FATIMA COLLEGE (AUTONOMOUS)

Re-Accredited with "A" Grade by NAAC (3rd Cycle)
94th Rank in India Ranking 2019 (NIRF) by MHRD
Maryland, Madurai- 625 018, Tamil Nadu, India

NAME OF THE DEPARTMENT: HOMESCIENCE

NAME OF THE PROGRAMME : Ph.D

PROGRAMME CODE :

ACADEMIC YEAR : APRIL 2019-21

COLLEGE PROFILE

Fatima College (Autonomous), Mary Land, Madurai, is a Post Graduate and Research Institution for Women affiliated to Madurai Kamaraj University. It is a Catholic Minority institution established and run by St. Joseph's Society of Madurai (of the Congregation of the Sisters of St. Joseph of Lyons, France). This institution came into existence through the tireless efforts of the missionary sisters of St. Joseph of Lyons and the zeal and heroic sacrifice of Rev. Sr. Rose Benedicta, the Foundress of the College.

The College was started in St. Joseph's Campus Madurai as a Second Grade College with 63 students in 1953. It was upgraded into a Post Graduate College in 1964; Autonomous in 1990 and a Research Institute in 2004. The College now offers 21 Undergraduate Programmes, 13 Postgraduate Programmes, 2 Professional Programme, 5 M.Phil. Programmes and 6 Departments have become Research Centres. It has strength of 4134 Students, 206 Teaching Staff and 100 Non-Teaching Staff.

The comprehensive assessment by NAAC in 1999 placed Fatima College in Five Star Status of merit. The college strives to sustain excellence, quality and relevance while equipping the students to meet the demands of higher education in India. In 2004 UGC conferred on Fatima College the status of College with Potential for Excellence. In 2006 and 2013 NAAC Re-Accredited the College with 'A' Grade. The College was ranked 94th in the All India NIRF Ranking in 2019 by MHRD.

VISION

WOMEN'S EMPOWERMENT THROUGH EDUCATION

The vision of the college is to empower women by developing human capabilities through quality education based on Christian values, making them responsible citizens who can work for the advancement of the society and promote communal harmony in the multi-religious and multi-cultural reality of India eventually evolving into women of communion.

MISSION

- To enhance quality of life through the development of individuals.
- To enable women to become contributors in the economic, social and political development of India.
- To equip the students with 21st century skill-sets with a focus on problem-solving abilities
- To motivate them to work for social justice
- To give preference to the rural economically backward and first-generation learners
- To enable students to be employed in the technology oriented competitive market

VISION OF THE DEPARTMENT

Empowering Women with life copying skills and enhancing entrepreneurial skills and promoting economic independency.

MISSION OF THE DEPARTMENT

- To inculcate in women managerial and organizational skills both at home and work places
- To equip them with professional skills to face the challenges and hurdles
- To enhance their communication skills by conducting various programmes
- To kindle their academic excellence
- To instill in them aesthetic values

FULL TIME DOCTOR OF PHILOSOPHY

HOMESCIENCE - SEMESTER - I

For those who joined in 2019 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
	19PHDCWP03	A COMPARATIVE STUDY ON SUPPLEMENTATION EFFECT OF GUAR GUM & PRAGMATIC LIFESTYLE INTERVENTIONS ON PREDIABETES	Core	-	4

COURSE DESCRIPTION

This course emphasise the basic concepts of prediabetes and its prevention

COURSE OBJECTIVES

This course provides detailed information about the management of prediabetes to prevent complications.

UNITS

UNIT-I IMPAIRED GLUCOSE TOLERANCE AND IMPAIRED FASTING BLOOD GLUCOSE :

Introduction, Definition to Prediabetes –Imapired Fasting Glucose, Impaired Glucose Tolerance, according to World Health Organization, American Diabetic Association guidelines, Aetiology ,Pathophysiology of pre-diabetes., Prediabetes and insulin resistance, how insulin resistance works, Insulin secretion in Prediabetes, Insulin level for diagnosis of Prediabetes. Prevalence of Impaired Glucose Tolerance, Instability of Impaired Glucose Tolerance, Etiology and Pathogenesis of Impaired Glucose Tolerance, Clinical implications of Impaired Glucose Tolerance, Risk factors for deterioration to Diabetes, Association with Cardiovascular Disease Mortality, Impaired Fasting Glucose versus Impaired Glucose Tolerance.

UNIT-II SCREENING TOOLS & DIAGNOSTIC CRITERIA FOR PREDIABETES

Screening tools –Risk Score Test-Centre for Diabetes Disease Control and Prevention and American Diabetic Association, United States Preventive Task Force, Indian Diabetic Risk Score Test, Risk factors for Prediabetes according to American Diabetic Association –Age, B.M.I, Physical Inactivity, family history of Diabetes Mellitus, Race, Gestational Diabetes Mellitus, Hypertension, High Density Lipoprotein, Polycystic ovarian Disease, Obesity, Acanthosis, History of Cardiovascular Disease, Diagnosis test for Prediabetes-Fasting Plasma Glucose, 2hrs PostPrandial, Glycated A1c.,Oral Glucose Tolerance Test, The Research Society For The study of Diabetes In India Recommendations for Screening/Early Detection of Diabetes and Prediabetes.

UNIT-III MANAGEMENT OF PREDIABETES

Controversies in Prediabetes : Beliefs and Attitudes of Doctors and patients, ways to bring changes in attitudes, behaviour ,and beliefs, Awareness of Diabetes, Clinical Risk of not treating Prediabetes :Progression, Modifiable Risk Factors-Lifestyle Factors,-Dietary Factors, Physical Activity, Prevention Of Diabetes-Primary Prevention, Secondary Prevention, Tertiary Prevention, , Medication and supplements-fibre rich, pharmacotherapy, Diabetes prevention programme.

UNIT –IV GUAR GUM AND ITS APPLICATIONS

Production and trade, Guar gum Structure, Properties –Chemical composition, Solubility and viscosity, Thickening, Ice crystals growth, grading, Manufacturing Process, Industrial Applications, food applications, Nutritional and medicinal effects-Allergies, Dioxin contamination. ,Effect of guar gum on glycaemic control

UNIT-V INTERVENTION STUDIES IN PREDIABETES

Characteristics of studies included in the systematic review, Implication for practices, Future Direction.

REFERENCE :

1. SV Madhu ,RSSDI Diabetes Update 2016, Jaypee Digital Explore Health Science, New Delhi 110002,India
2. V.Mohan,BB Tripathy,HB Chandalia,AK Das,PV Rao, SV Madhu,-RSSDI Textbook of Diabetes Mellitus, Jaypee Digital Explore Health Science,New Delhi 110002,India
3. Viswanathan Mohan, Hemraj BChandalia, Gumpeny Ramachandra Sridhar, Ashok Kumar Das, Sri Venkata Madhu Paturi, Vishnupriya Rao- RSSDI Textbook of Diabetes Mellitus,-2014, Jaypee Digital Explore Health Science,New Delhi 110002,India
4. Gundu HR Rao,V Mohan-Type 2 Diabetes in South Asian : Epidemiology,Risk Factors and Prevention , Jaypee Digital Explore Health Science,New Delhi 110002,India

5. Rajeev Chawla (2014)-Manual of Diabetes Care, Jaypee Digital Explore Health Science,New Delhi 110002,India , Jaypee Digital Explore Health Science,New Delhi 110002,India
6. Sarita Bajaj,Manoj K Srivastava-RSSDI Update-2015, Jaypee Digital Explore Health Science,New Delhi 110002,India
7. Nathan D Wrong,Shaista Malik-Diabetes and Cardiovascular Disease : Evaluation,Prevention & Management., Jaypee Digital Explore Health Science,New Delhi 110002,India
8. Rajeev Chawla,Aastha Chawla-FAQs in Diabetes , Jaypee Digital Explore Health Science,New Delhi 110002,India
9. C.Ronald Kahn Gordon C.Weir, International Edition-Joslin's Diabetes mellitus Thirteenth Edition,1994. Lea & Febiger-A Waverly Company,U.S.A
10. John R Turtle, Toshio Kaneko And Shuichi Osato, Diabetes in the New Millennium 1999.The Endocrinology and Diabetes Research Foundation of the University of Sydney,Sydney,NSW 2006,Australia.
11. Richard I.G. Holt, Clive S. Cockram, Allan Flyvbjerg, Barry J.Goldstein Textbooks Of Diabetes Fourth Edition 2010.Wiley India Pvt Ltd.
12. Jill Weisenberger, Prediabetes A complete Guide.
13. Kumar G S. & Jayaveera K N (2014) – A Textbook of Pharmacognosy and Phytochemistry, S. Chand Publishing,
14. www.diabetes.org/risk-test
15. http://mdiabetes.nhp.gov.in/display.php/PreventionOfDiabetes

COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED

CO 1	understand the basics of prediabetes	K1, K2	PSO1,PSO2
CO 2	understand the screening tools for prediabetes	K1, K2, K3	PSO3,PSO4
CO 3	understand the management of prediabetes through life style modification	K1, K2	PSO1,PSO3
CO 4	Understand the properties of guargum and its applications in diet	K2, K2, K3 & K4	PSO4, PSO5
CO 5	gain information about some of the literatures and intervention studies about diabetes prevention for future research	K1, K2, K3 & k4	PSO3,PSO4& PSO5

COURSE DESIGNER: Dr. K.Karthiga

Forwarded By
Dr. Vasantha Esther Rani

HoD'S Signature & Name

FULL TIME DOCTOR OF PHILOSOPHY

HOMESCIENCE - SEMESTER - I

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
	19PHDCWP01	RESEARCH METHODOLOGY	Ph. D Core	-	4

COURSE DESCRIPTION

This is a cross-curricular subject, which may be of interest for those students who are considering undertake a research career, especially in the fields of Nutrition and dietetics

COURSE OBJECTIVES

This paper highlights the various postulates of research problems, research design, writing a thesis and modern statistical methods. This helps to carry out research problem individually in a perfect scientific method.

UNITS

Unit –I RESEARCH COMPONENTS AND TYPES

Meaning of research – Objectives of research – Motivation in research – Research approaches – Significance of research and scientific methods – Qualities of good research – Problems encountered by researchers in India – Identifying a research – Necessary condition for the formulation of the research problem – Criteria for good research project .

Unit –II METHODS OF DATA COLLECTION AND SAMPLING TECHNIQUES

Primary Data: Observation, Experimentation, Simulation interviewing, Questionnaire, Projective technique. Secondary Data: Published and Unpublished sources.

Characteristics of good sample, advantages and disadvantages of sample.

Sampling Techniques: Probability or random sampling, Non-probability or non-random. Sampling and non-sampling errors.

Unit –III FORMULATION OF HYPOTHESIS, PROCESSING OF DATA, REPORT WRITING AND PLAGIARISM

Hypothesis: Definition, Role and Types – Criteria for useful hypothesis – Formulation – Tabulation – Editing – Coding – Analysis and Interpretation of data. Procedure for testing hypothesis.

Components or layout of a thesis: Introduction, Review of literature, Methodology, Results and Discussion, Summary and Conclusion, Bibliography, Foot Notes and Appendix.

Significance of Report Writing: Types of Report, Oral presentation, Mechanics of writing and Precaution of writing research report, Scientific writing.

Unit – IV: TESTING OF HYPOTHESIS

Measures of Central Tendency: Mean, Median, Mode and Standard Deviation. Procedure for Testing Hypothesis: Students 's' 't' test and 'f' test.

Unit –V STASTICAL ANALYSIS

Chi Squared test, Co – efficient of Correlation, Regression, ANNOVA, Data result interpretation.

BOOKS FOR REFERENCE

1. Donald.H.Mc. Burney, " Research methods" Thomson Wordsworth, 5th Edition, 2003.

2. Ghosh B.N., “Scientific Method and Social Research”, Sterling Publishers Pvt.Ltd... New Delhi, 4th Edition, 1987.

3. Goode and Hatt, “Methods and Social Research”, MCGraw Hill International Book Company, 23rd printing, 1983.

4. Gopal Lal Jain,” research Methodology, Methods, Tools and Techniques”, Mangal Deep Publications, Jaipur, 1998.

5. Kothari.C.R.,” Research methodology”, New Age International Publishers, New Delhi 3rd reprint Edition, 2004.

6. O.R.Krishnaswamy and M.Ranganathan, “Methodology of Research in Social Sciences”, Himalaya Publishing House, New Delhi, 2006.

7. Sadhu and Singh, “ Research Methodology in Social Sciences”, Himalaya Publishing House, Mumbai, 2nd Edition,1983.

8. Santhosh Gupta, “ Research Methodology and Statistical Techniques”, Deep and Deep Publications, New Delhi, 2001.

9. Sonachalam K.S., “Research Methodology of Social Science”, Emerald Publishers, Madras, 1988.

10. Yogesh Kumar Singh and Ruchikanth, “Research Methodology”, A.P.H, Publishing Corporation, New Delhi, 2005.

11. Gupta S.P.,” Statistics”, S.Chand & Company Ltd, New Delhi, 2001.

12. Pillai and Bagavathi R.S.N., “Statistics”, S.Chand & Company Ltd, New Delhi, 2001.

COURSE OUTCOMES

On the successful completion of the course, students will be able to

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	understand the basics of research and its objectives	K1,K2	PSO1,PSO2
CO 2	gain knowledge about the theoretical research involved	K1, K2	PSO1,PSO2
CO 3	get exposure to planning of experiments and the various methodologies involved	K1 , K2, K3	PSO2, PSO3
CO 4	apply the use software and other computational techniques for data presentation	K1, K2, K3 & K4	PSO4,PSO5
CO 5	understand and analyse the techniques of interpretation involved in written and oral presentations	K1, K2 , K3 & K4	PSO4,PSO5

COURSE DESIGNER Dr.K.Karthiga

Forwarded By
Dr. Vasantha Esther Rani
HoD'S Signature & Name

FULL TIME DOCTOR OF PHILOSOPHY

HOMESCIENCE - SEMESTER - I

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
	19PHDCWP02	CLINICAL NUTRITION	Ph. D Core	-	4

COURSE DESCRIPTION

This will provide you detailed scientific understanding about nutritional screening and assessment methods and strategies for improving patient care. You will learn how to perform nutritional assessments in various disease conditions. It will also enable you with knowledge on the best practices of managing nutrition support therapy in different patient conditions

COURSE OBJECTIVES

1. Explain the role of nutrition in health
2. Physiological, anthropometric and biochemical assessment of the nutritional status.
3. To plan a therapeutic diet according to the individual or patients requirement in disease conditions.
4. Monitor and evaluate nutrition therapy
5. Educate the patients and family regarding nutritional care to be followed
6. Logistics of enteral and parenteral nutrition.
7. Therapeutic diet counseling of patients in the outpatient department
8. Basic concepts of neutraceuticals and their applications

UNITS

UNIT-I

Assessment of nutritional status of the hospitalized patients, Diet counseling. Role of Dietitian in assessing patients needs Based on Clinical, Bio clinical, Biophysical and personal data. Current trends in nutritional support: Parenteral and enteral nutrition- Feeding of premature and LBW babies- pre and post operative diets Incorporation of Novel Therapeutic foods in the exchange lists followed in Hospitals, Periodical nutritional screening of patients

UNIT II

Gastro intestinal tract disorders-ulcer,constipation,diarrhea,dumping syndrome,irritablebowelsyndrome,ulcerativecolitis, Malabsorption Syndrome. Liver, gallbladder and pancreatic disorders, Stress & trauma. Nutrition and management in- Musculo skeletal disorders, Immuno deficiency & AIDS.

UNIT III

Etiopathophysiology, metabolic and clinical aberrations, diagnostic features, complications, prevention and recent advances in the nutritional management of Renal disorders, Cancer, Neurological disorders, Infection & febrile conditions and Respiratory problems

UNIT IV

Etiopathophysiology, metabolic and clinical aberrations, diagnostic features, complications, prevention and recent advances in the nutritional management of- Weight imbalances, diabetes Mellitus , other metabolic disorders and Cardio-vascular diseases.

UNIT V

Herbs and medicinal plants – medicinal uses Functional foods: Types & medicinal uses Antioxidants- types, role & mechanism of action in scavenging

free radicals, role in health & disease Phytochemicals- Occurrence, types & role in health & diseases Probiotic & Prebiotic foods for health benefits.

References

1. Bakhru. H.K.(2001) Indian Spices & Condiments As Natural Healers, Jaico Publishing, Mumbai

2. Syed A.A. Sharma S.C (2000) Herbal Cure For Common & Chronic Diseases, Pushtak Mahal , New Delhi

3. Gala, R, Gala,D, Gala.S.(1999), NATURE Cure For Common Diseases, Navneet Publications (India) Ltd., Chennai. M. Phil./Ph.D. Food and Nutrition (2018-19 onwards) Page 11 of 11

4. Manohar Murali. C. H, (2000), Ayurveda For All, Pustrak Mahal. New Delhi.Pp133- 136

5. Nutrition Principals And Applications In Health Promotion By Suitir & Crowley.

6. Food, Nutrition & Dietetics By Krause & Mahan, WB Saunders Co., Philadelpia, 1979.

7. Normal & Therapeutic Nutrition By Corinne H Robinson. Merlyn. R. Lawley. Mac Million Publishers & Co.

8. Maurice Shils, James Olson & Noshe, (1994), Modern Nutrition In Health & Disease 8 th Edition, Vol I & II, Lea & Febiger Co, USA.

9. Human Nutrition And Dietetics By Davidson And Passmore. English Language Book Society,1985.

10. Garrow, J.S., James W.P.T., And Rajph,A,(2000), Human Nutrition And Dietetics, 10th Edition, Churchill Livingstone.

Journals

1. Nutrition Update Series.

2. World Review Of Nutrition And Dietetics.

3. Journal Of The American Dietetic Association

4. American Journal Of Clinical Nutrition

5. Nutrition Review.

COURSE OUTCOMES

On the successful completion of the course, students will be able to

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	understand the basics of nutritional assessment and diet councelling	K1,K2	PSO1,PSO2
CO 2	gain knowledge about the Modern Nutrition In Health & Disease	K1, K2	PSO1,PSO2
CO 3	get exposure to planning of experiments and the various methodologies involved	K1 , K2, K3	PSO2, PSO3
CO 4	apply the use software and other computational techniques for data presentation	K1, K2, K3 & K4	PSO4,PSO5
CO 5	understand and analyse the techniques of interpretation involved in written and oral presentations	K1, K2 , K3 & K4	PSO4,PSO5

COURSE DESIGNER Dr. K.Karthiga

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FULL TIME DOCTOR OF PHILOSOPHY

HOMESCIENCE - SEMESTER - I

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
	20PHDREP04	RESEARCH AND PUBLICATION ETHICS	Ph. D Core	-	2

COURSE DESCRIPTION

This course emphasise the basic concepts of philosophy of science and ethics.

COURSE OBJECTIVES

This course provides detailed information about research integrity and publication ethics.

UNITS

UNIT I: PHILOSOPHY AND ETHICS

Introduction to philosophy: definition, nature and scope, concept, branches. Ethics: definition, moral philosophy, nature of moral judgments and reactions.

UNIT 2: SCIENTIFIC CONDUCT

Ethics with respect to science and research. Intellectual honesty and research integrity. Scientific misconducts: Falsification, Fabrication, and Plagiarism (FFP). Redundant publications: duplicate and overlapping publications, salami slicing. Selective reporting and misrepresentation of data

UNIT 3: PUBLICATION ETHICS

Publication ethics: definition, introduction and importance Best practices / standards setting initiatives and guidelines: COPE, WAME, etc. Conflicts of interest. Publication misconduct: definition, concept, problems that lead to unethical behaviour and vice versa, types. Violation of publication ethics, authorship and contributor ship. Identification of publication misconduct, complaints and appeals. Predatory publishers and journals practice.

UNIT 4: PUBLICATION MISCONDUCT

Group Discussions: Subject specific ethical issues, FFP, authorship. Conflicts of interest. Complaints and appeals: examples and fraud from India and abroad.

Software tools: Use of plagiarism software like Turnitin, Urkund and other open source software tools

UNIT 5: DATABASES AND RESEARCH METRICS

Databases: Indexing databases. Citation databases: Web of Science, Scopus, etc.

Research Metrics: Impact Factor of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score. Metrics: h-index, g index, i10 index, altmetrics.

BOOKS FOR REFERENCE

1. The Ethics of Teaching and Scientific Research By Miro Todorovich; Paul Kurtz; Sidney Hook.
2. Research Ethics: A Psychological Approach By Barbara H. Stanley; Joan E. Sieber; Gary B. Melton.
3. Research Methods in Applied Settings: An Integrated Approach to Design and Analysis By Jeffrey A. Gliner; George A. Morgan Lawrence Erlbaum Associates, 2000.
4. Ethics and Values in Industrial-Organizational Psychology By Joel LefkowitzLawrence Erlbaum Associates, 2003.

COURSE OUTCOMES

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NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	understand the basics of philosophy and ethics of research	K1,K2	PSO1,PSO2
CO 2	Understand the scientific misconducts like falsification, fabrication and plagiarism	K1, K2	PSO1,PSO2
CO 3	gain knowledge about the publication misconducts related will authorship and contributorship	K1 , K2, K3	PSO2, PSO3
CO 4	Understanding of the publication misconducts	K1, K2, K3 & K4	PSO4,PSO5
CO 5	Information about databases and research metrics	K1, K2 , K3 & K4	PSO4,PSO5

COURSE DESIGNER Dr.K.Karthiga

Forwarded By
Dr. Vasantha Esther Rani
HoD'S Signature & Name

FATIMA COLLEGE (AUTONOMOUS)

COLLEGE WITH POTENTIAL FOR EXCELLENCE
74th RANKING IN INDIA RANKING 2020(NIRF) BY MHRD
AFFLIATED TO MADURAI KAMARAJ UNIVERSITY
MADURAI - 625 018, Tamil Nadu, India

NAME OF THE DEPARTMENT: THE RESEARCH CENTRE OF HOME SCIENCE

NAME OF THE PROGRAMME : Ph.D

PROGRAMME CODE :

ACADEMIC YEAR : 2021-2022

COLLEGE PROFILE

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Empowering Women with life copying skills and enhancing entrepreneurial skills and promoting economic independency.

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- To inculcate in women managerial and organizational skills both at home and work places
- To equip them with professional skills to face the challenges and hurdles
- To enhance their communication skills by conducting various programmes
- To kindle their academic excellence
- To instill in them aesthetic values

PART TIME DOCTOR OF PHILOSOPHY

HOME SCIENCE - SEMESTER - I

For those who joined in 2020 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
	19PHDCWN01	Extraction of Alginates from Brown and Red Seaweed and its Impact of Supplementation on Obese Rats	Course	-	4

COURSE DESCRIPTION

This course emphasises the knowledge of causes, risk factors and complications of obesity and pathophysiology and management of obesity by dietary and lifestyle modifications, seaweeds alginate and its pharmaceuticals and medicinal uses.

COURSE OBJECTIVES

This course provides detailed information about obesity and seaweeds alginate contribution in treating obesity.

UNITS

UNIT: 1

INTRODUCTION TO OBESITY

Definition, Types of obesity, Assessment of obesity. Causes – Risk factors – family inheritance and influences, Lifestyle choices – unhealthy diet, inactivity, certain

diseases and medications, social and economic issues, age, Other factors – pregnancy, lack of sleep, stress. Complications of obesity – metabolic disorder, physical disability, heart diseases, strokes, type 2 diabetes, cancers, digestion problem, sleep apnea, osteoarthritis.

UNIT: 2

PATHOPHYSIOLOGY OF OBESITY:

Theories of obesity – Set point theory, Lay theory, Fat cell theory. Dysregulation of lipid and glucose metabolism, lipotoxicity and insulin resistance in obesity. The specific role of adipocyte inflammatory secretagogues including effects of hypertension, macrophage and immune function. Relationship between hormones and obesity. Management of obesity-Dietary and Lifestyle modifications, other treatments.

UNIT: 3

INTRODUCTION TO SEAWEED

History and origin of seaweeds, Distribution of seaweeds, Seaweed production, types of seaweed - Chlorophyta-green seaweed, Phaeophyta-brown seaweed, Rhodophyta-red seaweed, bioactive components of seaweeds – Polysaccharides, Dietary fibres-Alginates Carrageenans, Agar, Fucoidan, Mannitol, Ulvan, porphyran and xylans, Proteins, peptides and amino acids, Lipids, Health benefits of seaweeds

UNIT: 4

PHAEOPHYTA-BROWN SEAWEED

Overview of the brown seaweed, Distribution, Habitat, Cultivation, Properties, Allergies, Toxicity, Dosage, Industrial Applications, Nutritional and Pharmacological effects

RHODOPHYTA-RED SEAWEED

Overview of the red seaweed, Distribution, Habitat, Cultivation, Properties, Allergies , Toxicity, Dosage , Industrial Applications, Nutritional and Pharmacological effects

UNIT: 5

EXTRACTION OF ALGINATE FROM SEAWEEDS

Seaweed polysaccharides, Alginate structure and characteristics, Alginate extraction methods, Alginate uses, Pharmaceutical and Medical uses, Alginates in treating obesity

Impact of seaweeds in various diseases- Cardiovascular diseases and related risk factors, Metabolic syndrome, Weight management, Type 2 diabetes, Digestive tract health, Bone Health and Cancer

UNIT: 6

RESEARCH METHODOLOGY

Introduction to Research Methodology, Research Methods, Data Analysis and Interpretation, Report Writing, IPR and Plagiarism, Research Ethics.

TEXT BOOKS:

1. Mudambi SR and Rajagopal MV. Fundamentals of Foods, Nutrition and Diet Therapy, New Age International Publishers, New Delhi. 2007.

2. Robinson CH. Normal and Therapeutic Nutrition, The Oxford and IBH Publishing Co.1982.

3. Davidson And Passmore, Essentials of Food and Nutrition Human Nutrition And Dietetics By. English Language Book Society,1985.

4. Garrow, J.S., James W.P.T., And Rajph,A, Human Nutrition And Dietetics, 10th Edition, Churchill Livingstone.2000.

5. Swaminathan M., Vols. I and II, Ganesh and Co., Madras. 2007.

6. Dennis,J., Hugh M.C, A guide to the seaweed industry, FAO Fisheries Technical Paper, School of Chemistry, University of New South Wales and Australia, Defence Force Academy, Australia.2009

7. Suresh Kumar, K, Seaweeds: Distribution, Production and uses, Research Gate.2018.

8. Copper,J.W.,Bay of Bengal Programme Post – Harvest Fisheries – Agar and Alginate production from Seaweed in India, Food and Agriculture organization of the United Nation, Bay of Bengal Programme,India,1999.

9. Jayachandran Venkatesan,Sukumaran Anil, Sekwonkin, Introduction to Seaweed Polysaccharides, Pukyong National University, Busan, South Korea,2017.

10. Kothari C R. Research methodology: Methods & Techniques (Rev. Ed.), New Age International. New Delhi. 2006.

11. Roig M. Avoiding plagiarism, self-plagiarism, and other questionable writing Practices: A guide to ethical writing, 2006.

12. Emma M Brown, Philip J Allsopp, Seaweed and human health, Nutrition Reviews, Vol. 72(3):205–216,2018.

COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	understand the obesity with basic knowledge and information about causes of obesity	K1, K2	PSO1,PSO2
CO 2	Understand knowledge related to pathophysiology and management of obesity.	K1, K2, K3	PSO3,PSO4
CO 3	understand the types of seaweeds and its medicinal uses	K1, K2	PSO1,PSO3
CO 4	understanding of the uses and effects of alginates in obesity	K2, K2, K3 & K4	PSO4, PSO5
CO 5	understand the basics of research and its objectives	K1, K2, K3 & k4	PSO3,PSO4& PSO5

COURSE DESIGNER: Dr. K. Karthiga

Forwarded By
Dr. Vasantha Esther Rani

HoD'S Signature & Name

PART TIME DOCTOR OF PHILOSOPHY

HOME SCIENCE - SEMESTER - I

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
	19PHDRMP03	CLINICAL NUTRITION	Ph.D Core	-	4

COURSE DESCRIPTION

This will provide you detailed scientific understanding about nutritional screening and assessment methods and strategies for improving patient care. You will learn how to perform nutritional assessments in various disease conditions. It will also enable you with knowledge on the best practices of managing nutrition support therapy in different patient conditions

COURSE OBJECTIVES

1. Explain the role of nutrition in health
2. Physiological, anthropometric and biochemical assessment of the nutritional status.
3. To plan a therapeutic diet according to the individual or patients requirement in disease conditions.
4. Monitor and evaluate nutrition therapy
5. Educate the patients and family regarding nutritional care to be followed
6. Logistics of enteral and parenteral nutrition.
7. Therapeutic diet counseling of patients in the outpatient department
8. Basic concepts of neutraceuticals and their applications.

UNITS

UNIT-I

Assessment of nutritional status of the hospitalized patients, Diet counseling. Role of Dietitian in assessing patients' needs Based on Clinical, Bio clinical, Biophysical and personal data.

Current trends in nutritional support: Parenteral and enteral nutrition- Feeding of premature and LBW babies- pre and post-operative diets

Incorporation of Novel Therapeutic foods in the exchange lists followed in Hospitals, Periodical nutritional screening of patients

UNIT II

Gastro intestinal tract disorders-ulcer,constipation,diarrhea,dumping syndrome,irritablebowelsyndrome,ulcerativecolitis,HitausHernia,RegionalEnteritis,Diverticulosis,Malabsorpt ion Syndrome.

Liver, gallbladder and pancreatic disorders, Stress & trauma.

Nutrition and management in- Musculo skeletal disorders, Immuno deficiency & AIDS.

UNIT III

Etiopathophysiology, metabolic and clinical aberrations, diagnostic features, complications, prevention and recent advances in the nutritional management of Renal disorders, Cancer, Neurological disorders, Infection & febrile conditions and Respiratory problems.

UNIT IV

Etiopathophysiology, metabolic and clinical aberrations, diagnostic features, complications, prevention and recent advances in the nutritional management of- Weight imbalances, diabetes Mellitus, other metabolic disorders and Cardio-vascular diseases.

UNIT V

Herbs and medicinal plants – medicinal uses Functional foods: Types & medicinal uses

Antioxidants- types, role & mechanism of action in scavenging free radicals, role in health & disease

Phytochemicals- Occurrence, types & role in health & diseases

Probiotic & Prebiotic foods for health benefits.

BOOKS FOR REFERENCE

1. Bakhru. H.K.(2001) Indian Spices & Condiments As Natural Healers, Jaico Publishing, Mumbai
2. Syed A.A. Sharma S.C (2000) Herbal Cure For Common & Chronic Diseases, Pushtak Mahal , New Delhi
3. Gala, R, Gala,D, Gala.S.(1999), NATURE Cure For Common Diseases, Navneet Publications (India) Ltd., Chennai.
4. Manohar Murali. C. H, (2000), Ayurveda For All, Pustrak Mahal. New Delhi.Pp133- 136
5. Nutrition Principals And Applications In Health Promotion By Suitir & Crowley.
6. Food, Nutrition & Dietetics By Krause & Mahan, WB Saunders Co., Philadelpia, 1979.
7. Normal & Therapeutic Nutrition By Corinne H Robinson. Merlyn. R. Lawley. Mac Million Publishers & Co.
8. Maurice Shils, James Olson & Noshe, (1994), Modern Nutrition In Health & Disease 8th Edition, Vol I & II, Lea & Febiger Co, USA.
9. Human Nutrition And Dietetics By Davidson And Passmore. English Language Book Society,1985.
10. Garrow, J.S., James W.P.T., And Rajph,A,(2000), Human Nutrition And Dietetics, 10th Edition, Churchill Livingstone.

COURSE OUTCOMES

On the successful completion of the course, students will be able to

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Gain knowledge about aetiology, risk factors, clinical features and dietary management of cancer, HTN, CVD, genetic and mental disorders.	K1,K2	PSO1,PSO2
CO 2	Designing and carrying out health status assessment protocols, and identifying risk factors.	K1, K2	PSO1,PSO2
CO 3	Interpreting a nutritional diagnosis, evaluating nutritional aspects of a clinical record and implementing a dietary treatment plan.	K1 , K2, K3	PSO2, PSO3
CO 4	Evaluate the normal and therapeutic nutrition needs of patients and design appropriate dietary plans based on individual and group needs.	K1, K2, K3 & K4	PSO4,PSO5

COURSE DESIGNER Dr. K. Karthiga

Forwarded By
Dr. Vasantha Esther Rani
HoD'S Signature & Name

PART TIME DOCTOR OF PHILOSOPHY

HOME SCIENCE - SEMESTER - I

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
	19PHDREP04	RESEARCH AND PUBLICATION ETHICS	Ph.D Core	-	4

COURSE DESCRIPTION

This course emphasise the basic concepts of philosophy of science and ethics.

COURSE OBJECTIVES

This course provides detailed information about research integrity and publication ethics.

UNITS

UNIT I: PHILOSOPHY AND ETHICS

Introduction to philosophy: definition, nature and scope, concept, branches. Ethics: definition, moral philosophy, nature of moral judgments and reactions.

UNIT 2: SCIENTIFIC CONDUCT

Ethics with respect to science and research. Intellectual honesty and research integrity. Scientific misconducts: Falsification, Fabrication, and Plagiarism (FFP). Redundant publications: duplicate and overlapping publications, salami slicing. Selective reporting and misrepresentation of data

UNIT 3: PUBLICATION ETHICS

Publication ethics: definition, introduction and importance Best practices / standards setting initiatives and guidelines: COPE, WAME, etc. Conflicts of interest. Publication misconduct: definition, concept, problems that lead to

unethical behaviour and vice versa, types. Violation of publication ethics, authorship and contributor ship. Identification of publication misconduct, complaints and appeals. Predatory publishers and journals practice.

UNIT 4: PUBLICATION MISCONDUCT

Group Discussions: Subject specific ethical issues, FFP, authorship. Conflicts of interest. Complaints and appeals: examples and fraud from India and abroad.

Software tools: Use of plagiarism software like Turnitin, Urkund and other open source software tools

UNIT 5: DATABASES AND RESEARCH METRICS

Databases: Indexing databases. Citation databases: Web of Science, Scopus, etc.

Research Metrics: Impact Factor of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score. Metrics: h-index, g index, i10 index, altmetrics.

BOOKS FOR REFERENCE

1. The Ethics of Teaching and Scientific Research By Miro Todorovich; Paul Kurtz; Sidney Hook.
2. Research Ethics: A Psychological Approach By Barbara H. Stanley; Joan E. Sieber; Gary B. Melton.
3. Research Methods in Applied Settings: An Integrated Approach to Design and Analysis By Jeffrey A. Gliner; George A. Morgan Lawrence Erlbaum Associates, 2000.
4. Ethics and Values in Industrial-Organizational Psychology By Joel LefkowitzLawrence Erlbaum Associates, 2003.

COURSE OUTCOMES

On the successful completion of the course, students will be able to

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	understand the basics of philosophy and ethics of research	K1,K2	PSO1,PSO2
CO 2	Understand the scientific misconducts like falsification, fabrication and plagiarism	K1, K2	PSO1,PSO2
CO 3	gain knowledge about the publication misconducts related will authorship and contributorship	K1 , K2, K3	PSO2, PSO3
CO 4	Understanding of the publication misconducts	K1, K2, K3 & K4	PSO4,PSO5
CO 5	Information about databases and research metrics	K1, K2 , K3 & K4	PSO4,PSO5

COURSE DESIGNER Dr. K. Karthiga

Forwarded By
Dr. Vasantha Esther Rani
HoD'S Signature & Name

Course Work Syllabus

STUDY TITLE: **A Comparative Study on Supplementation of Purslane Leaves and Brahmi Leaves on the Nutritional and Cognitive Profile of the Selected Mentally Challenged Adolescent Children**

NAME OF THE STUDENT: J.Manjula **COURSE:** Ph.D. Food & Nutrition

COURSE CODE: 19PHDCWN01

UNIT: 1 INTRODUCTION TO INTELLECTUAL DISABILITY

Definitions – Mental retardation or Intellectual disability, Intelligent Quotient, Degree of Retardation, Facts on Intellectual disability; Biological Causes of intellectual disability - Genetic conditions, Prenatal Causes, Perinatal Causes, Postnatal causes, Metabolic disorders, Cranial anomalies and other factors; Characteristics of intellectual disability - Mild , Moderate, Severe and Profound Intellectual Disability; Diagnosis and prevention of Intellectual disability, Common mental retardation syndromes.

UNIT: 2

NUTRITIONAL SCREENING AND ASSESSMENTS IN THE FIELD OF INTELLECTUAL DISABILITY:

Definition of assessment, Purpose of assessment, Different stages of cognitive abilities, motor affordance on cognitive, motor, socio-emotional abilities ,socio economic status and the quality of the home environment.

Nutritional assessment – Anthropometric parameters, Bio-chemical data, Clinical history and Dietary assessments.

Measure of intelligence – Purpose of assessment, Different stages of evaluating cognitive abilities, Neurocognitive functioning assessment - General cognitive/intellectual ability, Language and communication, Memory acquisition, Attention and distractibility, Processing speed, and Executive functioning, Domain effect , Intelligence scale methods.

UNIT: 3

OMEGA 3 RICH HERBAL PLANTS AND ITS HEALTH BENEFITS

History and uses of herbal plants, Imbalance of Omega-3 Fatty Acid Ratio in Modern Diets, Importance of Omega-3 PUFAs for Human Health, Present Sources of Omega-3 PUFAs, Need of Alternative Source for the Production of Omega-3 PUFAs.

UNIT: 4

BRAHMI LEAVES (Bacopa monnieri)

Overview of the plant, Classification, Distribution, Habitat, Cultivation, Properties, Allergies , Toxicity, Dosage , Industrial Applications, Nutritional and Pharmacological effects, Effect of Brahmi leaves on cognitive development.

PURSLANE LEAVES (Portulaca oleracea)

Overview of the plant, Classification, Distribution, Habitat, Cultivation, Properties, Allergies , Toxicity, Dosage , Industrial Applications, Nutritional and Pharmacological effects, Effect of Purslane leaves on cognitive development.

UNIT: 5

IMPACT OF OMEGA 3 FATY ACIDS ON INTELLECTUAL DISABILITIES:

Interacting process for the effect of omega 3 deficiency on intellectual disabilities, cognitive, motor, and socio-emotional development, Mechanisms of inadequate omega 3 fatty acids on brain development, mental and Cognitive development.

UNIT: 6

RESEARCH METHODOLOGY

Introduction to Research Methodology, Research Methods, Data Analysis and Interpretation, Report Writing, IPR and Plagiarism, Research Ethics.

REFERENCE:

1. Nutrition for children with special health care needs, A handbook for Parents, Teachers, care givers and Food service providers, Nancy S. Wellman, Ph.D., R.D., F.A.D.A. , Sheah Rarback, M.S., R.D.1998,Florida Department of Education, Food and Nutrition Management, Florida International University, Florida.

2. Children at Risk, Challenging Boundaries- A Study on Mentally Challenged Children, Ajitha. R.Manjeshwar, Dr. Abhishrk Lakhtakia, Amol l.Jadhav, Ramesh R.Pawar, Sudhir S.Salgar, Vinayak m. Sakhare, 2008, CHILD LINE India Foundation Mumbai.

3. Introduction to Psychology, Glifford T.Morgan , Richard A.King , John R.Weisz, John Schopcler, Tata McGraw – Hill, 1999, New Delhi.

4. Handbook of Evidence based practices in Intellectual and Developmental Abilities, Nirbhay N.Singh, Springer, 2017, USA.

5. Psychological Testing in the service of Disability Determination, Institute of Medicine, The National Academic Press, 2015,US.

6. Intellectual Disability: A Guide for Families and Professionals, James C. Harris, M.D., Oxford University Press, 2010, New York.

7. Omega 3 fatty acids in Brain and Neurological Health, Ronald Ross Watson, Fabien De Meester, Elsevier, 2014.

8. Omega-3 Fatty Acids: Chemistry, Dietary Sources and Health Effects, Wasim Khan, Nova Science Publishers, 2014, UK.

9. The lost book of Herbal Remedies, Nicole Apelian & Claud Davis, Capital Printing Co; 3rd edition, 2018, Austin.

10. Handbook of Indian Medicinal Plants, M.C.Joshi, Scientific Publishers, 2019, India.

11. KOTHARI (C R). Research methodology: Methods & Techniques (Rev. Ed.), (2006) New Age International. New Delhi.

12. ROIG (M). Avoiding plagiarism, self-plagiarism, and other questionable writing Practices: A guide to ethical writing, (2006)

Forwarded by
Dr. Vasantha Esther Rani
Head, The Reserach Centre of Homescience

FATIMA COLLEGE (AUTONOMOUS)

Re-Accredited with A $^{++}$ Grade by NAAC (Cycle 4)

74th Rank in India Ranking 2020 (NIRF) by MHRD

Maryland, Madurai- 625 018,

Tamil Nadu, India

NAME OF THE DEPARTMENT: HOMESCIENCE

NAME OF THE PROGRAMME : Ph.D.,

ACADEMIC YEAR : APRIL 2020 -23

COLLEGE PROFILE

Fatima College (Autonomous), Mary Land, Madurai, is a Post Graduate and Research Institution for Women affiliated to Madurai Kamaraj University. It is a Catholic Minority institution established and run by St. Joseph's Society of Madurai (of the Congregation of the Sisters of St. Joseph of Lyons, France). This institution came into existence through the tireless efforts of the missionary sisters of St. Joseph of Lyons and the zeal and heroic sacrifice of Rev. Sr. Rose Benedicta, the Foundress of the College.

The College was started in St. Joseph's Campus Madurai as a Second Grade College with 63 students in 1953. It was upgraded into a Post Graduate College in 1964; Autonomous in 1990 and a Research Institute in 2004. The College now offers 21 Undergraduate Programmes, 13 Postgraduate Programmes, 2 Professional Programme, 5 M.Phil. Programmes and 6 Departments have become Research Centres. It has strength of 4134 Students, 206 Teaching Staff and 100 Non-Teaching Staff.

The comprehensive assessment by NAAC in 1999 placed Fatima College in Five Star Status of merit. The college strives to sustain excellence, quality and relevance while equipping the students to meet the demands of higher education in India. In 2004 UGC conferred on Fatima College the status of College with Potential for Excellence. In 2021 NAAC Re-Accredited the College with A $^{++}$Grade. The College was ranked 74th in the All India NIRF Ranking in 2020 by MHRD.

VISION

WOMEN'S EMPOWERMENT THROUGH EDUCATION

The vision of the college is to empower women by developing human capabilities through quality education based on Christian values, making them responsible citizens who can work for the advancement of the society and promote communal harmony in the multi-religious and multi-cultural reality of India eventually evolving into women of communion.

MISSION

- To enhance quality of life through the development of individuals.
- To enable women to become contributors in the economic, social and political development of India.
- To equip the students with 21st century skill-sets with a focus on problem-solving abilities
- To motivate them to work for social justice
- To give preference to the rural economically backward and first-generation learners
- To enable students to be employed in the technology oriented competitive market

VISION OF THE DEPARTMENT

Empowering Women with life copying skills and enhancing entrepreneurial skills and promoting economic independency.

MISSION OF THE DEPARTMENT

- To inculcate in women managerial and organizational skills both at home and work places
- To equip them with professional skills to face the challenges and hurdles
- To enhance their communication skills by conducting various programmes
- To kindle their academic excellence
- To instill in them aesthetic values

FULL TIME DOCTOR OF PHILOSOPHY

HOMESCIENCE

COURSE CODE	COURSE TITLE	CATEGORY	CREDITS
20PHDCWP01	RESEARCH METHODOLOGY	Course - I	4

COURSE DESCRIPTION

This is a cross-curricular subject, which may be of interest for those students who are considering undertake a research career, especially in the fields of Nutrition and dietetics

COURSE OBJECTIVES

This paper highlights the various postulates of research problems, research design, writing a thesis and modern statistical methods. This helps to carry out research problem individually in a perfect scientific method.

Unit –I RESEARCH COMPONENTS AND TYPES

Meaning of research – Objectives of research – Motivation in research – Research approaches – Significance of research and scientific methods – Qualities of good research – Problems encountered by researchers in India – Identifying a research – Necessary condition for the formulation of the research problem – Criteria for good research project.

Unit –II METHODS OF DATA COLLECTION AND SAMPLING TECHNIQUES

Primary Data: Observation, Experimentation, Simulation interviewing, Questionnaire, Projective technique. Secondary Data: Published and Unpublished sources.

Characteristics of good sample, advantages and disadvantages of sample.

Sampling Techniques: Probability or random sampling, non-probability or non-random. Sampling and non-sampling errors.

Unit –III FORMULATION OF HYPOTHESIS, PROCESSING OF DATA, REPORT WRITING AND PLAGIARISM

Hypothesis: Definition, Role and Types –Criteria for useful hypothesis – Formulation – Tabulation – Editing – Coding – Analysis and Interpretation of data. Procedure for testing hypothesis.

Components or layout of a thesis: Introduction, Review of literature, Methodology, Results and Discussion, Summary and Conclusion, Bibliography, Foot Notes and Appendix.

Significance of Report Writing: Types of Report, Oral presentation, Mechanics of writing and Precaution of writing research report, Scientific writing.

Unit – IV: TESTING OF HYPOTHESIS

Measures of Central Tendency: Mean, Median, Mode and Standard Deviation. Procedure for Testing Hypothesis: Students 's' 't' test and 'f' test.

Unit –V STASTICAL ANALYSIS

Chi Squared test, Co – efficient of Correlation, Regression, ANNOVA, Data result interpretation.

REFERENCE BOOKS:

1. Donald.H.Mc. Burney, "Research methods" Thomson Wordsworth, 5th Edition, 2003.

2. Ghosh B.N., "Scientific Method and Social Research", Sterling Publishers Pvt.Ltd... New Delhi, 4th Edition, 1987.

3. Goode and Hatt, "Methods and Social Research", MCGraw Hill International Book Company, 23rd printing, 1983.

4. GopalLal Jain," research Methodology, Methods, Tools and Techniques", Mangal Deep Publications, Jaipur, 1998.

5. Kothari.C.R.," Research methodology", New Age International Publishers, New Delhi 3rd reprint Edition, 2004.

6. O.R.Krishnaswamy and M.Ranganathan, "Methodology of Research in Social Sciences", Himalaya Publishing House, New Delhi, 2006.

7. Sadhu and Singh, "Research Methodology in Social Sciences", Himalaya Publishing House, Mumbai, 2nd Edition,1983.

8. Santhosh Gupta, "Research Methodology and Statistical Techniques", Deep and Deep Publications, New Delhi, 2001.

9. Sonachalam K.S., "Research Methodology of Social Science", Emerald Publishers, Madras, 1988.

10. Yogesh Kumar Singh and Ruchikanth, "Research Methodology", A.P.H, Publishing Corporation, New Delhi, 2005.

11. Gupta S.P.," Statistics", S.Chand& Company Ltd, New Delhi, 2001.

12. Pillai and Bagavathi R.S.N., "Statistics", S.Chand& Company Ltd, New Delhi, 2001.

COURSE OUTCOMES

On the successful completion of the course, students will be able to

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Understand the basics of research and its objectives	K1, K2	PSO1, PSO2
CO 2	Gain knowledge about the theoretical research involved	K1, K2	PSO1, PSO2
CO 3	Get exposure to planning of experiments and the various methodologies involved	K1, K2, K3	PSO2, PSO3
CO 4	Apply the use software and other computational techniques for data presentation	K1, K2, K3& K4	PSO4, PSO5
CO 5	Understand and analyse the techniques of interpretation involved in written and oral presentations	K1, K2, K3 & K4	PSO4, PSO5

COURSE DESIGNER: Dr.Vasantha Esther Rani

Forwarded By
Dr.Vasantha Esther Rani
HoD'S Signature & Name

FULL TIME DOCTOR OF PHILOSOPHY

HOMESCIENCE

COURSE CODE	COURSE TITLE	CATEGORY	CREDITS
20PHDCWP02	CLINICAL NUTRITION	Course - II	4

COURSE DESCRIPTION

This will provide you detailed scientific understanding about nutritional screening and assessment methods and strategies for improving patient care. You will learn how to perform nutritional assessments in various disease conditions. It will also enable you with knowledge on the best practices of managing nutrition support therapy in different patient conditions

COURSE OBJECTIVES

- Explain the role of nutrition in health
- Understand physiological, anthropometric and biochemical assessment of the nutritional status.
- Guide to plan a therapeutic diet according to the individual or patients requirement in disease conditions.
- Monitor and evaluate nutrition therapy
- Educate the patients and family regarding nutritional care to be followed
- Logistics of enteral and parenteral nutrition.
- Therapeutic diet counselling of patients in the outpatient department
- Explain basic concepts of nutraceuticals and their applications

UNIT-I

Assessment of nutritional status of the hospitalized patients, Diet counseling. Role of Dietitian in assessing patients' needs Based on Clinical, Bio clinical, Biophysical and personal data. Current trends in nutritional support: Parenteral and enteral nutrition- Feeding of premature and LBW babies- pre and post operative diets Incorporation of Novel Therapeutic foods in the exchange lists followed in Hospitals, Periodical nutritional screening of patients

UNIT II

Gastro intestinal tract disorders-ulcer, constipation, diarrhoea, dumping syndrome, ulcerative colitis, Malabsorption Syndrome. Liver, gallbladder and pancreatic disorders, Stress & trauma. Nutrition and management in-Musculo skeletal disorders, immuno deficiency & AIDS.

UNIT III

Etiopathophysiology, metabolic and clinical aberrations, diagnostic features, complications, prevention and recent advances in the nutritional management of Renal disorders, Cancer, Neurological disorders, Infection & febrile conditions and Respiratory problems

UNIT IV

Etiopathophysiology, metabolic and clinical aberrations, diagnostic features, complications, prevention and recent advances in the nutritional management of- Weight imbalances, diabetes Mellitus , other metabolic disorders and Cardio-vascular diseases.

UNIT V

Herbs and medicinal plants – medicinal uses Functional foods: Types & medicinal uses Antioxidants- types, role & mechanism of action in scavenging

free radicals, role in health & disease Phytochemicals- Occurrence, types & role in health & diseases Probiotic & Prebiotic foods for health benefits.

REFERENCE BOOKS:

1. Bakhru. H.K(2001) Indian Spices & Condiments As Natural Healers, Jaico Publishing, Mumbai

2. Syed A.A. Sharma S.C (2000) Herbal Cure For Common & Chronic Diseases, PushtakMahal , New Delhi

3. Gala, R, Gala,D, Gala.S.(1999), NATURE Cure For Common Diseases, Navneet Publications (India) Ltd., Chennai. M. Phil./Ph.D. Food and Nutrition (2018-19 onwards) Page 11 of 11

4. ManoharMurali. C. H, (2000), Ayurveda for All, PustrakMahal. New Delhi.Pp133- 136

5. Nutrition Principals and Applications In Health Promotion By Suitir& Crowley.

6. Food, Nutrition & Dietetics y Krause & Mahan, WB Saunders Co., Philadelpia, 1979.

7. Normal & Therapeutic Nutrition by Corinne H Robinson. Merlyn. R. Lawley. Mac Million Publishers & Co.

8. Maurice Shils, James Olson &Noshe, (1994), Modern Nutrition in Health & Disease 8 th Edition, Vol I & II, Lea &Febiger Co, USA.

9. Human Nutrition and Dietetics By Davidson And Passmore. English Language Book Society,1985.

10. Garrow, J.S., James W.P.T., And Rajph,A,(2000), Human Nutrition And Dietetics, 10th Edition, Churchill Livingstone.

JOURNALS:

1. Nutrition Update Series.

2. World Review of Nutrition and Dietetics.

3. Journal of The American Dietetic Association

4. American Journal of Clinical Nutrition

5. Nutrition Review.

COURSE OUTCOMES

On the successful completion of the course, students will be able to

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Understand the basics of nutritional assessment and diet counselling	K1, K2	PSO1, PSO2
CO 2	Gain knowledge about the Modern Nutrition in Health & Disease	K1, K2	PSO1, PSO2
CO 3	Get exposure to planning of experiments and the various methodologies involved	K1, K2, K3	PSO2, PSO3
CO 4	Apply the use software and other computational techniques for data presentation	K1, K2, K3& K4	PSO4, PSO5
CO 5	Understand and analyse the techniques of interpretation involved in written and oral presentations	K1, K2, K3 & K4	PSO4, PSO5

COURSE DESIGNER: Dr.Vasantha Esther Rani

Forwarded By
Dr.Vasantha Esther Rani
HoD'S Signature & Name

FULL TIME DOCTOR OF PHILOSOPHY

HOME SCIENCE

For those who joined in 2019onwards

COURSE CODE	COURSE TITLE	CATEGORY	CREDITS
20PHDCWP03	Role of Whey Protein Functional Yogurt to Combat Obesity and Type II Diabetes – Mice Study	Course - III	4

COURSE DESCRIPTION

This course emphasises the basic concepts of type II diabetes, obesity and its prevention

COURSE OBJECTIVES

This course provides detailed information about the management of type II diabetes and obesity to prevent its complications.

UNIT I - TYPE II DIABETES

Natural history of type 2 diabetes, Epidemiology and risk factors for type II diabetes mellitus, β-Cell Function, Pathogenesis of β-cell failure, Insulin Resistance, Acute Diabetic Complications, Hypoglycemia in diabetes, Acute metabolic complications of diabetes, Microvascular Complications in Diabetes, Macrovascular Complications in Diabetes, Normal

Physiology - Mechanisms of insulin signal transduction, Glucose, Protein, Lipid and Lipoprotein metabolism – normal physiology, Pathophysiology - Genetics of Diabetes, Immunology of Diabetes, Pathology of Pancreas in Diabetes Mellitus, Metabolic Disturbances in Diabetes, Management of Diabetes - Relation between Diet and Type II DM, Relation between Dietary Practices and Diabetes Complications, Recent Technologies for Combating Diabetes.

UNIT II - OBESITY

Obesity as a global problem, The epidemiology of obesity, Body Weight, Diagnosis - Anthropometric Indices of Obesity and Regional Distribution of Fat Depots, Body Composition and Longevity, Appetite regulation and obesity regulation, Fat in the Diet and Obesity, Energy Expenditure at Rest and During Exercise. Pathogenesis and types of obesity - The Specificity of Adipose Depots, visceral obesity and metabolic syndrome, interrelationship between Obesity and Type II Diabetes Mellitus.

UNIT III - WHEY PROTEIN

Composition, History, Chemical constituents, Production, Major forms of whey protein, Amino acids in Whey protein, Nutritional properties, biological activities, role of bioactive compounds from whey protein, Functional properties, industrial preparation, processing and applications, quality aspects including flavour and effects of storage, role and application.

UNIT IV - RICE BRAN

Introduction, basic composition, Processing and utilization, Preparation and functional properties, Extraction, isolation and identification of the active components in rice bran, Role of bioactive components in rice bran, Rice bran as functional bran, rice bran protein properties, extraction methods and food uses.

UNIT V - YOGURT

Manufacture of yogurt - Fruits and flavouring materials, Milk and Milk-based dairy ingredients, Ingredients for Yogurt manufacture, microorganism starter culture strains for yogurt production, principles of yogurt processing, Types of Yogurts, Yoghurt and its peptides, Sensory Analysis of Yogurt.

REFERENCE BOOKS:

1. A Handbook on Diabetes Mellitus 8th Edition 2021 Paperback, January 2021 by V.Seshiah
2. Textbook of Diabetes, 5th EditionSBN: 978-1-118-91202-7 March 2017 Wiley-Blackwell 1104 Pages
3. Organization WH. Obesity: Preventing and Managing the Global Epidemic. Geneva, Switzerland: World Health Organization; 2000
4. International Textbook of Obesity. Edited by Per Bjorntorp. Copyright © 2001 John Wiley & Sons Ltd Print ISBNs:0-471-988707 (Hardback); 0-470-846739 (Electronic)
5. Whey Proteins from Milk to Medicine 1st Edition, September 1, 2018 Editors: Hilton CDeeth, Nidhi Bansal Paperback ISBN: 9780128121245 eBook ISBN: 9780128121252.
6. Whey Protein Production, Chemistry, Functionality, and Applications Mingruo Guo John Wiley & Sons, 15-Apr-2019 - Technology & Engineering - 280 pages.
7. Rice Bran and Rice Bran Oil Chemistry, Processing and Utilization, Ling-Zhi Cheong, Xuebing Xu
8. Yogurt ancient food in the 21st century.

Journals Reference:

1. Bioactive Compounds of Rice as Health Promoters Author(s): Charu Lata Mahanta andSangeeta Saikia, Pp**:** 221-234(14), Doi**:** 10.2174/9781681082431116010012.
2. Food Research International (2020), doi: https://doi.org/10.1016/j.foodres.2020.109504

COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED

CO 1	understand the basic mechanism of type II diabetes and its complications	K1, K2	PSO1, PSO2
CO 2	understand the basics and complication of obesity	K1, K2, K3	PSO3, PSO4
CO 3	understand the properties of whey protein and its applications in diet	K1, K2	PSO1, PSO3
CO 4	Understand the properties of rice bran and its applications in diet	K2, K2, K3& K4	PSO4, PSO5
CO 5	Gain information about the processing and development of yogurt	K1, K2, K3 & k4	PSO3, PSO4& PSO5

COURSE DESIGNER: Dr.Vasantha Esther Rani

Forwarded By
Dr.Vasantha Esther Rani

HoD'S Signature & Name

FULL TIME DOCTOR OF PHILOSOPHY

HOMESCIENCE

COURSE CODE	COURSE TITLE	CATEGORY	CREDITS
20PHDRPE04	RESEARCH AND PUBLICATION ETHICS	Course - IV	2

COURSE DESCRIPTION

This course emphasises the basic concepts of philosophy of science and ethics.

COURSE OBJECTIVES

This course provides detailed information about research integrity and publication ethics.

UNIT I: PHILOSOPHY AND ETHICS

Introduction to philosophy: definition, nature and scope, concept, branches. Ethics: definition, moral philosophy, nature of moral judgments and reactions.

UNIT II: SCIENTIFIC CONDUCT

Ethics with respect to science and research. Intellectual honesty and research integrity. Scientific misconducts: Falsification, Fabrication, and Plagiarism (FFP). Redundant publications: duplicate and overlapping publications, salami slicing. Selective reporting and misrepresentation of data

UNIT III: PUBLICATION ETHICS

Publication ethics: definition, introduction and importance Best practices / standards setting initiatives and guidelines: COPE, WAME, etc. Conflicts of interest. Publication misconduct: definition, concept, problems that lead to

unethical behaviour and vice versa, types. Violation of publication ethics, authorship and contributor ship. Identification of publication misconduct, complaints and appeals. Predatory publishers and journals practice.

UNIT IV: PUBLICATION MISCONDUCT

Group Discussions: Subject specific ethical issues, FFP, authorship. Conflicts of interest. Complaints and appeals: examples and fraud from India and abroad.

Software tools: Use of plagiarism software like Turnitin, Urkund and other open-source software tools

UNIT V: DATABASES AND RESEARCH METRICS

Databases: Indexing databases. Citation databases: Web of Science, Scopus, etc.

Research Metrics: Impact Factor of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score. Metrics: h-index, g index, i10 index, altimetric.

REFERENCE BOOKS:

1. The Ethics of Teaching and Scientific Research by Miro Todorovich; Paul Kurtz; Sidney Hook.
2. Research Ethics: A Psychological Approach By Barbara H. Stanley; Joan E. Sieber; Gary B. Melton.
3. Research Methods in Applied Settings: An Integrated Approach to Design and Analysis by Jeffrey A. Gliner; George A. Morgan Lawrence Erlbaum Associates, 2000.
4. Ethics and Values in Industrial-Organizational Psychology by Joel Lefkowitz Lawrence Erlbaum Associates, 2003.

COURSE OUTCOMES

On the successful completion of the course, students will be able to

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	understand the basics of philosophy and ethics of research	K1, K2	PSO1, PSO2
CO 2	Understand the scientific misconducts like falsification, fabrication and plagiarism	K1, K2	PSO1, PSO2
CO 3	Gain knowledge about the publication misconducts related will authorship and contributor ship	K1, K2, K3	PSO2, PSO3
CO 4	Understanding of the publication misconducts	K1, K2, K3 & K4	PSO4, PSO5
CO 5	Information about databases and research metrics	K1, K2, K3 & K4	PSO4, PSO5

COURSE DESIGNER: Dr.Vasantha Esther Rani

Forwarded By
Dr.Vasantha Esther Rani
HoD'S Signature & Name