE:

- a. This is an independent field training and the candidates will be posted in some hospital or nutrition projects or nutrition rehabilitation centres.
- b. The external evaluation of oral examination will be conducted by the university according to the guidelines prescribed on the basis of the field training.
- c. The examination will be held in the first week of July and December in case of failed candidates.

13. SYNDICATE COMPETENT TO SUSPEND THE COURSE: Notwithstanding anything contained in the above regulations, it shall be competent for the Syndicate, by previous notification, to suspend for any year or any number of years, the Post-graduate Diploma course in Applied Nutrition and Dietetics.

First semester - 11 Public Health

Objectives:

To ~~help~~ help students

1. Understand the basic concepts, principles and components of public health
2. Understand the principles of sanitation and hygiene
3. Obtain knowledge on public health administration and public health programmes.

Theory

1. Public health-importance and need for public health India.
2. Personal hygiene-need for personal hygiene with special reference to hair, hands, teeth, nail, face, nose, throat and other parts of the body-health education on personal hygiene.
3. Carriers of Infection: *Parasites*
 - a. Helminths and protozoa- a study of parasites intestinal nematodes-thread worm, round worm, hook worm cestodes-taenia saginata, taenia solium, trematodes, blood flukes, protozoa-phylum rhizopoda flagellates, ciliates and sporozoa.
 - b. Insects-a study of insects mosquito fleas, lice, house fly, tsetse fly bed bug sandfly and ticks, morphology life history and prevention.

- c. Microbes virus, fungi, yeasts and bacteria morphology physiology and pathogenesis in human being.
- d. Food hygiene-milk, meat, fish, fruits and vegetables, sanitation of eating places-food poisoning-types, remedial measures.
4. Control of communicable diseases-epidmiology of communicable diseases transmission, source or reservoir of infection, early diagnosis notification, isolation treatment modes of control, epidmiological surveillance, disinfection.

Vehicles of transmission, sector transmission, airborne transmission, contact transmission, blocking the transmission.

Protecting the susceptible population-immunisation schedule chemorpopylaxis.

5. Environmental health-water and soil radio active and noise pollution as well as pollution of atmosphere-waste diaposa-sewage treatment adulteration of foods~~max~~-method and prevention.
6. Occupational health-chemical agents, hazards arising from dust, fumes, mists, vapours, gages and solvents physical agents-vibrations, unsatisfactory lighting ultraviolot radiation, exposure to heat and cold.
7. Public health administration-public health administration at different levels, health services, international health relationships of India (W.H.O.)
8. National health programmes-health statistics and demography.
 - a. National Malaria Eradication Programme.
 - b. National Small Pox Eradication Programme.
 - c. National Water Supply and Sanitation Programme
 - d. Leprosy Control Programme
 - e. National T.B. Control Programme
 - f. National Family Planning Programme
 - g. Health Statistics and Demography
 - h. Other agencies such as saretis for cancer, diabetes and heart diseases.
9. Health education.
 - a. Role of preventive health
 - b. Importance of sound health habits
 - c. Hazads of smoking alchohol addition and other social weakness.

epidemiology

PRACTICALS/RELATED EXPERIENCE

1. Examination of different helminths
2. Life history of mosquito, flea, lice, housefly, testse fly, bedcug, sand fly and ticks.
3. Examination of organisms, yeasts, fungi, bacteria and protozoa.
4. Methods of study of organisms in soil, water, air, milk and milk products.

5. A study of health data in India.
6. Visit to public health laboratory to study common adulterants.
7. Visit to dairy farm
8. Visit to sewage farm
9. Visit to industrial complex to study methods of waste disposal and extent of pollution.
10. Visit to primary health centre or district hospital.
11. Visit to district health office.

REFERENCE BOOKS:-

1. Gosh, R, 'A TREATISE ON HYGIENE AND PUBLIC HEALTH', Scientific Publishing Company Inc., Calcutta, 1959.
2. Park, J.E. and Park K., "PREVENTIVE AND SOCIAL MEDICINE", Bannarsidas Bhanot and Company limited, India, 1975.
3. Switz, W.G. "MEDICAL PARASITOLOGY", McGraw Hill Book Company, 1956
4. Felezer, K.J. and Reid, R.D., "MICROBIOLOGY", McGraw Hill Book Company, Calcutta 1959.
5. W.H.O., "HEALTH HAZARDS OF HUMAN ENVIRONMENT", World Health Organisation, 1972.
6. Jacob, T., "Food Adul Teration" The MacMillan Company of India limited, Delhi, 1976.
7. Langree, K., "QUANTITY FOOD SANITATION Wile Inter Science, 1972.
8. Frazier, W.C. "FOOD MICROBIOLOGY", Tata Mc Graw Hill Book Company, Bombay 1970.
9. Hobbs, "FOOD POISONING AND FOOD HYGIENE? Edward Arnold company, London 1963.

FIRST SEMESTER-1 2 PRINCIPLES OF NUTRITION

Objectives:

To enable students

1. Understand the vital link between nutrition and health
2. Obtain knowledge of different food groups and their nutritive value
3. Gain knowledge of ~~nutrients~~ nutrients and their role in body's smooth functioning.

THEORY

- 1.. Concept of nutrition growth of the science of nutrition with special reference to India-rekation of nutrition to health-adequate nutrition, optimum nutrition, malnutrition.
2. Food groups which will provide nutritive requirements for normal health body building foods energy food and protective foods- I.C.M.R. grouping of foods-basic five.
3. Structure, nutritive value and effect of processing on cereals, pulses, vegetables, fruits, flesh foods, egg, milk and its products, nuts, spices and condiments.

4. A study of cooking methods and how they may be used to preserve the nutritive elements in foods.
5. Chemistry, functions, food sources and effect of deficiency of the following:
 - a. Carbohydrates
 - b. Fats
 - c. Proteins
 - d. Mineral elements
 - e. Vitamins
 Role of water and roughage in the day's diet.
6. Energy-history of determinations of, energy requirements-energy needs of the body-basal metabolism-calculation of basal metabolic rate and total energy needs of the body in terms of kilo calories and joules, physiological fuel values of foods specific dynamic action of foods.
7. Inter-relationship and inter-dependence between carbohydrates, & fats, proteins, minerals and vitamins.
8. Food preservation-principles-reasons for methods of food preservation-chemicals used in food processing-precautions to be observed rural food processing.
9. Food enrichment and food fortification role in combating malnutrition.

PRACTICALS

1. Grouping different foods and comparing their nutritive value, concept of volume, weight relationship-percentage of edible portion in foods-raw equivalents for cooked food items.
2. Experience in cooking foods by different methods and evaluation in terms of time and conservation of nutrients.
3. Experience in methods of food preservation.
4. Quantitative tests for carbohydrates, proteins and minerals.
5. Quantitative estimation of iron, vitamin-C, calcium and phosphorus.

REFERENCE BOOKS:-

1. Davidson, S, Passmore, R., Broke, J.F. and, Truswel. "HUMAN NUTRITION AND DIETETICS" The English Language book Society and Churchill, Livingstone, 1975.
2. Gopalan, C, and Vijayaraghavan, K, "NUTRITION ATLAS OF INDIA", ICMR., New Delhi 1971.
3. Gopalan, C, and Balasubramanian, S.C., Ramasastri, B, V and Visweswara Rao, "DIET ATLAS OF INDIA", ICMR, New Delhi, 1972.
4. Gopalan, C, and Ramasastri, B.A and Balasubramanian S.C, "THE NUTRITIVE VALUE OF INDIAN FOODS ICMR NEW DELHI. 1978.
5. Guthrie, H.F. "INTRODUCTORY NUTRITION" G. H. G.

Publishing company, Calcutta, 1976.

7. Swaminathan, M, "ESSENTIALS OF NUTRITION" Vol 1 and II, The Ganesh and Company, Madras 1974.

JOURNALS:-

1. NUTRITION-Quarterly-National Institute Nutrition. ICMR, Hyderabad.
2. "INDIAN JOURNAL OF NUTRITION AND DIETETICS" Sri Avinashilingam Home Science College, Coimbatore.
3. "PROCEEDINGS OF NUTRITION SOCIETY OF INDIA", Nutrition Society, of India New Delhi.

FIRST SEMESTER - 1,3 DIETETICS

Objectives:-

To enable students

1. Understand the nutritional needs of individuals throughout life cycle and stress conditions.
2. Plan and prepare suitable diets for different age groups stages of life and economical background
3. Understand the different meal patterns in India.
4. Gain knowledge and experience in planning and preparing meals for different occasions and different styles of service.
5. Obtain knowledge on importance of diet in disease and gain experience in preparation of therapeutic diets.

THEORY

1. Definition of dietetics-concept of an adequate diet of measurement for foods including household planning meals for different income ~~xxx~~ levels.
2. Nutritional needs in human life cycle-nutritional measurement for maintenance, growth, reproduction and nutrition in pregnancy, lactation infancy, preschool school age, adolescence, adulthood and oldage maintainance for foods and nutrients recommended by the ICMR.
3. Study of meal patterns in different states of India way service.
4. Meals for special occasions-meal planning, marketing calculation of cost and organisation of work for different occasions like parties, festivals-packed lunches factors be considered in the preparation of packed lunches school, college children, working adults, pñonics.
5. A ~~xx~~ study of food service, methods of service-different Indian styles-western styles.
6. Concept of diet therapy-growth and science of dietetics purposes and principles of therapetic diets-modification normal diets-classification.
7. Role of dietition-definition of nutritional care dietary consmelling-team approach to nutritional care-principlex ~~xx~~ of food prescription.

8. Routine hospital diets-preoperative and postoperative diets-hospital diets-nutrition in surgical conditions-basic concepts of oral feeding tube feeding intravenous rectal feeding-modification of diets in burns.
9. Therapeutic diets-dietary modifications in the following disease conditions based on aetiological factors, biochemical impairments and clinical symptoms.
 - a. obesity and leanness
 - b. Diabetes mellitus
 - c. Febrile diseases
 - d. Peptic ulcer
 - e. Diarrhoea, dysentery and constipation.
 - f. Diseases of the heart and circulatory system
 - g. Diseases of the liver and biliary tract
 - h. Allergy
 - i. Nervous disorder and mental illness.
10. Diets in nutritional deficiency diseases-modifications of normal diets for protein malnutrition, anaemia and vitamin-A deficiency.
11. Diet in cancer.

PRACTICALS

1. Planning a meal for the family at low and medium costs market list and organisation of work.
2. Planning, preparing and serving of low and medium cost meals for
 - a. Preschool children
 - b. School going children
 - c. Adolescence
 - d. Adult
 - e. Expectant mothers
 - f. Nursing mothers
 - g. Preparation of infant formula and weaning foods.
3. Group experiences in planning, preparing and serving meal patterns of different states in India.
4. Demonstration of different styles of service.
5. Planning preparing and serving meals for parties and festivals-planning and preparing packed lunches for school children, college girls, working adults for picnics.
6. Planning, preparation service of diets for
 - a. Obesity
 - b. Diabetes mellitus
 - c. Peptic ulcer
 - d. Heart diseases-hypertension and atherosclerosis
 - e. Liver disorders
 - f. Urinary disorders.

REFERENCE BOOKS:

1. Antia, F.P., "CLINICAL NUTRITION AND DIETETICS", Oxford University Press. Delhi, London New York, 1973.
2. Krause, M.V. and Hunsicker, A. "FOOD nutrition and Diet Therapy", 5th Edition, W.B.Saunders Company, Philadelphia, London, Toronto, 1972.
3. Robinson C.H. "Normal and Therapeutic Nutrition", 14th Edition, The Oxford and J.B.H. Publishing Company, Calcutta, 1976.
4. Williams, S.R. "Nutrition and Diet Therapy", C.V. Mosby Company, St. Louis, 1973.
5. Swaminathan, M., "Essentials of Nutrition", Vol III, The Ganesh and company, Madras, 1974.
6. Davidson, S., Passmore, R., Brock, J.F. and Truswell, "Human Nutrition and Dietetics", The English Language Book Society and Churchill, Livingstone, 1975.
7. Williams S.C., "Essentials of Nutrition and diet Therapy", II Edition, C.V. Mosby Company, St Louis, 1978.
8. Gopalan, C., Balasubramanian, S.C., Ramasastri, B.V., and Visweswara Rao, "Diet Atlas of India", ICMR., New Delhi, 1971.
9. Gopalan C, Ramasastri, B.V. and Balasubramanian, S.C. "The Nutrition value of India foods and planning of satisfactory diets", ICMR, New Delhi, 1975.
10. Gopalan, C; Vijayaraghavan, K "Nutrition Atlas of India", ICMR New Delhi 1971.
11. Callnan and Paul, "An Introduction to cancer medicine", Macmillan, 1978

JOURNALS

1. "Journal of American Dietetics Association", The American Dietetics Association Mount Morris, Illinois, USA.
2. "India Journal of Medical Research", India Council of Medical Research, New Delhi.

Second semester 11 1 Community Nutrition and Nutrition Education Objectives:-

To enable students.

1. Gain insight into the national nutritional problems and their implications.
2. Obtain knowledge about the methods of assessment of nutrition problems
3. Develop skills in organising and evaluating nutrition projects in the community.
4. Appreciated the national and International concentration towards nutritional improvement in India.

1. National nutritional picture-prevalence of malnutrition in India-ecology of malnutrition-environmental and socio-economic factors-related to malnutrition-
2. Assessment of the nutritional status of the community direct and indirect methods-assessment of ecological factors techniques of diet and nutrition survey.
3. Measures to overcome malnutrition-application of basic principles of nutrition to improve the dietary practice of community need for an integrated approach to solve the problems of malnutrition.
4. Fertilization adulteration-fortification of foods, objectives, foods commonly fortified-adulteration of foods-common adulterant effects-prevention of food adulteration-food laws.
5. Nutrition education -teaching and extension of better nutrition-the need for nutrition education for the community and the lessons to be taught-nutrition education through nutritional feeding programmes-training workers in nutrition education-integration of nutrition education with education and extension work-principles of planning, executing and evaluating nutrition programme.
6. Nutritional feeding programme-objectives and operation of feeding programmes in the country-preschool feeding programmes-school lunch programmes-applied nutrition programmes for the other vulnerable sections of the population-evaluation of feeding programmes.
7. Agricultural planning in relation to nutrition-objectives in agricultural planning in relation to nutrition-the green revolution-new hybrid strains-production of milk and milk products, poultry, fish and other fresh foods.
8. Role of national and international organisation to combat malnutrition F.A.O.W.H.O.U.C.I.E.F.-C.A.R.E.-World Bank and others-national organisations concerned with foods and nutrition, ICMR-ICAR-CAEB-C.S.W.B.-S.S.W.B.-State Nutrition Councils and Bureau Community Development and Extension Programme-All India Women's Conference-Women's Voluntary Service-Bharatiya Grameen Mahila Sangh(B.G.M.S)Lasthurba Gandhi National Memorial Trust and other local efforts.

Practical

1. Analysis of urine for;
 - a. total nitrogen
 - b. calcium
 - c. phosphorus
 - d. vitamin-C
2. Analysis of blood for:
 - a. blood glucose
 - b. total protein
 - c. blood haemoglobin

Recipes

3. Visit the different communities both rural and urban to study the food and nutrition situation.
4. Assessment through anthropometric measurements-vital statistics, mortality and morbidity rates;
5. Conducting food and nutrition surveys on selected groups NOTE: Items 4 and 5 can be covered in the village posting.

REFERENCE BOOKS:-

1. Devadas, R.P., NUTRITION IN TAMILNADU Sangam Publishers, 1972.
2. Devadas, R.P, and Radharukmani, A., "The School Lunch Programme", Ministry of Education, 1964.
3. Jelliffe, D.B., "The Assessment of the Nutritional Status of the Community", W.H.O.1965.
4. Avinashilingam, T.S., "Nutritional Feeding in the fourth plan", 1970.
5. Mayer, U., "Human Nutrition", Springfield, 1972.

Journals:

1. "Proceedings of the nutrition in India", Nutrition Society in India, New Delhi.
2. "Nutrition News letters", Food and Agricultural Organisation of the United nations.
3. "Ecology of Food and nutrition", Gordon and Breach Science Publishers, London.
4. "Social Welfare", Central Social Welfare Board New Delhi.
5. "WHO Chronicle", WHO Geneva.
6. Swasth hind", Central Health Education Bureau, New Delhi.
7. "Indian Journal of Home Science", Sri Avinashilingam Home Science College, Coimbatore.
9. "Journal of Nutrition Education", Published by Society for Nutrition Education, Berkely, C.A.
10. All the reports of WHO and FAO.

Second Semester-II 2 Catering and Accountancy

Objectives:

To enable students to:-

1. Analyse the basic principles and application of food science in catering.
2. Develop skills for planning normal and therapeutic and quantity cookery
3. Develop skills in maintaining accounts and
4. Accept responsibilities in catering institution and hospitals.

(A) CATERING

1. Studies of different types of food service institutions
 - a. College of school hostel
 - b. hotel, caterial
 - c. Hospital.
2. Requirements of catering institution -layout-plan of area of food preparation-cooking.cleaning, storing, serving and dining-flow of traffic.

3. Sanitation and hygiene
 - a. Hygienic planning of the kitchen
 - b. Importance of hygiene in the store room
 - c. Collection of garbage disposal, use of incinerator.
 - d. Clock room and change room facilities
 - e. Water supply-purification of water-water closets-flushing tanks-cistern.
 - f. Sewage disposal-septic tanks.
4. Equipment(major and minor)--selection-care-operational know how and maintenance.
5. Management-leadership job chart-plan of work-planning the days work-plan by the week, month, year.
6. Receiptes-role and standardisation.
7. Quantity cookery-suitable methods of cooking food-selection,purchase and stroage of foods-food preparation portion control-food service.
8. Industrial catering.
 - a. Study of dietary habits of industrial ~~xxxxxxx~~ workers
 - b. Food costs and adequate diet
 - c. Observatyon of the working of industrial centeens
 - d. Low cost adequate diets of industrial workers.

B. ACCOUNTANCY

1. Furdamental principles of accounts-introduction and conventions-the principles underlying the double entry-single entry and its disadvantages-double entry and it advantages-real accounts, personal-accounts and ^{nominal} ~~normal~~ accounts-journal-cash and bank books-~~all~~ books and receipt books-purchase and sales registers ledger-classification and advantages of keeping separate ledgers such as deptors, creditors and general ledgers.
2. Preparation of final accounts-trial balance-trading, manufacturing and profit and loss accounts and balance sheet-final adjustment entries and closing entries.
3. Receipts and payments and income and expenditure accounts distinction between the above-preparation of final accounts, from the above accounts.
4. Revenus^e and capital items of expenditure-distinction between capital and revenus items of expenditure-items chargeable to revenus and capital accounts-deferred revenus expenditure.
5. Meeting of sale pfoprietorship and partnership.
6. Budgetary control-meaning and need for budget-objectives and advantages budget how to plan a budget with availability to finance-sales, production purchases co-ordination between purchases and sales.
7. Licences-local laws and regulations, various types of licences required to be obtained-patent. conv right laws etc (basic ~~business~~)

1. Visit to different types of catering institutions.
2. Study of lay out of food preparation, cooking and sewing areas in there selected institution kitchens.
3. Care and ~~xxx~~ cleanliness of different types of equipment during and after preparation.
4. Quantity cookery of cereals, pulses, vegetables, milk products and flesh foods.
5. Food service-western, Indian and other styles for 50 members.
6. Visits to banks and companices to understand the maintenance of account
7. Maintaining the accounts of the stationary stores and canteens in the campus.
8. Detection of pollutants and adréferants in edible in edible materials.

REFERENCE BOOKS:-

1. West B.N., Wood, I., Marger, U.F., "FOOD SERVICE IN INSTITUTIONS", John Wiley and Sons, New York, 1966.
2. Ketschevar, D.H. and Terrel, M.E., "FOOD SERVICE PLANNING, LAYOUT AND EQUIPMENT", John Wiley and Sans, 1974.
3. Longree, K., "QUANTITY AND FOOD SANITATION", Jon Wiley and Sons Inc, New York, 1976.
4. Vazante, W.J. "HOUSEHOLD EQUIPMENT AND PRINCIPLES" Prentice Hall, Inc, Eaglewood Cliffs, New York, 1964.
5. Lawrence, A., "MANAGEMENT IN ACTION", Times of India Press, 1970-
6. Shukhla, M.C., "ADVANCE ACCOUNTS", Sultan Chand & Co Pvt. Ltd, Ram Nagar, New Delhi-110 055, 1978.
7. Gupta, R.L., "ADVANCE ACCOUNTANCY", Volumes I II III IV Sultan Chand and Co Pvt. Ltd., Ram Nagar, New Delhi, 1978.
8. Chakravarthy "ADVANCED ACCOUNTANCY", Mababharat Publishers, 72, Mahatma Gandhi Road, Calcutta 1971.
9. Agafwala, "ADVANCE ACCOUNTS", Kitab Mahal, Allahabad, 1972.
10. Pickles, "ADVANCED ACCOUNTS", The English Language Book Society, 1960.
11. Gupta, R.R., "ADVANCED ACCOUNTS", Meera Prakasm Educational Trust, Agra, 1962.
12. Krishnawamy, O.R. "FUNDAMENTALS OF ACCOUNTANCY", Maral Malai Publish-ing House, 3, Hunters Road, Madras - 7. 1971.
13. Davar, "ACCOUNTS" Progressive Coupr Near Davar College Madras, 1978.
14. Nagarager Lakshipath K.N., Vineryaban, N, and Nagarageriadm, Y. "Book KEEPING-PRINCIPLES OF COMMERCE". Chand & Co, Ram Nagar, New Delhi.
15. Jain and Marag, "ADVANCED ACCOUNTING", Chand and Co, Ram Nagar, New Delhi, 1976.

Second semester-II.3 Practical

Objectives:

To enable the students to get practical experience in the laboratory and develop the skill to under take research work.

1. Qualitative tests for carbohydrates, proteins and minerals.
2. Quantitative estimation of iron, vitamin, C, calcium and phosphorus.
3. Planning, preparing and calculation of nutrients of low and medium cost meals to meet extra needs of expectant mothers, nursing mothers, preschool children, adolescence and old people.
4. Preparation of diets for the following conditions:
Peptic ulcer, diabetes mellitus (use of exchange list), heart disease.
5. Preparation of diets for the following:
a. Kwashiorkor b. Anemia c. Vitamin - A deficiency.
6. Quantity cookery of cereals, pulses, vegetables, milk product products and flesh foods.
7. Analysis of urine for
a. Total nitrogen b. calcium c. M phosphorus d. Vitamin-C,
8. Analysis of blood for
a. Blood glucose b. Total protein c. blood haemoglobin.

REFERENCE BOOK:

1. Varley, I. "Practical Clinical Bio-Chemistry", VI Edition, Arnold Heineman Publishers (India), New York, 1965.

SECOND SEMESTER, III-4 Project Report (CONCURRENT FIELD TRAINING)

The trainees will be in a village for the concurrent field training. Each trainee will be allotted 10 to 15 houses. The trainees will conduct a basic line survey regarding the nutritional status of the people in the selected households. Base line data will be collected through Diet Survey and Nutritional Status assessment.

Based on the survey findings the trainees will prepare visual aids like flash cards, slides, flip charts, channel graph, etc. The trainees will visit the village, every week for three days (Wednesday, Thursday and Friday) afternoon. The Community will be approached through men and women leaders. The educational sessions will be conducted through individual contact group discussions and by conducting demonstration using appropriate aids - after 24 visits a final evaluation done using the same schedule as for evaluation to find out the change in their knowledge regarding nutrition. A report of the activities carried out will be prepared and submitted to the university.

The concurrent field training opportunity is given the trainees to practice the theory and principles in the field and the guide helps the trainees to correct their mistakes in implementing the programme.