

AC 27/2/13
Item no. 4.26

UNIVERSITY OF MUMBAI



Syllabus
SEMESTER III and IV
Program: M.Sc.
Course: Home Science
Branch IA: Foods, Nutrition & Dietetics

(Credit Based Semester and Grading System with effect
from the academic year 2013–2014)

M.Sc. (HOME SCIENCE)
BRANCH IA: FOODS, NUTRITION & DIETETICS

Credit Based Semester and Grading System

Semester III

Course Code	Title	Internal Marks	Semester End Examination	Total Marks	Periods / week	Credits
PSHSIA301	Advances in Human Nutrition	40	60	100	3	4
PSHSIA302	Clinical Nutrition & Therapeutic Dietetics	40	60	100	3	4
PSHSIA303	Public Health Nutrition	30	45	75	2	3
PSHSIA304	Management – Manpower & Marketing	30	45	75	2	3
PSHSIAP301	Therapeutic Dietetics					
	Planning	--	50	100	3	2
	Preparation	--	50			
PSHSIAP302	Dissertation	100	50	150	10	8
	Total			600	23	24

Course Code	Title	Periods/week	Marks	Credits
PSHSIA301	ADVANCES IN HUMAN NUTRITION	3	100	4

Objectives

- To understand the influence of nutrition on human growth and development.
- To study about the nutritional requirements and adaptations by the human body.
- To update knowledge in the area of human nutrition.

Course Content	Periods
Unit I Contemporary issues in macronutrient metabolism and regulatory nutrients Water and Micronutrients	15
Unit II Growth and Development General aspects of Human Growth Cellular and Physical Growth Impact of Nutrients on Growth and Development Nutrition and Brain; Neurotransmitters and nutrients Effect of nutrition on neuronal development	15
Unit III Human Body Composition Changes during lifecycle Nutritional Requirements Energy Macro and Micro nutrients Methods of determining RDAs Concerns of RDAs for vulnerable groups of population Nutritional requirements for special conditions Extreme climatic conditions and High altitude and space nutrition	15

References

- Benordot, D. (1999) *Nutrition for serious athletes and advanced guide to foods, fluids and supplements for training and performance campaign* IL. Human Kinetic.
- Grodd, J.L. and Gropper, S.S. (1999) *Advanced Nutrition and human metabolism*. Belmont CA Wodworth/ Thomson learning.
- Judith E. Broch (1998) *Nutrition Now*, West/wadsworth International Thomson Pub. Co.
- Williams, Cand Devlin, T.J. (1992) *Foods nutrition and sports performance* E and N Sposs I Ed.
- Goodhart R.S.S and Shils, M.E (1998) *Modern nutrition in health and disease*. Philadelphia Lea and Febiger.
- Stipanuk Martha H. 2006 *Biochemical, physiological, molecular aspects of human nutrition* – Saunders Elsevier.
- Paul, I, Turner, E.R., Ross, Don – 2006 (2nd ed.) *Discovering Nutrition* – Jones and Bartlett Publishers – Canada.
- Geissler, C., Powers, H (11th ed.) (2005) *Human Nutrition* ELSEVIER Churchill Livinstone ISBN
- Zegler, E.E and Filer, L.J. (1996) *Present knowledge in nutrition*. Washington D.C. International Life Sciences Institute

Course Code	Title	Periods/week	Marks	Credits
PSHSIA302	CLINICAL NUTRITION AND THERAPEUTIC DIETETICS	3	100	4

Objectives

- To provide students with an overview of the physiology and functions of different organ system.
- To expose students to the nutritional care process, the role of a nutritionist and the methods employed in nutrition provision and intervention.
- To impart an indepth knowledge regarding prevalence, etiology, diagnosis, pathophysiology, drug nutrient interactions, gene – nutrient interactions and medical, nutritional and lifestyle management in different disease conditions.
- To enable students to focus on: advancements in clinical nutrition, emerging modes of therapy and intervention and ongoing research in the field.
- To emphasise the role of nutrition in the prevention of chronic disease.

All diseases (acute and chronic) will be discussed with reference to the following topics:-

- Physiology and functions of the organ system.
- Etiology, risk factors, Diagnosis, classification, Pathophysiology.
- Management - Medical
 - o Nutritional Lifestyle and exercise
 - o Surgical (wherever applicable)
- Drug - nutrient interactions
- Gene nutrient interactions
- Advances and trends in research in the disease conditions.
- Available supplements and nutraceuticals – a study of dosage and efficacy.

Course Content		Periods
Unit I	Disorders of the GI system Gastro Intestinal system Physiology Dental Health GERD and esophagitis Gastroparesis and Gastritis Peptic Ulcers Intestinal symptoms – overview Gluten Induced Enteropathy Lactose intolerance Inflammatory bowel Disease Short Bowel Syndrome Irritable Bowel Syndrome Diverticulitis and Haemorrhoids	15
Unit II	Diseases of the Liver, Pancreas and Gall bladder Liver Diseases Physiology Assessment of Liver Function Hepatitis Cirrhosis Effects of alcohol on the Liver Hepatic Encephalopathy Liver Transplant Wilson’s Disease Diseases of the Gall Bladder Physiology Cholecystitis Dyskinesia Cholelithiasis Diseases of the Pancreas Physiology Acute and Chronic Pancreatitis Pancreatic Cancer	15
Unit III	Bone Health Physiology Nutrients involved in bone health Osteoporosis and Osteomalacia Osteoarthritis and Gout Rheumatoid Arthritis	15

References

Gibney J.M.,(2005). *Clinical Nutrition* Blackwell Publishing House.
 King K. (2003). *Nutrition Therapy* 2nd ed. Helm Publishing,Texas
 Bendich.A (1997). *Preventive Nutrition* Humana Press
 Burke .L (2006). *Clinical Sports Nutrition* 3rd ed. Mc Graw Hill Co
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 Peckenpauh .N (2003). *Nutrition Essentials and Diet Therapy*. 9th ed. Saunders Pub Co.
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Jamison .J. (2003). *Clinical Guide To Nutrition and Dietary Supplements in Disease Management* Churchill – Livingstone Pub.
 Jeejeebhoy et al (1988) *Nutrition and Metabolism in Patient Care* W.B.Saunders CO.
 Lee. R.D. (2003) *Nutritional Assessment* 3rd ed. M c Graw Hill Pub.
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 Mahan .K.L.(2008) *Krause’s Food and Nutrition Therapy* Saunders Pub.
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 Shills. M. (2006) *Modern Nutrition in Health and Disease*.10th ed.Lippincot William and Wilkins ICMR Pub. (2000) *Nutrient Requirement and Recommended Dietary Allowances for Indians*
 Gopalan .C.(2000) *Nutritive Value of Indian Foods*. NIN ICMR Pub.
 Whitney .C. (2006) *Understanding Normal and Clinical Nutrition*. Wadsworth publication
 Sauberlich .H (1999) *Laboratory Tests for the Assessment of Nutritional Status* 2nd ed. CRC Press

Journals :

- Nutrition Reviews
- American Journal of Clinical Nutrition
- Journal of American Dietetic Association.
- Journal of Nutrition

Course Code	Title	Periods/week	Marks	Credits
PSHSIA303	PUBLIC HEALTH NUTRITION	2	75	3

Objectives

To enable students to

- Increase awareness about current and emerging issues in Public Health Nutrition.
- Apply their knowledge to solve nutrition – related health problems.
- Appreciate and critically evaluate the impact of research on the practice of public health nutrition.

Course Content		Periods
Unit I	An overview of Public health Nutrition Definitions The Public health nutrition cycle Nutrition Epidemiology Types of studies Study design Measuring exposure Measuring outcomes and associations Interpretation of associations Assessment of the Nutrition Status of Individuals and Populations. Dietary assessment Use of biomarkers for assessing the nutritional status Anthropometric and other clinical measures. Errors in assessment of nutritional status.	15
Unit II	National Goals and Policies Nutrition Related health Goals Immunisation schedules National Nutrition Policy – a summary of important aspects. An overview of plans and services (local, state, national and international) Initiatives for prevention of disease e.g. Water and air-borne diseases, osteoporosis. Dietary Guidelines Dietary goals versus dietary guidelines Quantitative and Qualitative dietary guidelines. Steps involved in devising dietary guidelines. Food Choice Population issues affecting food choice Individual issues affecting food choice.	15

References

Gibney, M.J. Margetts, B.M., Kearney, J.M. and Arab, L. (eds) (2004). *Public health Nutrition*. The Nutrition Society Blackwell Science. Oxford.
 Jelliffe, D.B. (1966). *The Assessment of the Nutritional Status of the community* WHO Geneva.

Lee, R.D. and Nieman, D.C. (2003). *Nutritional Assessment* 3rd ed. McGraw – Hill Higher education. New York.

Nutrient Requirements and recommended dietary Allowances for Indians. (1990) ICMR, New Delhi.

Sachdev, H.P.S. and Choudhary, P (eds). (1994). *Nutrition in Children-Developing country Concerns*, B.I. Publications Pvt. Ltd. New Delhi.

Sainani, G.S. (ed-in-chief) (1992), *A.P.I. textbook of Medicine* 5th ed. Association of Physicians of India Mumbai.

Course Code	Title	Periods/week	Marks	Credits
PSHSIA304	MANAGEMENT – MANPOWER AND MARKETING	2	75	3

Objectives

- To help enhance personal & professional performance
- To make facilitate better administration & management skills

Course Content		Periods
Unit I	Developing and Managing Human Resources – Recent Trends Job Design and Job Analysis Manpower Planning – Recruitment and Selection Orientation, Training and Development Performance Appraisal Compensation and Rewards Personal Development Self Awareness Leadership and Motivation Group Dynamics – Grievance Management, Conflict Management. Ethics and Social Responsibility	15
Unit II	Marketing and Marketing Management Process Meaning and Importance of Marketing Marketing Mix Market Research Market Segmentation Consumer Behaviour Supply Chain Management	15

References

Agarwala, T. (2007). *Strategic Human Resource Management* Oxford University Press – New Delhi.

Aswathappa, K. (2005). *Human Resource and Personnel Management – Text and Cases* Tata McGraw – Hill Publishing Co. Ltd. New Delhi.

Boyd, H.W. Walker, O.C. and Larreche, J. (1995). *Marketing Management – A Strategic Approach with a global Orientation* 2nd ed. Irwin Chicago.

Cartwright, R. Collins, M, Green, G and Candy, A (2001). *The Handbook for Managing resources and Information* Infinity books, New Delhi.

Ivancevich, J.M. Donnelly, J.H and Gibson, J.L. (1996). *Management – Principles and functions* 4th ed. All India Traveller Bookseller. Delhi.

Kale, N.G. *Principles and practice of marketing.* Vipul prakashan – Mumbai.

Kotler, P. (2003). *Marketing Management* 11th ed. Pearson Education (Singapore) Pte. Ltd. Delhi.

Rao, V.S.P. (2005) *Human Resource management – text and cases* 2nd ed. Excel Books. New Delhi.

Shukla, M.S. (2004). *A Handbook of Human relations (with structured experiences and Instruments).* Macmillan India Ltd. Delhi.

Singh, P.N. (1998). *Developing and managing human resources* 3rd ed. Suchandra Publications. Mumbai.

Course Code	Title	Periods/week	Marks	Credits
PSHSIAP301	THERAPEUTIC DIETETICS	3	100	2

Objectives

To provide a detailed practical aspect to the clinical conditions studied in theory

To enable students to:

- Analyse the given case
- Obtain a nutritional diagnosis
- Propose a nutrition plan for the patient
- Prepare the selected meal
- Evaluate the suggested diet plans

Course Content		Periods
Unit I	Review of Diet Planning and its adaptations to different life cycle conditions Understanding the role of supplements and nutraceuticals (Review) Obesity and Metabolic syndrome – Planning and Preparation Juvenile Onset and Adult Onset obesity Bariatric Surgery VLCD Metabolic Syndrome	15
Unit II	Diabetes – Planning and Preparation Type I DM, Type II DM Cardiovascular Diseases – Planning and Preparation Atherosclerosis – Prevention and Management Myocardial infarction, Congestive cardiac failure Hyperlipidemias Hypertension Cardiac Surgery Enteral Feeds - Planning and Preparation	15
Unit III	Hypercatabolic States – Planning and Preparation Burns Surgery Accident Victim Trauma Head Injury Pulmonary Diseases – Planning and Preparation Asthma COPD Chronic Bronchitis Cystic Fibrosis	15

References

- Gibney, J.M.,(2005). *Clinical Nutrition* Blackwell Publishing House.
- King, K. (2003). *Nutrition Therapy* 2nd ed. Helm Publishing,Texas
- Bendich,A (1997). *Preventive Nutrition* Humana Press
- Peckenpauh, N (2003). *Nutrition Essentials and Diet Therapy*. 9th ed. Saunders Pub Co. Blackwell Scientific Publication (1994). *Manual Of Dietetic Practice*.2nd ed.
- Brown, J. (2002). *Nutrition Through The Lifecycle*. Wadsworth Pub Co.
- Jamison, J. (2003). *Clinical Guide To Nutrition and Dietary Supplements in Disease Management* Churchill – Livingstone Pub.
- Jeejeebhoy, et al (1988). *Nutrition and Metabolism in Patient Care* W.B.Saunders CO.
- Lee, R.D. (2003). *Nutritional Assessment* 3rd ed. M c Graw Hill Pub.
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- Shills, M. (2006). *Modern Nutrition in Health and Disease*.10th ed.Lippincot William and Wilkins ICMR Pub. (2000). *Nutrient Requirement and Recommended Dietary Allowances for Indians*
- Gopalan .C. (2000). *Nutritive Value of Indian Foods*. NIN ICMR Pub.
- Whitney .C. (2006) *Understanding Normal and Clinical Nutrition*. Wadsworth publication
- Sauberlich .H (1999) *Laboratory Tests for the Assessment of Nutritional Status* 2nd ed. CRC Press

Course Code	Title	Periods/week	Marks	Credits
PSHSIAP302	DISSERTATION	10	150	8

Objectives

- To provide students with an opportunity to conduct independent research in their specialization (i.e., Foods, Nutrition and Dietetics; Human Development; and, Textile and Fashion Technology) under supervision.
- To encourage students to work in conjunction with relevant industries, institutes, hospitals, schools, etc.
- To assist students in developing general research skills as well as research skills specific to their specialization.
- To encourage students to adopt best practices in research.
- To facilitate students in accomplishing the beginning steps of the research process, formulate and defend a research proposal, begin data collection, and write the first two chapters of the dissertation (Introduction and Review of Literature; Method).

Course Content	
UNIT I	<p>A. Beginning Steps of the Research Process: I Contacting and communicating with experts (locally, nationally, and internationally) initially and periodically throughout the research process; reading relevant literature (e.g., scientific journals, dissertations, theses, books, literature on the Net); selecting appropriate topics in one's specialization; prioritizing these topics; checking topics for feasibility.</p> <p>B. Beginning Steps of the Research Process: II Identifying possible focus areas with regard to one topic; specifying one such focus area (using relevant reading and communication with experts); writing research objectives/ questions/ hypotheses; conducting a thorough literature review; presenting a clear and convincing argument in support of the study; writing the first chapter of the dissertation, namely, the <i>Introduction and Review of Literature</i>, with due acknowledgement of source of ideas.</p>
UNIT II	<p>A. Proposing Methods Specifying variables; defining variables (citing relevant literature); selecting an appropriate research design; making decisions related to sampling; selecting and/or constructing tools, pilot-testing tools; making a plan of analysis; writing the second chapter of the dissertation, namely, the <i>Method</i>, with due acknowledgement of source of ideas; orally defending a research proposal; integrating feedback.</p> <p>B. Beginning Data Collection: Obtaining consent from participants and relevant agencies/authorities; starting data collection; integrating changes if any; scheduling remaining data collection; starting data entry; revising the first two chapters of the dissertation.</p>

M.Sc. (HOME SCIENCE)
BRANCH IA: FOODS, NUTRITION & DIETETICS

Credit Based Semester and Grading System

Semester IV

Course Code	Title	Internal Marks	Semester End Examination	Total Marks	Periods / week	Credits
PSHSIA401	Advances in Human Nutrition	40	60	100	3	4
PSHSIA402	Clinical Nutrition & Therapeutic Dietetics	40	60	100	3	4
PSHSIA403	Public Health Nutrition	30	45	75	2	3
PSHSIA404	Management – Manpower & Marketing	30	45	75	2	3
PSHSIAP401	Therapeutic Dietetics					
	Planning	--	50	100	3	2
	Preparation	--	50			
PSHSIAP402	Dissertation	100	50	150	10	8
	Total			600	23	24

Course Code	Title	Periods/week	Marks	Credits
PSHSIA401	ADVANCES IN HUMAN NUTRITION	3	100	4

Objectives:

- To get an insight in to the role of Nutrition for fitness and sports.
- To update knowledge in the area of human Nutrition.

Course Content		Periods
Unit I	Nutrition and Physical Fitness Body Composition of Sports Persons Energy metabolism during Exercise (aerobic and anaerobic) Utilisation of Carbohydrates, Protein and fat during Exercise Micronutrients and sports performance Fluid and Electrolyte needs Assessment of sports performance Nutritional problems of athletes Ergogenic Aids	15
Unit II	Complementary Nutrition Bioactive Dietary Components, Nutraceuticals Functional foods, Phytochemicals, Flavonoids, Phytoestrogens, etc. mechanism of action	15
Unit III	Prebiotics, Probiotics and Synbiotics Meal Replacers Nutritional Supplements Mega dosing of Nutrients – Concerns.	15

References

- Benordot, D. (1999) *Nutrition for serious athletes and advanced guide to foods, fluids and supplements for training and performance campaign* IL. Human Kinetic.
- Grodd, J.L. and Gropper, S.S. (1999) *Advanced Nutrition and human metabolism*. Belmont CA Wodworth/ Thomson learning.
- Judith E. Broch (1998) *Nutrition Now*, West/wadsworth International Thomson Pub. Co.
- Williams, Cand Devlin, T.J. (1992) *Foods nutrition and sports performance* E and N Sposs I Ed.
- Goodhart R.S.S and Shils, M.E (1998) *Modern nutrition in health and disease*. Philadelphia Lea and Febiger.
- Stipanuk Martha H. 2006 *Biochemical, physiological, molecular aspects of human nutrition* – Saunders ELSEVIER.
- Paul, I, Turner, E.R., Ross, Don – 2006 (2nd ed.) *Discovering Nutrition* – Jones and Bartlett Publishers – Canada.
- Geissler, C., Powers, H (11th ed.) (2005) *Human Nutrition* ELSEVIER Churchill Livinstone ISBN
- Zegler, E.E and Filer, L.J. (1996) *Present knowledge in nutrition*. Washington D.C. International Life Sciences Institute

Course Code	Title	Periods/week	Marks	Credits
PSHSIA402	CLINICAL NUTRITION AND THERAPEUTIC DIETETICS	3	100	4

Objectives

- To provide students with an overview of the physiology and functions of different organ system.
- To expose students to the nutritional care process, the role of a nutritionist and the methods employed in nutrition provision and intervention.
- To impart an indepth knowledge regarding prevalence, etiology, diagnosis, pathophysiology, drug nutrient interactions, gene – nutrient interactions and medical, nutritional and lifestyle management in different disease conditions.
- To enable students to focus on : advancements in clinical nutrition, emerging modes of therapy and intervention and ongoing research in the field.
- To emphasise the role of nutrition in the prevention of chronic disease.

All diseases (acute and chronic) will be discussed with reference to the following topics:-

- Physiology and functions of the organ system.
- Etiology, risk factors, Diagnosis, classification, Pathophysiology.
- Management - Medical
 - o Nutritional Lifestyle and exercise
 - o Surgical (wherever applicable)
- Drug - nutrient interactions
- Gene nutrient interactions
- Advances and trends in research in the disease conditions.
- Available supplements and nutraceuticals – a study of dosage and efficacy.

Course Content		Periods
Unit I	Renal Diseases Physiology Tests for renal function Glomerulonephritis Nephrotic Syndrome Acute Renal failure Chronic Renal failure and ESRD Dialysis – Haemo, Peritoneal and CAPD Renal Transplant Nephrolithiasis	15
Unit II	Nutrition and Cancer and Haematological Diseases Nutrition and Cancer Etiology and molecular basic of cancer Assessment of nutritional status Medical, Surgical and Nutritional Management Nutritional Support Nutrition and Prevention of Cancer Haematological diseases Nutritional anemias Haematological disturbances	15
Unit III	Inborn errors of metabolism and Neurological Disease Inborn errors of Metabolism Principles of genetic disease management Arrino acid metabolism and urea cycle defects Galactose enzyme deficiencies Defects of oxidation Retinyl degradation Nutrition in Neurological and Psychiatric Disease Physiology Neurological Disorders associated with vitamin deficiencies and excess Alzheimer’s and Parkinson’s disease Cerebral Palsy Senility Schizophrenia and Psychosis	15

References

Gibney J.M.,(2005). *Clinical Nutrition* Blackwell Publishing House.
 King K. (2003). *Nutrition Therapy* 2nd ed. Helm Publishing,Texas
 Bendich.A (1997). *Preventive Nutrition* Humana Press
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 Sauberlich .H (1999) *Laboratory Tests for the Assessment of Nutritional Status* 2nd ed. CRC Press

Journals:

Nutrition Reviews
 American Journal of Clinical Nutrition
 Journal of American Dietetic Association.
 Journal of Nutrition

Course Code	Title	Periods/week	Marks	Credits
PSHSIA403	PUBLIC HEALTH NUTRITION	2	75	3

Objectives

To enable students to

- increase awareness about current and emerging issues in Public Health Nutrition.
- Apply their knowledge to solve nutrition – related health problems.
- Appreciate and critically evaluate the impact of research on the practice of public health nutrition.

Course Content		Periods
Unit I	<p>Public health Nutrition Strategies for Intervention at the Ecological level Definition of the Ecological Approach Key Principles Intervention Guidelines for using the ecological approach to design nutrition interventions. Ecological interventions to change eating habits.</p> <p>Public Health Nutrition Strategies for Intervention at the Individual Level. Possible approaches Theoretical models for behaviour change Key steps involved in planning, implementing and evaluating an intervention.</p>	15
Unit II	<p>Public health Issues Study of the following with greater emphasis to the current Indian context. Nutrition and Reproductive health Maternal nutrition and foetal outcome Underweight and obesity PEM Vitamin A deficiency and child health, survival and vision Iodine deficiency Iron deficiency and anaemia Zinc Deficiency HIV and micronutrient nutrition Diarrhoea Cancers Diabetes Heart disease</p>	15

References:

Gibney, M.J. Margetts, B.M., Kearney, J.M. and Arab, L. (eds) (2004). Public health Nutrition. The Nutrition Society Blackwell Science. Oxford.
 Jelliffe, D.B. (1966). The Assessment of the Nutritional Status of the community WHO Geneva.
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 Nutrient Requirements and recommended dietary Allowances for Indians. (1990) ICMR, New Delhi.
 Sachdev, H.P.S. and Choudhary, P (eds). (1994). Nutrition in Children-Developing country Concerns, B.I. Publications Pvt. Ltd. New Delhi.
 Sainani, G.S. (ed-in-chief) (1992), A.P.I. textbook of Medicine 5th ed. Association of Physicians of India Mumbai.

Course Code	Title	Periods/week	Marks	Credits
PSHSIA404	MANAGEMENT-MANPOWER AND MARKETING	2	75	3

Objectives

- To help enhance personal & professional performance
- To make facilitate better administration & management skills

Course Content		Periods
Unit I	Financial Issues: An overview of Budgeting Concepts of Costs – Fixed and Variable Cost, Marginal cost, Opportunity Cost, Breakeven Analysis Sources of Finance Evaluation Parameters Quality Management Approaches and Issues to quality improvement Tools used in the process Standards of quality in the food industry	15
Unit II	Managing Information Need and Process of Managing Information Information in Interviews and Meetings Making Presentations Report Writing Entrepreneurship in the Food Industry / Service Section Starting a Business Legal Requirements Skills and Knowledge needed Planning Strategies for Marketing Products	15

References

- Agarwala, T. (2007). *Strategic Human Resource Management* Oxford University Press – New Delhi.
- Aswathappa, K. (2005). *Human Resource and Personnel Management – Text and Cases* Tata McGraw – Hill Publishing Co. Ltd. New Delhi.
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- Ivancevich, J.M. Donnelly, J.H and Gibson, J.L. (1996). *Management – Principles and functions* 4th ed. All India Traveller Bookseller. Delhi.
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- Singh, P.N. (1998). *Developing and managing human resources* 3rd ed. Suchandra Publications. Mumbai.

Course Code	Title	Periods/week	Marks	Credits
PSHSIAP401	THERAPEUTIC DIETETICS	3	100	2

Objectives

To provide a detailed practical aspect to the clinical conditions studied in theory
 To enable students to:

- Analyse the given case
- Obtain a nutritional diagnosis
- Propose a nutrition plan for the patient
- Prepare the selected meal
- Evaluate the suggested diet plans

Course Content		Periods
Unit I	Assignment presentation of Nutritional Care Protocol GI diseases (Planning and Preparation) Esophagitis Gastritis and pepticuliers Gluten induced enteropathy Lactose intolerance Inflammatory bowel disease Short bowel syndrome Irritable bowel syndrome Diverticulitis haemorrhoids Diseases of the Liver Gall bladder and Pancreas (Planning and Preparation) Hepatitis Cirrhosis Encephalopathy Gallbladder disease Chronic Pancreatitis Wilson's disease	15
Unit II	Disease of the Kidney (Planning and Preparation) Glomerular Nephritis, Nephritic syndrome Acute Renal Failure, Chronic Renal Failure Haemodialysis, Peritoneal Dialysis Renal Transplan, Renal Calculi Cancer Therapy (Planning and Preparation) Patients on chemotherapy, Patients on Radiation Head and Neck Cancer, GI Cancers Bone Health and Bone Joint Disease (Planning and Preparation) Bone Health Osteoporosis, Osteoarthritis Gout, Rheumatoid arthritis	15
Unit III	Infections (Planning and Preparation) HIV Tuberculosis Malaria, Dengue Food Borne Infection Haematological Conditions (Planning and Preparation / Presentation)	15

References

- Gibney, J.M. (2005). *Clinical Nutrition* Blackwell Publishing House.
- King, K. (2003). *Nutrition Therapy* 2nd ed. Helm Publishing, Texas
- Bendich, A (1997). *Preventive Nutrition* Humana Press
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Course Code	Title	Periods/week	Marks	Credits
PSHSIAP402	DISSERTATION	10	150	8

Objectives

- To provide students with an opportunity to conduct independent research in their specialization (i.e., Foods, Nutrition and Dietetics; Human Development; and, Textile and Fashion Technology) under supervision.
- To encourage students to work in conjunction with relevant industries, institutes, hospitals, schools, etc.
- To assist students in developing general research skills as well as research skills specific to their specialization.
- To encourage students to adopt best practices in research.
- To facilitate students in completing data collection/data entry/data analysis, and writing the remaining three chapters of the dissertation (Results, Discussion, Summary).
- To support students to complete and submit the dissertation for the viva voce examination, integrate feedback, submit the final copy of the dissertation, and write a research paper using the findings of their research.

Course Content	
UNIT I	<p>A. Completing Data Collection</p> <p>B. Completing Data Entry and Preliminary Analyses Entering all data; checking for data entry errors; running preliminary analyses.</p> <p>C. Analyzing Data and Reporting Results Analyzing data; interpreting findings; reporting results in figures/tables and text using scientific protocol; writing the third chapter of the dissertation, namely, the <i>Results</i>, by research objectives/questions/hypotheses; orally presenting the results and integrating feedback.</p>
UNIT II	<p>A. Discussing Findings Corroborating own findings with those in previous research and theory; explaining findings using relevant literature and communication with experts; discussing implications of findings for practice/industry/family/society; suggesting recommendations for future research; writing the fourth chapter of the dissertation, namely, the <i>Discussion</i>, using appropriate scientific protocol</p> <p>B. Summarizing Findings and Completing the Writing of the Dissertation Writing the fifth chapter of the dissertation, namely, the <i>Summary</i>; writing the abstract; revising previous chapters as necessary; completing all other relevant work for the dissertation (e.g., reference list, appendices, table of contents, and list of figures/tables); submitting the dissertation for the viva voce examination.</p> <p>C. Submission and Oral Defense; Writing of the Research Paper Orally defending the dissertation; integrating feedback into the final document; submitting the completed dissertation (hard copy and soft copy). Using the dissertation to write a research paper; submitting the research paper (hard copy and soft copy).</p>

Scheme of Examination

The performance of the learners shall be evaluated into two parts. The learner's performance shall be assessed by Internal Assessment with 40% marks in the first part by conducting the Semester End Examinations with 60% marks in the second part. The allocation of marks for the Internal Assessment and Semester End Examinations are as shown below:-

Internal assessment for Theory 40 % (40 marks)

Sr. No.	Evaluation type	Marks
1	One seminar based on curriculum assessed by teacher of the institution teaching PG learners / Publication of a research paper/ presentation of a research paper in seminar or conference. A. Selection of the topic, introduction, write up, references- 15 marks. B. Presentation with the use of ICT- 15 marks.	30
2	Active participation in routine class instructional deliveries	05
3	Overall conduct as a responsible learner, communication and leadership qualities in organizing related academic activities	05

Internal assessment for Theory 40 % (30 marks)

Sr. No.	Evaluation type	Marks
1	One seminar based on curriculum assessed by teacher of the institution teaching PG learners / Publication of a research paper/ presentation of a research paper in seminar or conference. A. Selection of the topic, introduction, write up, references- 15 marks. B. Presentation with the use of ICT- 15 marks.	20
2	Active participation in routine class instructional deliveries	05
3	Overall conduct as a responsible learner, communication and leadership qualities in organizing related academic activities	05

Semester End Theory Examination 60 %

Semester End Theory Examination of 60 marks (three unit courses)

Duration: These examinations shall be of two and half hours duration.

Theory question paper pattern:

- There shall be five questions each of 12 marks. On each unit there will be one question and the first one will be based on entire syllabus.
- All questions shall be compulsory with internal choice within the questions. Each question will be of 18 to 20 marks with options.
- Question may be subdivided into sub-questions a, b, c... and the allocation of marks depend on the weightage of the topic.

Semester End Theory Examination of 45 marks (two unit courses)

Duration: These examinations shall be of one and half hours duration.

- There shall be three questions each of 15 marks. On each unit there will be one question and the third question will be based on the entire syllabus.
- All questions shall be compulsory with internal choice within the questions.
(Each question will be of 20 to 23 marks with options.)
- Questions may be subdivided into sub-questions a, b, c... and the allocation of marks depend on the weightage of the topic.

Practicals Semester End Examination of 50 marks (No Internal Assessment)

Duration: These examinations to be conducted for three hours.

Sr. No.	Evaluation type	Marks
1	Laboratory work: Semester End Examination	40
2	Journal	05
3	Viva	05

Standard of Passing is as per the ordinances set by the University of Mumbai for the Credit Based Semester and Grading System for the postgraduate courses.