



V.V.VANNIAPERUMAL COLLEGE FOR WOMEN

(Belonging to Virudhunagar Hindu Nadars)

An Autonomous Institution Affiliated to Madurai Kamaraj University, Madurai

Re-accredited with 'A' Grade (3rd Cycle) by NAAC

VIRUDHUNAGAR - 626 001

OUTCOME BASED EDUCATION WITH CHOICE BASED CREDIT SYSTEM REGULATIONS AND SYLLABUS

(with effect from Academic Year 2020 - 2021)

V.V.Vanniaperumal College for Women, Virudhunagar, established in 1962, offers 20 UG Programmes, 14 PG Programmes, 6 M.Phil. Programmes and 6 Ph.D. Programmes. The curricula for all these Programmes, except Ph.D. Programmes, have been framed as per the guidelines given by the University Grants Commission (UGC) & Tamil Nadu State Council for Higher Education (TANSCHÉ) under Choice Based Credit System (CBCS) and the guidelines for Outcome Based Education (OBE).

The Departments of Commerce, English, History, Mathematics, Biochemistry and Tamil upgraded as Research Centres offer Ph.D. Programmes as per the norms and regulations of Madurai Kamaraj University, Madurai and do not come under the purview of CBCS.

A. CHOICE BASED CREDIT SYSTEM (CBCS)

The CBCS provides an opportunity for the students to choose Courses from the prescribed Courses. The CBCS is followed as per the guidelines formulated by the UGC. The performance of students is evaluated based on the uniform grading system. Computation of the Cumulative Grade Point Average (CGPA) is made to ensure uniformity in evaluation system.

List of Programmes in which CBCS/Elective Course System is implemented

UG PROGRAMMES

- Arts & Humanities : History (E.M. & T.M.), English, Tamil
- Physical & Life Sciences : Mathematics, Zoology, Chemistry, Physics, Biochemistry, Microbiology, Biotechnology, Computer Science, Information Technology and Computer Applications.
- Commerce & Management : Commerce, Commerce (Computer Applications), Commerce (Professional Accounting), Business Administration

PG PROGRAMMES

- Arts & Humanities : History, English, Tamil
- Physical & Life Sciences : Mathematics, Physics, Chemistry, Zoology, Biochemistry, Home Science - Nutrition and Dietetics, Computer Science, Information Technology, Computer Applications (MCA*)
- Commerce & Management : Commerce, Business Administration (MBA*)
- * AICTE approved Programmes

PRE-DOCTORAL PROGRAMMES (M.Phil.)

- Arts & Humanities : History, English, Tamil Physical &
- Life Sciences : Mathematics, Biochemistry
- Commerce & Management : Commerce

OUTLINE OF CHOICE BASED CREDIT SYSTEM - UG

1. Core Courses
2. Discipline Specific Elective Courses (DSEC)
3. Allied Courses
4. Skill Enhancement Courses (SEC)
5. Non Major Elective Courses (NMEC)
6. Ability Enhancement Compulsory Courses (AECC)
7. Generic Elective Courses (GEC)
8. Internship / Field Project
9. Self Study Courses
10. Extra Credit Courses (optional)

List of Non Major Elective Courses (NMEC) Offered

UG PROGRAMMES

| Name of the Course | Semester | Department |
|---|----------|---|
| History of India upto A.D.1858 | III | History(EM) |
| இந்திய வரலாறு கி.பி.1858 வரை | III | History (TM) |
| Indian National Movement (A.D 1885-1947) | IV | History(EM) |
| இந்திய தேசிய இயக்கம்(கி.பி.1885 – 1947) | IV | History(TM) |
| English for Professions I | III | English |
| English for Professions II | IV | |
| இக்கால நீதி இலக்கியம் | III | Tamil |
| உரைநடை இலக்கியம் | IV | |
| Basic Hindi – I | III | Hindi |
| Basic Hindi – II | IV | |
| Practical Banking | III | Commerce |
| Basic Accounting Principles | IV | |
| Business Management | III | Business Administration |
| Entrepreneurship | IV | |
| Quantitative Aptitude | III | Mathematics |
| Statistics and Operation Research | IV | |
| Physics in Everyday life | III | Physics |
| Fundamentals of Electronics | IV | |
| Industrial Chemistry | III | Chemistry |
| Drugs and Natural Products | IV | |
| Applied Zoology | III | Zoology |
| Animal Science | IV | |
| Basic Food Science | III | Home Science – Nutrition and Dietetics |
| Basic Nutrition and Dietetics | IV | |
| Women and Health | III | Biochemistry |
| Lifestyle associated disorders | IV | |
| Medical Lab Technology | III | Microbiology |
| Applied Microbiology | IV | |
| Infectious Diseases | III | Biotechnology |
| Organic Farming | IV | |
| Basics of Fashion | III | Costume Design And Fashion |
| Interior Designing | IV | |
| Introduction to Computers and Office Automation | III | Computer Science |
| Introduction to Internet and HTML 5 | IV | |
| MS Office | III | Information Technology |
| Introduction to HTML | IV | |
| Fundamentals of Computers | III | Computer Applications |
| Web Design with HTML | IV | |
| Horticulture – I | III | Botany |
| Horticulture – II | IV | |
| மருத்துவ தாவரவியல் - I | III | |
| மருத்துவ தாவரவியல் - II | IV | |
| Library and Information Science – I | III | Library Science |
| Library and Information Science - II | IV | |

மேல்நிலை கல்வி வரை தமிழை முதன்மை பாடமாக எடுத்து படிக்காத மாணவிகள் கீழ்க்கண்ட பாடங்களை கட்டாயம் படிக்க வேண்டும்

1. அடிப்படைத் தமிழ் - எழுத்தறிதல்
2. அடிப்படைத் தமிழ் - மொழித்திறனறிதல்

List of Non Major Elective Courses (NMEC)

(2023-2024 onwards)

UG PROGRAMMES

| Name of the Course | Semester | Department |
|---|----------|--|
| History of India upto A.D.1858 | III | History(EM) |
| இந்திய வரலாறு கி.பி. 1858 வரை | III | History (TM) |
| Indian National Movement (A.D 1885-1947) | IV | History(EM) |
| இந்திய தேசிய இயக்கம் (கி.பி. 1885 – 1947) | IV | History(TM) |
| English for Professions I | III | English |
| English for Professions II | IV | |
| இக்கால நீதி இலக்கியம் | III | Tamil |
| உரைநடை இலக்கியம் | IV | |
| Basic Hindi – I | III | Hindi |
| Basic Hindi – II | IV | |
| Practical Banking | III | Commerce |
| Basic Accounting Principles | IV | |
| Financial Literacy I | III | |
| Financial Literacy II | IV | |
| Self-Employment And Start-Up Business | III | Commerce CA |
| Fundamentals Of Marketing | IV | |
| Women Protection Laws | III | Commerce (Professional Accounting) |
| Basic Labour Laws | IV | |
| Business Management | III | Business Administration |
| Entrepreneurship | IV | |
| Quantitative Aptitude I | III | Mathematics |
| Basic Statistics | | |
| Quantitative Aptitude II | IV | |
| Operations Research | | |
| Physics in Everyday life –I | III | Physics |
| Physics in Everyday life –II | IV | |
| Industrial Chemistry | III | Chemistry |
| Drugs and Natural Products | IV | |
| Applied Zoology | III | Zoology |
| Animal Science | IV | |
| Basic Food Science | III | Home Science – Nutrition and Dietetics |
| Basic Nutrition and Dietetics | IV | |
| Women and Health | III | Biochemistry |
| Lifestyle Associated Disorders | IV | |
| Medical Lab Technology | III | Microbiology |
| Applied Microbiology | IV | |
| Infectious Diseases | III | Biotechnology |

| | | |
|---|-----|----------------------------|
| Organic Farming | IV | |
| Basics of Fashion | III | Costume Design And Fashion |
| Interior Designing | IV | |
| Introduction to Computers and Office Automation | III | Computer Science |
| Introduction to Internet and HTML 5 | IV | |
| MS Office | III | Information Technology |
| Introduction to HTML | IV | |
| Fundamentals of Computers | III | Computer Applications |
| Web Design with HTML | IV | |
| Horticulture – I | III | Botany |
| Horticulture – II | IV | |
| மருத்துவ தாவரவியல் - I | III | |
| மருத்துவ தாவரவியல் - II | IV | |
| Library and Information Science – I | III | Library Science |
| Library and Information Science – II | IV | |
| Cadet Corps for Career Development I | III | National Cadet Corps |
| Cadet Corps for Career Development II | IV | |

மேல்நிலைக் கல்வி வரை தமிழை முதன்மைப் பாடமாக எடுத்துப் படிக்காத மாணவிகள் கீழ்க்கண்ட பாடங்களைக் கட்டாயம் படிக்க வேண்டும்

1. அடிப்படைத் தமிழ் - எழுத்தறிதல்
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**List of Ability Enhancement Compulsory Courses (AECC) &
Generic Elective Courses (GEC) Offered**

ABILITY ENHANCEMENT COMPULSORY COURSES (AECC)

1. Value Education
2. Environmental Studies

GENERIC ELECTIVE COURSES 1

1. Human Rights
2. Women Studies

GENERIC ELECTIVE COURSES 2

1. Constitution of India
2. Modern Economics
3. Adolescent Psychology
4. Disaster Management

B. OUTCOME BASED EDUCATION (OBE) FRAMEWORK

The core philosophy of Outcome Based Education rests in employing a student - centric learning approach to measure the performance of students based on a set of pre-determined outcomes. The significant advantage of OBE is that it enables a revamp of the curriculum based on the learning outcomes, upgrade of academic resources, quality enhancement in research and integration of technology in the teaching –learning process. It also helps in bringing clarity among students as to what is expected of them after completion of the Programme in general and the Course in particular. The OBE directs the teachers to channelize their teaching methodologies and evaluation strategies to attain the PEOs and fulfill the Vision and Mission of the Institution.

Vision of the Institution

The founding vision of the Institution is to impart Quality Education to the rural womenfolk and to empower them with knowledge and leadership quality.

Mission of the Institution

The mission of the Institution is to impart liberal education committed to quality and excellence. Its quest is to mould learners into globally competent individuals instilling in them life- oriented skills, personal integrity, leadership qualities and service mindedness.

B.1 Programme Educational Objectives, Programme Outcomes and Programme Specific Outcome

It is imperative for the institution to set the Programme Educational Objectives (PEOs), Programme Outcomes (POs) and Course Outcomes (COs), consistent with its Vision and Mission statements. The PEOs and the POs should be driven by the mission of the institution and should provide distinctive paths to achieve the stated goals. The PEOs for each Programme have to fulfill the Vision and Mission of the Department offering the Programme.

Vision of the Department of Home Science

To empower the young students by imparting professional knowledge and skills, moulding their holistic personality and making them economically competent to face all personal and global challenges.

Mission of the Department of Home Science

To prepare the students in becoming self-reliant, to establish themselves as an entrepreneur in any of the varied fields of Home Science and to uphold professionalism and ethics for improving their quality of living.

B.1.1 Programme Educational Objectives (PEOs)

PEOs are broad statements that describe the career and professional achievements that the Programme is preparing the graduates to achieve within the first few years after graduation. PEOs are framed for each Programme and should be consistent with the mission of the Institution

Programme Educational Objectives (PEOs) of B.Sc. Home Science - Nutrition and Dietetics Programme

The students will be able to

- become professionally competent nutritionist, dieticians, health care workers in hospitals, health departments, speciality clinics, fitness centres, hospitality industries, Social welfare organizations and public health agencies or member of teaching faculty in higher education or become self-employed.
- employ their culinary skills, artistic skills, interpersonal skills and technical skills both in career and home for holistic living.
- follow professional ethics and provide feasible solutions for health related problems in social, cultural and environmental issues.

| Key Components of the Mission Statement | PEO1 | PEO2 | PEO3 |
|--|-------------|-------------|-------------|
| prepare the students in becoming self-reliant | √ | √ | √ |
| establish of an entrepreneur in any of the varied fields of Home Science | √ | √ | √ |
| uphold professionalism and ethics for improving their quality of living | √ | √ | √ |

B.1.2 Programme Outcomes (POs)

POs shall be based on Graduate Attributes (GAs) of the Programme. The GAs are the attributes expected of a graduate from a Programme in terms of knowledge, skills, attitude and values. The Graduate Attributes include Disciplinary Knowledge, Communication Skills, Critical Thinking, Problem Solving, Analytical Reasoning, Research Related Skill, Co-operation/Team Work, Scientific Reasoning, Reflective Thinking, Information/Digital Literacy, Multicultural Competence, Moral and Ethical Awareness/Reasoning, Leadership Qualities and Lifelong Learning.

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

- 1 apply effectively the acquired knowledge and skill in the field of Arts, Physical Science, Life Science, Computer Science, Commerce and Management for higher studies and employment.
(*Disciplinary Knowledge*)

- 2 communicate proficiently and confidently with the ability to express original/complex ideas effectively in different situations. (*Communication Skills*)
- 3 identify, formulate and solve problems in real life situations scientifically / systematically by adapting updated skills in using modern tools and techniques. (*Scientific Reasoning and Problem Solving*)
- 4 critically analyse, synthesize and evaluate data, theories and ideas to provide valid suggestions for the betterment of the society. (*Critical Thinking and Analytical Reasoning*)
- 5 use ICT in a variety of self-directed lifelong learning activities to face career challenges in the changing environment. (*Digital Literacy, Self - directed and Lifelong Learning*)
- 6 self-manage and function efficiently as a member or a leader in diverse teams in a multicultural society for nation building. (*Co-operation/Team Work and Multicultural Competence*)
- 7 uphold the imbibed ethical and moral values in personal, professional and social life for sustainable environment. (*Moral and Ethical Awareness*)

B.1.3 Programme Specific Outcomes (PSOs)

Based on the Programme Outcomes, Programme Specific Outcomes are framed for each UG Programme. Programme Specific Outcomes denote what the students would be able to do at the time of graduation. They are Programme specific. It is mandatory that each PO should be mapped to the respective PSO.

On completion of B.Sc. Home Science – Nutrition and Dietetics Programme, the students will be able to

PO 1: *Disciplinary Knowledge*

PSO1.a: apply the knowledge of the basic principles involved in various branches of Home Science incorporated with knowledge in related courses in higher studies.

PSO1.b : apply their professional and entrepreneurial skills in the areas such as Food Science, Nutrition Science, Dietetics, Human Development, Textiles and Clothing, Family Resource Management, Food Service Management, Community Nutrition, Family Dynamics, Extension Education and Computer for establishing a career in food and hospitality industries and other allied organizations leading to economic empowerment.

PO 2: *Communication Skills*

PSO 2.a: use appropriate communication strategies to deliver the learnt concepts effectively to peer groups, job providers and common people in relevant situations.

PSO 2.b: hone communication skills in effective presentation of curricular ideas, concept and scientific principles in various circumstances.

PO 3: Scientific Reasoning and Problem Solving

PSO 3: categorise the prevalent demands for Home Science related issues in the contemporary society and formulate new methods to fulfill them with the best possible service for human upliftment.

PO 4: Critical thinking and Analytical Reasoning

PSO 4.a: evaluate the practices in cookery, diet planning, diet counselling, food analysis, food preservation, food safety and quality control, bakery and confectionary, Human Development, pre-school management, textiles and clothing, resource management, interior decoration, housekeeping and arrive at a conclusion to instill a health culture in the community through outreach programmes.

PSO 4.b : analyse critically the current situation of the society in human health related issues and find out the solutions from acquired practical skills gained in the laboratory.

PO 5: Digital Literacy, Self - directed and Lifelong learning

PSO 5: upgrade their learning skills in their field of interest through ICT to meet the challenges in competitive examinations and grab more career opportunities.

PO 6: Cooperation/Team Work and Multi-Cultural Competence

PSO 6: maintain a harmonious interpersonal relationship as member or leader in team works and their wholesome personality, to attain a goal.

PO 7: Moral and Ethical awareness

PSO 7: practice the inculcated moral values and ethics for promoting sound health and holistic living by considering about environmental issues.

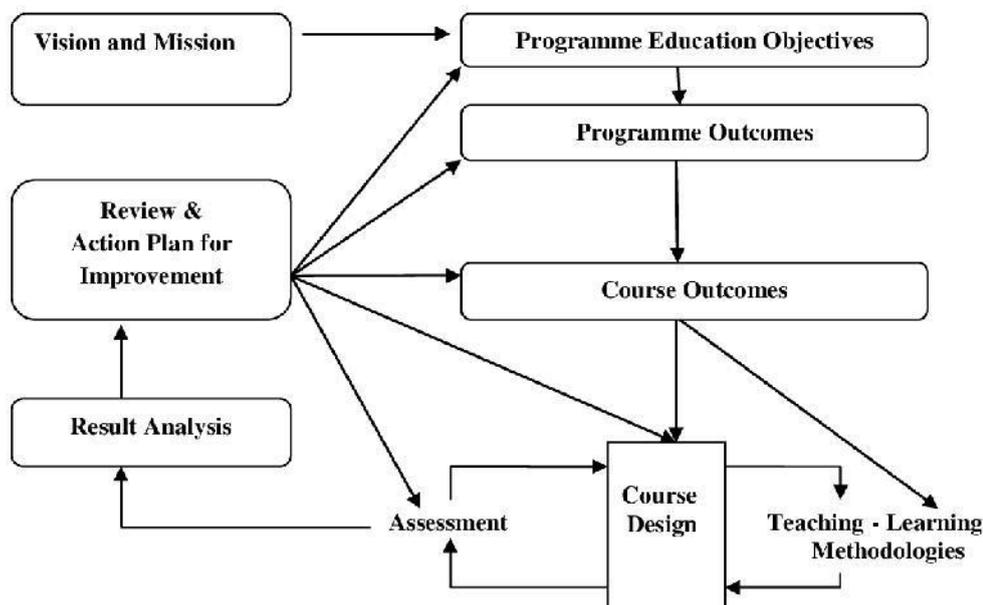
PO-PEO Mapping Matrix

Attainment of PEOs can be measured by a PO-PEO matrix. PEOs should evolve through constant feedback from alumnae, students, industry, management, *etc.* It is mandatory that each PEO should be mapped to at least one of the POs.

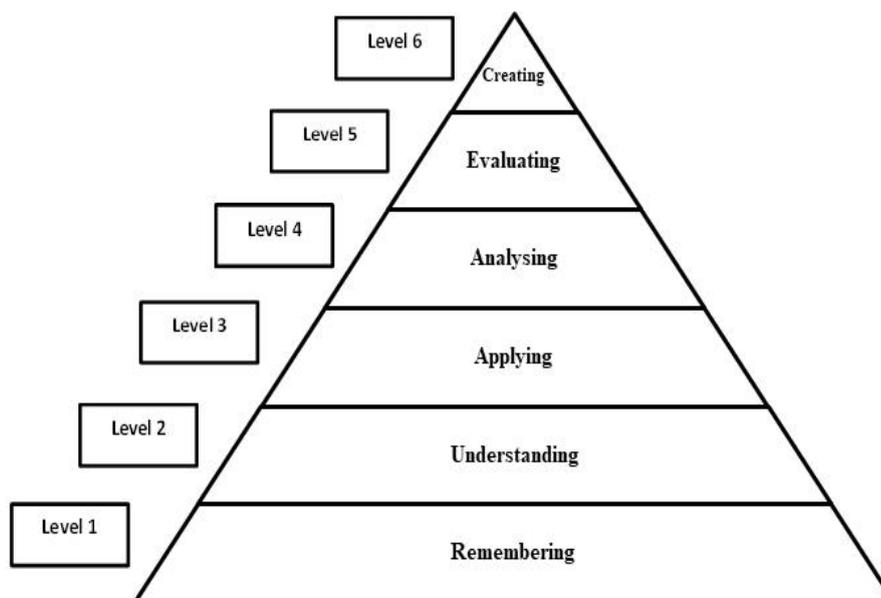
| PEOs POs/PSOs | PEO1 | PEO2 | PEO3 |
|------------------|------|------|------|
| PO1/PSO1 | ✓ | ✓ | ✓ |
| PO2/PSO2 | ✓ | ✓ | ✓ |
| PO3/PSO3 | ✓ | ✓ | ✓ |
| PO4/PSO4 | ✓ | ✓ | ✓ |
| PO5/PSO5 | ✓ | ✓ | ✓ |
| PO6/PSO6 | ✓ | ✓ | ✓ |
| PO7/PSO7 | ✓ | - | ✓ |

B.1.4 Course Outcomes (COs)

Course Outcomes are narrow statements restricted to the Course contents given in five units. Course Outcomes describe what students would be capable of, after learning the contents of the Course. They reflect the level of knowledge gained, skills acquired and attributes developed by the students after learning of Course contents. COs are measurable, attainable and manageable in number. COs contribute to attain POs in such a way that each CO addresses at least one of the POs and also each PO is reasonably addressed by adequate number of COs.



It is important to determine the methods of assessment. A comprehensive assessment strategy may be outlined using the revised Bloom's Taxonomy levels.

BLOOM'S TAXONOMY**CO – PO Mapping of Courses**

After framing the CO statements, the COs framed for each Course is mapped with POs based on the relationship that exists between them. The COs which are not related to any of the POs is indicated with (-), signifying Nil. Measurement Mapping is based on Four Points Scale [High (H), Medium (M), Low (L) and Nil (-)]. For calculating weighted percentage of contribution of each Course in the attainment of the respective POs, the weights assigned for H, M and L are 3, 2 and 1 respectively.

CO-PO/PSO Mapping Table (Course Articulation Matrix)

| PO/PSOs | PO1/ PSO1 | PO2/ PSO2 | PO3/ PSO3 | PO4/ PSO4 | PO5/ PSO5 | PO6/ PSO6 | PO7/ PSO7 |
|---------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| COs | | | | | | | |
| CO1 | | | | | | | |
| CO2 | | | | | | | |
| CO3 | | | | | | | |
| CO4 | | | | | | | |
| CO5 | | | | | | | |

ELIGIBILITY FOR ADMISSION

Candidates should have passed the Higher Secondary Examination conducted by the Board of Higher Secondary Education, Tamilnadu or any other Examination accepted by Academic Council with any Science / Home Science / Nursing Vocational group in Higher Secondary Examination.

DURATION OF THE PROGRAMME

The candidates shall undergo the prescribed Programme of study for a period of three academic years (six semesters).

MEDIUM OF INSTRUCTION

English

COURSES OFFERED

| | | |
|----------|---|---|
| Part I | : | Tamil/Hindi/Alternate Course |
| Part II | : | English |
| Part III | : | Core Courses |
| | : | Allied Courses |
| | : | Elective Courses: Discipline Specific Elective Courses |
| | : | Self Study Course |
| Part IV | : | Skill Enhancement Courses (SEC) |
| | : | Field Project/Internship |
| | : | Non-Major Elective Courses (NMEC) |
| | : | Ability Enhancement Compulsory Courses (AECC) |
| | : | Generic Elective Courses (GEC) |
| Part V | : | Self Study Course |
| | : | National Service Scheme/ Physical Education/ Youth Red Cross Society/ Red Ribbon Club/ Science Forum/ Eco Club/ Library and Information Science/ Consumer Club/ Health and Fitness Club and National Cadet Corps/ Rotaract Club |

B.2. EVALUATION SCHEME**B.2.1 PART II**

| Components | Internal Assessment Marks | External Examination Marks | Total Marks |
|------------|---------------------------|----------------------------|-------------|
| Theory | 15 | 75 | 100 |
| Practical | 5+5 | - | |

INTERNAL ASSESSMENT**Distribution of Marks**

| Mode of Evaluation | Marks |
|--------------------|-------------|
| Periodic Test | : 15 |
| Practical | : 10 |
| Total | : 25 |

Three Periodic Tests - Average of the best two will be considered

B.2.1.1 PART II (II UG – 2023-2024 onwards)

| Components | Internal Assessment Marks | External Examination Marks | Total Marks |
|------------|---------------------------|----------------------------|-------------|
| Test | 15 | 60 | 100 |
| Practical | 10 | 15 | |

INTERNAL ASSESSMENT**Distribution of Marks**

| Mode of Evaluation | Marks |
|--------------------|-------------|
| Periodic Test | : 15 |
| Practical | : 10 |
| Total | : 25 |

Three Periodic Tests - Average of the best two will be considered

EXTERNAL ASSESSMENT**Distribution of Marks**

| Mode of Evaluation | Marks |
|--------------------|-------------|
| Theory | : 60 |
| Practical | : 15 |
| Total | : 75 |

B.2.1 Part I & PART III - Core Courses, Discipline Specific Elective Courses & Allied Courses

| Components | Internal Assessment Marks | External Examination Marks | Total Marks |
|------------|---------------------------|----------------------------|-------------|
| Theory | 25 | 75 | 100 |
| Practical | 40 | 60 | 100 |
| Project | 60 | 40 | 100 |
| Internship | 50 | 50 | 100 |

INTERNAL ASSESSMENT**Distribution of Marks****Theory**

| Mode of Evaluation | Marks |
|---|-------------|
| Periodic Test | : 15 |
| Assignment | : 5 |
| Core:I UG-K4 Level, II & III UG – K5 Level | : |
| Part I & Allied: K4 Level DSEC:K5 Level | |
| Quiz | : 5 |
| Total | : 25 |

Three Periodic Tests - Average of the best two will be considered

Two Assignments - Better of the two will be considered

Three Quiz Tests - Best of the three will be considered

Practical

| Mode of Evaluation | | Marks |
|--------------------|----------|-----------|
| Test | : | 15 |
| Model Examination | | 15 |
| Performance | : | 10 |
| Total | : | 40 |

Test- Better of the two will be considered

Model Examination - Better of the two will be considered

Performance - Attendance and Record

Internship

- One month internship training is mandatory in reputed hospitals.
- Internal evaluation will be carried out by a Dietitian of the reputed hospital.

Question Pattern for Periodic Tests

Duration: 2 Hours

| Section | Types of Question | No. of Questions | No. of Questions to be answered | Marks for each Question | Total Marks |
|------------------|-------------------------------------|------------------|---------------------------------|-------------------------|-------------|
| A Q.No.(1- 4) | Multiple Choice | 4 | 4 | 1 | 4 |
| B Q.No.(5- 7) | Internal Choice - Either Or Type | 3 | 3 | 7 | 21 |
| C Q.No.(8&9) | Internal Choice - Either Or Type | 2 | 2 | 10 | 20 |
| Total | | | | | 45* |

*The total marks obtained in the Periodic Test will be calculated for 15 marks

EXTERNAL EXAMINATION

Question Pattern

Duration: 3 Hours

| Section | Types of Question | No. of Questions | No. of Questions to be answered | Marks for each Question | Total Marks |
|---------------------|-------------------------------------|------------------|---------------------------------|-------------------------|-------------|
| A Q. No.(1- 10) | Multiple Choice | 10 | 10 | 1 | 10 |
| B Q. No.(11 -15) | Internal Choice – Either Or Type | 5 | 5 | 7 | 35 |
| C Q. No.(16-18) | Internal Choice – Either Or Type | 3 | 3 | 10 | 30 |
| Total | | | | | 75 |

PROJECT

Assessment by Internal Examiner only

Internal Assessment

Distribution of Marks

| Mode of Evaluation | | Marks |
|-----------------------------|----------|------------|
| Project Work and Report | : | 60 |
| Presentation and Viva –Voce | : | 40 |
| Total | : | 100 |

B.2.1 PART III - SELF STUDY COURSE

Core Courses Quiz – Online

Assessment by Internal Examiner only

- Question Bank is prepared by the Faculty Members of the Departments.
- No. of Questions to be taken 700.
- Multiple Choice Question pattern is followed.
- Online Test will be conducted in VI Semester for 100 Marks.
- Model Examination is conducted after two periodic tests.

Distribution of Marks

| Mode of Evaluation | | Marks |
|--------------------|----------|------------|
| Periodic Test | : | 40 |
| Model Examination | : | 60 |
| Total | : | 100 |

Two Periodic Tests – Better of the two will be considered

B.2.2 PART IV - Skill Enhancement Courses & Non Major Elective Courses**INTERNAL ASSESSMENT**

Distribution of Marks

Theory

| Mode of Evaluation | | | Marks |
|--------------------|---------------|----------|-----------|
| Periodic Test | | : | 25 |
| Assignment | SEC:K4 Level | : | 10 |
| | NMEC:K3 Level | | |
| Quiz | K2 Level | : | 5 |
| Total | | : | 40 |

- Three Periodic tests - Average of the best two will be considered
 Two Assignments - Better of the two will be considered
 Three Quiz Tests - Best of the three will be considered

Practical

| Mode of Evaluation | | Marks |
|--------------------|---|-----------|
| Test | : | 15 |
| Model Examination | | 15 |
| Performance | : | 10 |
| Total | | 40 |

Test – Better of will be considered
 Model Examination - Average of the best two will be considered
 Performance - Attendance and Record

Question Pattern**Duration: 1 Hour**

| Section | Types of Question | No. of Questions | No. of Questions to be answered | Marks for each Question | Total Marks |
|--------------------|-------------------------------------|------------------|---------------------------------|-------------------------|-------------|
| A Q. No.(1- 4) | Open Choice | 4 | 3 | 5 | 15 |
| B Q. No.(5a,5b) | Internal Choice - Either Or Type | 1 | 1 | 10 | 10 |
| Total | | | | | 25 |

EXTERNAL EXAMINATION**Question Pattern****Duration: 2 Hours**

| Section | Types of Question | No. of Questions | No. of Questions to be answered | Marks for each Question | Total Marks |
|--------------------|-------------------|------------------|---------------------------------|-------------------------|-------------|
| A Q. No.(1- 6) | Open Choice | 8 | 6 | 5 | 30 |
| B Q. No.(7 - 9) | Open Choice | 5 | 3 | 10 | 30 |
| Total | | | | | 60 |

B.2.3 PART IV- Ability Enhancement Compulsory Courses (AECC) & Generic Elective Courses (GEC)

Assessment by Internal Examiner only

- Model Examination is conducted after two periodic tests.
- Book and Study Material prepared by the Faculty Members of the respective departments will be prescribed.

Distribution of Marks

| Mode of Evaluation | | | Marks |
|--------------------|----------|----------|------------|
| Periodic Test | | : | 30 |
| Assignment | K2 Level | : | 10 |
| Model Examination | | : | 60 |
| Total | | : | 100 |

Two Periodic tests - Better of the two will be considered

Two Assignments - Better of the two will be considered

Question Pattern for Periodic Test

Duration: 1 Hour

| Section | Types of Question | No. of Questions | No. of Questions to be answered | Marks for each Question | Total Marks |
|--------------------|-------------------------------------|------------------|---------------------------------|-------------------------|-------------|
| A Q. No.(1- 4) | Open Choice | 4 | 3 | 6 | 18 |
| B Q. No.(5a,5b) | Internal Choice - Either Or Type | 1 | 1 | 12 | 12 |
| Total | | | | | 30 |

Question Pattern for Model Examination

Duration: 2 Hours

| Section | Types of Question | No. of Questions | No. of Questions to be answered | Marks for each Question | Total Marks |
|--------------------|-------------------|------------------|---------------------------------|-------------------------|-------------|
| A Q. No.(1- 8) | Open Choice | 8 | 5 | 6 | 30 |
| B Q. No.(9- 13) | Open Choice | 5 | 3 | 10 | 30 |
| Total | | | | | 60 |

B.2.4 PART IV – Internship/Field Project

Internship / Field Project is compulsory for II year UG Science Students

- **Internship:** A designated activity that carries one credit involving not less than 15 days of working in an organization under the guidance of an identified mentor
- **Field Project:** Students comprising of maximum 5 members in a team need to undertake a project that involves conducting surveys inside/outside the college premises and collection of data from designated communities or natural places.
- Assessment by Internal Examiner only

| Mode of Evaluation | | Marks |
|------------------------|---|------------|
| Onsite Learning/Survey | : | 50 |
| Report | : | 25 |
| Viva-Voce | : | 25 |
| Total | | 100 |

SELF STUDY COURSE

Practice for Competitive Examinations - Online

Assessment by Internal Examiner only

- Question Bank is prepared by the Faculty Members of the respective Departments will be followed.
- Multiple Choice Question pattern is followed.
- Online Test will be conducted in V Semester for 100 Marks.
- Model Examination is conducted after two periodic tests.

Subject wise Allotment of Marks

| Subject | | Marks |
|---------------------------|---|------------|
| Tamil | : | 10 |
| English | : | 10 |
| History | : | 10 |
| Mathematics | : | 10 |
| Current affairs | : | 10 |
| Commerce, Law & Economics | : | 10 |
| Physical Sciences | : | 10 |
| Life Sciences | : | 15 |
| Computer Science | : | 5 |
| Food and Nutrition | : | 5 |
| Sports and Games | : | 5 |
| Total | | 100 |

Distribution of Marks

| Mode of Evaluation | | Marks |
|---------------------------|----------|--------------|
| Periodic Test | : | 40 |
| Model Examination | : | 60 |
| Total | : | 100 |

Two Periodic Tests - Better of the two will be considered

B.2.5 Part V – Extension Activities

Assessment by Internal examiner only

Distribution of Marks

| Mode of Evaluation | | Marks |
|---|---|--------------|
| Attendance | : | 5 |
| Performance | : | 10 |
| Report /Assignment/Project/Camp/Practical | : | 10 |
| Total | | 25* |

*The marks obtained will be calculated for 100 marks

B.2.6 EXTRA CREDIT COURSES (OPTIONAL)

Assessment by Internal Examiner only

Distribution of Marks**Question Pattern**

Duration: 3 Hours

| Section | Types of Question | No. of Questions | No. of Questions to be answered | Marks for each Question | Total Marks |
|---------------------|-------------------------------------|-------------------------|--|--------------------------------|--------------------|
| A Q. No.(1- 10) | Multiple Choice | 10 | 10 | 1 | 10 |
| B Q. No.(11 -15) | Internal Choice – Either or Type | 5 | 5 | 9 | 45 |
| C Q. No.(16-20) | Open Choice | 5 | 3 | 15 | 45 |
| Total | | | | | 100 |

ELIGIBILITY FOR THE DEGREE

The candidate will not be eligible for the Degree without completing the prescribed Courses of study, lab work, *etc.*, and a minimum Pass marks in all the Courses.

- No Pass minimum for Internal Assessment.
- Pass minimum for External Examination is 27 marks out of 75 for Core Courses, Discipline Specific Elective Courses and Allied Courses.
- Pass minimum for External Examination is 21 marks out of 60 for Skill Enhancement Courses and Non Major Elective Courses.
- The aggregate minimum pass percentage is 40
- Pass minimum for External Practical Examination is 21 marks out of 60 marks.
- Pass minimum for Ability Enhancement Compulsory Course and Generic Elective Course is 40.
- Pass minimum for Self Study Courses is 40.

ATTENDANCE

- For UG, PG and M.Phil. Programmes,
 - (a) The students who have attended the classes for 76 days (85%) and above are permitted to appear for the Summative Examinations without any condition.
 - (b) The students who have only 60-75 days (66% - 84%) of attendance are permitted to appear for the Summative Examinations after paying the required fine amount and fulfilling other conditions according to the respective cases.
 - (c) The students who have attended the classes for 59 days and less - upto 45 days (50%- 65%) can appear for the Summative Examinations only after getting special permission from the Principal.
 - (d) The students who have attended the classes for 44 days or less (<50%) cannot appear for the Summative Examinations and have to repeat the whole semester.
- For Part V in UG Programmes, the students required 75% of attendance to get a credit.
- For Certificate, Diploma, Advanced Diploma and Post Graduate Diploma Programmes, the students require 75% of attendance to appear for the Theory/Practical Examinations.

These rules come into the effect from 2020-2021 onwards.

B.3 ASSESSMENT MANAGEMENT PLAN

An Assessment Management Plan that details the assessment strategy both at the Programme and the Course levels is prepared. The continuous assessment is implemented using an assessment rubric to interpret and grade students.

B.3.1 Assessment Process for CO Attainment

Assessment is one or more processes carried out by the institution that identify, collect and prepare data to evaluate the achievement of Course Outcomes and Programme Outcomes. Course Outcome is evaluated based on the performance of students in the Continuous Internal Assessments and in End Semester Examination of a Course. Target levels of attainment shall be fixed by the Course teacher and Heads of the respective departments.

Direct Assessment (rubric based)-Conventional assessment tools such as Term Test, Assignment, Quiz and End Semester Summative Examination are used.

Indirect Assessment – Done through Course Exit Survey.

CO Assessment Rubrics

For the evaluation and assessment of COs and POs, rubrics are used. Internal assessment contributes 40% and End Semester assessment contributes 60% to the total attainment of a CO for the theory Courses. For the practical Courses, internal assessment contributes 50% and Semester assessment contributes 50% to the total attainment of a CO. Once the Course Outcome is measured, the PO can be measured using a CO-PO matrix.

CO Attainment Direct CO Attainment

Course outcomes of all Courses are assessed and the CO – wise marks obtained by all the students are recorded for all the assessment tools. The respective CO attainment level is evaluated based on set attainment rubrics.

Attainment Levels of COs

| Assessment Methods | Attainment Levels | |
|------------------------------------|-------------------|---|
| Internal Assessment | Level 1 | 50% of students scoring more than average marks or set target marks in Internal Assessment tools |
| | Level 2 | 55% of students scoring more than average marks or set target marks in Internal Assessment tools |
| | Level 3 | 60% of students scoring more than average marks or set target marks in internal Assessment tools |
| End Semester Summative Examination | Level 1 | 50% of students scoring more than average marks or set target marks in End Semester Summative Examination |
| | Level 2 | 55% of students scoring more than average marks or set target marks in End Semester Summative Examination |
| | Level 3 | 60% of students scoring more than average marks or set target marks in End Semester Summative Examination |

Target Setting for Assessment Method

For setting up the target of internal assessment tools, 55% of the maximum mark is fixed as target. For setting up the target of End Semester Examination, the average mark of the class shall be set as target.

Formula for Attainment for each CO

Attainment = Percentage of students who have scored more than the target marks

$$\text{Percentage of Attainment} = \frac{\text{Number of Students who Scored more than the Target}}{\text{Total Number of Students}} \times 100$$

Indirect CO Attainment

At the end of each Course, an exit survey is conducted to collect the opinion of the students on attainment of Course Outcomes. A questionnaire is designed to reflect the views of the students about the attainment of Course outcomes.

Overall CO Attainment = 75% of Direct CO Attainment + 25 % of Indirect CO Attainment

In each Course, the level of attainment of each CO is compared with the predefined targets. If the target is not reached, the Course teacher takes necessary steps for the improvement to reach the target.

For continuous improvement, if the target is reached, the Course teacher can set the target as a value greater than the CO attainment of the previous year.

B.3.2 Assessment Process for Overall PO Attainment

With the help of CO against PO mapping, the PO attainment is calculated. PO assessment is done by giving 75% weightage to direct assessment and 25% weightage to indirect assessment. Direct assessment is based on CO attainment, where 75% weightage is given to attainment through End Semester examination and 25 % weightage is given to attainment through internal assessments. Indirect assessment is done through Graduate Exit Survey and participation of students in Co-curricular/Extra-curricular activities.

PO Assessment Tools

| Mode of Assessment | Assessment Tool | Description |
|--|---------------------------------|--|
| Direct Attainment (Weightage -75%) | CO Assessment | This is computed from the calculated CO Attainment value for each Course |
| Indirect Attainment (Weightage - 25%) | Graduate Exit Survey 10% | At the end of the Programme, Graduate Exit Survey is collected from the graduates and it gives the opinion of the graduates on attainment of |
| | Co-curricular / Extracurricular | For participation in Co-curricular / Extracurricular activities during the period of their study. |

Programme Articulation Matrix (PAM)

| Course Code | Course Title | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 |
|------------------------------------|--------------|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | | | | | | | |
| | | | | | | | | | |
| Average Direct PO Attainment | | | | | | | | | |
| Direct PO Attainment in percentage | | | | | | | | | |

Indirect Attainment of POs for all Courses

| Pos | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 |
|------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Graduate Exit Survey | | | | | | | | |
| Indirect PO Attainment | | | | | | | | |

Attainments of POs for all Courses

| Pos | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 |
|---------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Direct Attainment (Weightage - 75%) | | | | | | | | |
| Indirect Attainment (Weightage - 25%) | | | | | | | | |
| Overall PO Attainment | | | | | | | | |

**Overall PO Attainment = [75% of Direct PO Attainment +
25% of Indirect PO Attainment (Graduate Exit Survey**

**& Participation in Co- curricular and
Extracurricular Activities)]**

Expected Level of Attainment for each of the Programme Outcomes

| POs | Level of Attainment |
|-------------------------------------|---------------------|
| Value \geq 70% | Excellent |
| Value \geq 60 % and Value $<$ 70% | Very Good |
| Value \geq 50 % and Value $<$ 60% | Good |
| Value \geq 40% and Value $<$ 50% | Satisfactory |
| Value $<$ 40% | Not Satisfactory |

Level of PO attainment

| Graduation Batch | Overall PO Attainment (in percentage) | Whether Expected Level of PO is Achieved? (Yes/No) |
|-------------------------|--|---|
| | | |

B.3.3 Assessment Process for PEOs

The curriculum is designed so that all the courses contribute to the achievement of PEOs. The attainment of PEOs is measured after 5 years of completion of the programme only through Indirect methods.

Target for PEO Attainment

| Assessment Criteria | Target (UG) | Target (PG) |
|---------------------------------|---------------------------|---------------------------|
| Record of Employment | 25% of the class strength | 30% of the class strength |
| Progression to Higher Education | 40% of the class strength | 5% of the class strength |
| Record of Entrepreneurship | 2% of the class strength | 5% of the class strength |

Attainment of PEOs

| Assessment Criteria & Tool | Weightage |
|---------------------------------------|------------------|
| Record of Employment | 10 |
| Progression to Higher Education | 20 |
| Record of Entrepreneurship | 10 |
| Feedback from Alumnae | 30 |
| Feedback from Parents | 10 |
| Feedback from Employers | 20 |
| Total Attainment | 100 |

$$\text{Percentage of PEO Attainment from Employment} = \frac{\text{Number of Students who have got Employment}}{\text{Target}} \times 100$$

$$\text{Percentage of PEO Attainment from Higher Education} = \frac{\text{Number of Students who pursue Higher Education}}{\text{Target}} \times 100$$

$$\text{Percentage of PEO Attainment from Entrepreneurship} = \frac{\text{Number of Students who have become Entrepreneurs}}{\text{Target}} \times 100$$

Expected Level of Attainment for each of the Programme Educational Objectives

| POs | Level of Attainment |
|-------------------------------------|----------------------------|
| Value \geq 70% | Excellent |
| Value \geq 60 % and Value $<$ 70% | Very Good |
| Value \geq 50 % and Value $<$ 60% | Good |
| Value \geq 40% and Value $<$ 50% | Satisfactory |
| Value $<$ 40% | Not Satisfactory |

Level of PEO Attainment

| Graduation Batch | Overall PEO Attainment (in percentage) | Whether Expected Level of PEO is Achieved? (Yes/No) |
|-------------------------|---|--|
| | | |

C. PROCESS OF REDEFINING THE PROGRAMME EDUCATIONAL OBJECTIVES

The college has always been involving the key stake holders in collecting information and suggestions with regard to curriculum development and curriculum revision. Based on the information collected the objectives of the Programme are defined, refined and are inscribed in the form of PEOs. The level of attainment of PEOs defined earlier will be analyzed and will identify the need for redefining PEOs. Based on identified changes in terms of curriculum, regulations and PEOs, the administrative system like Board of Studies, Academic Council and Governing Body may recommend appropriate actions. As per the Outcome Based Education Framework implemented from the Academic Year 2020 -2021, the following are the Programme Structure, the Programme Contents and the Course Contents of B.Sc. Home Science – Nutrition and Dietetics Programme.



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VIRUDHUNAGAR - 626 001

BACHELOR OF SCIENCE

HOME SCIENCE – NUTRITION AND DIETETICS (2028)

Outcome Based Education with Choice Based Credit System

Programme Structure - Allotment of Hours and Credits

Forthose who join in the Academic Year 2020-2021

| Components | Semester | | | | | | Total Number of Hours (Credits) |
|---|----------------|-------------------|----------------|----------------|-------------------|---------------|---------------------------------|
| | I | II | III | IV | V | VI | |
| Part I : Tamil /Hindi | 6 (3) | 6 (3) | 6 (3) | 6 (3) | - | - | 24 (12) |
| Part II : English | 6 (3) | 6(3) | 6 (3) | 6 (3) | - | - | 24 (12) |
| Part III: Core Courses, Discipline Specific Elective Courses, Allied Courses and Self Study Course. | | | | | | | |
| Core Course | 4 (4) | 4 (4) | 5 (5) | 5 (5) | 4 (4) | 5 (4) | 27 (26) |
| Core Course | 4 (4) | 4 (4) | - | - | 4 (4) | 5 (4) | 17(16) |
| Core Course | - | - | - | - | 4 (4) | 5 (4) | 9 (8) |
| Core Course Practical | 2 (0) | 2 (2) | 2 (0) | 2 (2) | 3 (0) | 3 (3) | 14 (7) |
| | | | | | 3 (0) | 3 (3) | 6 (3) |
| | | | | | 2 (0) | 2 (2) | 4 (2) |
| DSEC | - | - | - | - | 4 (4) | 5 (4) | 9 (8) |
| Project | | | | | 0(1) | | 0(1) |
| Allied Course I | 4 (4) | 4 (4) | - | - | - | - | 8 (8) |
| Allied Course II | - | - | 4 (4) | 4 (4) | - | - | 8 (8) |
| Allied Course Practical | 2 (0) | 2 (2) | 2 (0) | 2 (2) | - | - | 8 (4) |
| Self Study Course | - | - | - | - | | 0 (1) | 0 (1) |
| Part IV : Skill Enhancement Courses, Non Major Elective Courses, Ability Enhancement Compulsory Courses, Generic Elective Courses, Self Study Course and Internship/ Field Project | | | | | | | |
| SEC | - | 2 (2) (1T*+1P) | 2 (2) | 2 (2) | 2 (2) | 2 (2) | 10 (10) |
| SEC | - | - | - | - | 2 (2) (1T*+1P) | - | 2 (2) |
| Non Major Elective Course | - | - | 2(2) | 2 (2) | - | - | 4 (4) |
| AECC - Value Education | 2 (2) | - | - | - | - | - | 2 (2) |
| AECC - Environmental Studies | - | - | - | - | 2 (1) | - | 2 (1) |
| GEC-1 | - | - | 1(1) | - | - | - | 1 (1) |
| GEC-2 | - | - | - | 1 (1) | - | - | 1 (1) |
| Self Study Course | | | | | 0 (1) | - | 0 (1) |
| Internship/ Field Project | - | - | - | 0 (1) | - | - | 0 (1) |
| Part V : Extension Activities | - | - | - | 0 (1) | - | - | 0 (1) |
| Total | 30 (20) | 30 (24) | 30 (20) | 30 (26) | 30 (23) | 30(27) | 180 (140) |
| Extra Credit Course | | | | | 0(2) | | |

T* - Tutorial



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PART I - TAMIL

| S. No. | Sem. | Code | Title of the Course | Credits | Marks |
|--------------|------|----------|----------------------|-----------|------------|
| 1. | I | 20UTAG11 | பொதுத்தமிழ் தாள் I | 3 | 100 |
| 2. | II | 20UTAG21 | பொதுத்தமிழ் தாள் II | 3 | 100 |
| 3. | III | 20UTAG31 | பொதுத்தமிழ் தாள் III | 3 | 100 |
| 4. | IV | 20UTAG41 | பொதுத்தமிழ் தாள் IV | 3 | 100 |
| TOTAL | | | | 12 | 400 |

PART I – HINDI

| S. No. | Sem. | Code | Title of the Course | Credits | Marks |
|--------------|------|----------------------|--|-----------|------------|
| 1. | I | 20UHDG11 22UHDG11 | Hindi - Paper I Prose – I & II, Ancient Stories - I, General Essays, Functional Hindi – I & Grammar General Hindi – I | 3 | 100 |
| 2. | II | 20UHDG21 22UHDG21 | Hindi - Paper II Drama, One Act Play, Letter, Correspondence, Functional Hindi – II & Grammar General Hindi – II | 3 | 100 |
| 3. | III | 20UHDG31 22UHDG31 | Hindi - Paper III Ancient Poetry, Drama, Indian History, Hindi Grammar & Functional Hindi III Advanced Hindi – I | 3 | 100 |
| 4. | IV | 20UHDG41 22UHDG41 | Hindi - Paper IV Modern Poetry, Hindi Literary Essays, Letter Correspondence, Conversation & Functional Hindi IV Advanced Hindi - II | 3 | 100 |
| TOTAL | | | | 12 | 400 |

PART II - ENGLISH

| S.No. | Sem. | Code | Title of the Course | Credits | Marks |
|-------|------|-------------------------------------|---|---------|-------|
| 1. | I | 20UENG11A 20UENG11B 20UENG11C | English – Paper I English for Advanced Learners I English for Career Guidance - I English for Communicative Competence-I | 3 | 100 |
| 2. | II | 20UENG21A 20UENG21B 20UENG21C | English – Paper II English for Advanced Learners II English for Career Guidance - II English for Communicative Competence - II | 3 | 100 |

| | | | | | |
|--------------|-----|---|--|-----------|------------|
| 3. | III | 20UENG31A 20UENG31B 20UENG31C 22UENG31 | English – Paper III English for Advanced Learners III English for Career Guidance – III English for Communicative Competence – III Communicative English – I | 3 | 100 |
| 4. | IV | 20UENG41A 20UENG41B 20UENG41C 22UENG41 | English – Paper IV English for Advanced Learners IV English for Career Guidance – IV English for Communicative Competence – IV Communicative English – II | 3 | 100 |
| TOTAL | | | | 12 | 400 |

PART III – CORE, DISCIPLINE SPECIFIC ELECTIVE COURSES

| S.No. | Sem. | Code | Title of the Course | Credits | Marks |
|--------------|------|---|---|-----------|-------------|
| 1 | I | 20UHSC11/20UHSC11N | Food Science I | 4 | 100 |
| 2 | I | 20UHSC12 | Nutrition Science | 4 | 100 |
| 3 | II | 20UHSC21/20UHSC21N | Food Science II | 4 | 100 |
| 4 | II | 20UHSC22 | Food Service Management | 4 | 100 |
| 5 | II | 20UHSC21P | Core Course Practical – I Food Science Lab | 2 | 100 |
| 6 | III | 20UHSC31/20UHSC31N | Dietetics I | 5 | 100 |
| 7 | IV | 20UHSC41/20UHSC41N | Dietetics II | 5 | 100 |
| 8 | IV | 20UHSC41P | Core Course Practical-2 Dietetics Lab | 2 | 100 |
| 9 | V | 20UHSC51 | Food Microbiology | 4 | 100 |
| 10 | V | 20UHSC52/20UHSC52N | Textiles and Clothing | 4 | 100 |
| 11 | V | 20UHSC53/20UHSC53N | Human Development | 4 | 100 |
| 12 | V | 20UHSE51/20UHSE51N 20UCFE52/ 20UHSE53 | Discipline Specific Elective Course1 (DSEC 1) 1. Basic Statistics 2. Fashion and Apparel Marketing 3. Textile Testing | 4 | 100 |
| 13 | V | 20UHSC5PR | Project | 1 | 100 |
| 14 | VI | 20UHSC61 | Nutritional Biochemistry | 4 | 100 |
| 15 | VI | 20UHSC62 | Internship - Dietetics | 4 | 100 |
| 16 | VI | 20UHSC63 | Extension Education | 4 | 100 |
| 17 | VI | 20UHSE61/ 20UCFE62/ 20UHSE63 | Discipline Specific Elective Course 2 (DSEC 2) 1. Culinary Art 2. Perspectives of Textiles and Fashion 3. Food Toxicology | 4 | 100 |
| 18 | VI | 20UHSQ61 | Core Courses Quiz - Online | 1 | 100 |
| 19 | VI | 20UHSC61P | Core Course Practical - 3 Food Analysis Practical | 3 | 100 |
| 20 | VI | 20UHSC62P | Core Course Practical - 4 Textiles and Clothing Practical | 3 | 100 |
| 21 | VI | 20UHSC63P | Core Course Practical - 5 Art in Everyday Life Practical | 2 | 100 |
| Total | | | | 72 | 2100 |

PART III – ALLIED COURSE I- CHEMISTRY

| S. No. | Sem. | Code | Title of the Course | Credits | Marks |
|--------------|------|-----------|--|-----------|------------|
| 1. | I | 20UCNA11 | Allied Course I Organic , Inorganic and Physical Chemistry -I | 4 | 100 |
| 2. | II | 20UCNA21/ | Allied Course I Organic , Inorganic and Physical Chemistry -II | 4 | 100 |
| 3. | II | 20UCNA21P | Allied Course Practical-I Volumetric Analysis | 2 | 100 |
| Total | | | | 10 | 300 |

PART III - ALLIED COURSE II- ALLIED BIOLOGY

| S. No. | Sem. | Code | Title of the Course | Credits | Marks |
|--------------|------|-----------|---|-----------|------------|
| 1. | III | 20UBHA31 | Allied Course II Human Physiology | 4 | 100 |
| 2. | IV | 20UBHA41 | Allied Course II Functional Foods and Nutraceuticals | 4 | 100 |
| 3. | IV | 20UBHA41P | Allied Course Practical - II Biochemical Analysis Lab | 2 | 100 |
| Total | | | | 10 | 300 |

PART IV - SKILL ENHANCEMENT COURSES

| S. No. | Sem. | Code | Title of the Course | Credits | Marks |
|--------------|------|--------------------------|---|-----------|------------|
| 1. | II | 20UHSS21P/ 20UHSS21PN | MS Office Lab | 2 | 100 |
| 2. | III | 20UHSS31 | Entrepreneurship Development | 2 | 100 |
| 3. | IV | 20UHSS41 | Interior Design | 2 | 100 |
| 4. | V | 20UHSS51 | Family Resource Management | 2 | 100 |
| 5. | V | 20UHSS52P | Food Preservation and Bakery Practical | 2 | 100 |
| 6. | VI | 20UHSS61 | Family Dynamics | 2 | 100 |
| Total | | | | 12 | 600 |

PART IV – NON MAJOR ELECTIVE COURSES

| S. No. | Sem. | Code | Title of the Course | Credits | Marks |
|--------------|------|----------|-------------------------------|----------|------------|
| 1. | I | 20UHSN31 | Basic Food Science | 2 | 100 |
| 2. | II | 20UHSN41 | Basic Nutrition and Dietetics | 2 | 100 |
| Total | | | | 4 | 200 |

PART IV- ABILITY ENHANCEMENT COMPULSORY COURSES, ENERIC ELECTIVE COURSES AND INTERNSHIP / FIELD PROJECT

| S. No. | Sem. | Code | Title of the Course | Credits | Marks |
|--------------|------|----------------------|---|----------|------------|
| 1. | I | 20UGVE11 | Value Education | 2 | 100 |
| 2. | V | 20UGES51 | Environmental Studies | 1 | 100 |
| 3 | III | 20UGEH31 20UGEW32 | Human Rights/ Women Studies | 1 | 100 |
| 4. | IV | 20UGEC41 | Constitution of India/ | 1 | 100 |
| | | 20UGEM42 | Modern Economics/ | | |
| | | 20UGEA43 | Adolescent Psychology/ | | |
| | | 20UGED44 | Disaster Management | | |
| | | 20UHSI41G | Internship/Field Project | 1 | 100 |
| 5. | V | 20UGCE51 | Practice for Competitive Examinations -Online | 1 | 100 |
| Total | | | | 7 | 600 |

PART V -EXTENSION ACTIVITIES

| S. No. | Sem. | Code | Title of the Course | Credit |
|--------|---------------|---------------------|---------------------------------|--------|
| 1 | I, II,III, IV | 20UVNS1, 20UVNS2 | National Service Scheme | 1 |
| 2 | | 20UVPE1 | Physical Education | |
| 3 | | 20UVYR1 20UVYR2 | Youth Red Cross Society | |
| 4 | | 20UVRR1 | Red Ribbon Club | |
| 5 | | 20UVSF1 | Science Forum | |
| 6 | | 20UVEC1 | Eco Club | |
| 7 | | 20UVLI1 | Library and Information Science | |
| 8 | | 20UVCC1 | Consumer Club | |
| 9 | | 20UVHF1 | Health and Fitness Club | |
| 10 | | 20UVNC1 20UVNC2 | National Cadet Corps | |
| 11 | | 20UVRO1 | Rotaract Club | |

PART III – ALLIED COURSE I HOME SCIENCE FOR COSTUME DESIGN AND FASHION

| S. No. | Sem. | Code | Title of the Course | Credits | Marks |
|--------------|------|------------------------|--------------------------------------|-----------|------------|
| 1. | I | 20UHSA11/ 20UHSA11N | Home Furnishing | 4 | 100 |
| 2. | II | 20UHSA21 | Entrepreneurial Skill Development | 4 | 100 |
| 3. | II | 20UHSA21P | Home Textiles Lab | 2 | 100 |
| Total | | | | 10 | 300 |

EXTRA CREDIT COURSES (Optional)

| S. No. | Sem. | Code | Title of the Course | Credits | Total Marks |
|--------|------|----------|---------------------|---------|----------------|
| 1. | V | 20UHSO51 | Community Nutrition | 2 | 100 |



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BACHELOR OF HOME SCIENCE – NUTRITION AND DIETETICS

Programme Code – 2028

| Semester | Course Code | Courses | Hours per week | Credits | Exam. Hours | Marks | | | |
|----------|--------------|---------------------------------------|---|-----------|-------------|-------|------|-------|------------|
| | | | | | | Int. | Ext. | Total | |
| I | Part I | 20UTAG11 | Tamil Paper I | 6 | 3 | 3 | 25 | 75 | 100 |
| | | 20UHDG11 | Hindi Paper I | | | | | | |
| | Part II | 20UENG11A/ 20UENG11B/ 20UENG11C | English Paper I | 6 | 3 | 3 | 25 | 75 | 100 |
| | Part III | 20UHSC11 | Core Course 1 Food Science I | 4 | 4 | 3 | 25 | 75 | 100 |
| | | 20UHSC12 | Core Course 2 Nutrition Science | 4 | 4 | 3 | 25 | 75 | 100 |
| | | 20UHSC21P | Core Course Practical -1 Food Science Lab | 2 | - | 3 | - | - | - |
| | | 20UCNA11 | Allied Course I Organic , Inorganic and Physical Chemistry-I | 4 | 4 | 3 | 25 | 75 | 100 |
| | | 20UCNA21P | Volumetric Analysis | 2 | - | 3 | - | - | - |
| | Part IV | 20UGVE11 | Value Education | 2 | 2 | - | 100 | - | 100 |
| | TOTAL | | | 30 | 20 | | | | 600 |

| Semester | Course Code | Courses | Hours per week | Credits | Exam. Hours | Marks | | | | |
|----------|-------------|---------------------------------------|--|---|-------------|-------|------|-------|------------|-----|
| | | | | | | Int. | Ext. | Total | | |
| II | Part I | 20UTAG21 | Tamil Paper II | 6 | 3 | 3 | 25 | 75 | 100 | |
| | | 20UHDG21 | Hindi Paper II | | | | | | | |
| | Part II | 20UENG21A/ 20UENG21B/ 20UENG21C | English Paper II | 6 | 3 | 3 | 25 | 75 | 100 | |
| | | Part III | 20UHSC21 | Core Course 3 Food Science II | 4 | 4 | 3 | 25 | 75 | 100 |
| | | | 20UHSC22 | Core Course 4 Food Service Management | 4 | 4 | 3 | 25 | 75 | 100 |
| | 20UHSC21P | | Core Course Practical I Food Science Lab | 2 | 2 | 3 | 40 | 60 | 100 | |
| | 20UCNA21 | | Allied Course I Organic , Inorganic and Physical Chemistry-II | 4 | 4 | 3 | 25 | 75 | 100 | |
| | 20UCNA21P | | Volumetric Analysis | 2 | 2 | 3 | 40 | 60 | 100 | |
| | Part IV | 20UHSS21P | Skill Enhancement Course 1 (SEC 1) MS Office Lab | 2 (1T*+1P) | 2 | 2 | 40 | 60 | 100 | |
| | | TOTAL | | 30 | 24 | | | | 800 | |

T* - Tutorial

| Semester | Course Code | Courses | Hours per week | Credits | Exam. Hours | Marks | | | | |
|----------|-------------|---------------------------------------|---|--|-------------|-----------|------|-------|-----|------------|
| | | | | | | Int. | Ext. | Total | | |
| III | Part I | 20UTAG31 | Tamil Paper III | 6 | 3 | 3 | 25 | 75 | 100 | |
| | | 20UHGD31 | Hindi Paper III | | | | | | | |
| | Part II | 20UENG31A/ 20UENG31B/ 20UENG31C | English Paper III | 6 | 3 | 3 | 25 | 75 | 100 | |
| | | Part III | 20UHSC31 | Core Course 5 Dietetics I | 5 | 5 | 3 | 25 | 75 | 100 |
| | | | 20UHSC41P | Core Course Practical II Dietetics Lab | 2 | - | 3 | - | - | - |
| | 20UBHA31 | | Allied Course II Human Physiology | 4 | 4 | 3 | 25 | 75 | 100 | |
| | 20UBHA41P | | Allied Course II Practical Biochemical Analysis Lab | 2 | - | 3 | - | - | - | |
| | Part IV | 20UHSS31 | Skill Enhancement Course 2 (SEC 2) Entrepreneurship Development | 2 | 2 | 2 | 40 | 60 | 100 | |
| | | 20UHSN31 | NMEC 1 Basic Food Science | 2 | 2 | 2 | 40 | 60 | 100 | |
| | | 20UGEH31 20UGEW32 | GEC 1 1. Human Rights/ 2. Women Studies | 1 | 1 | 2 | 100 | - | 100 | |
| | | TOTAL | | | 30 | 20 | | | | 700 |

| Semester | Course Code | Courses | Hours per week | Credits | Exam. Hours | Marks | | | | |
|----------|-------------|---|--|--|-------------|-------|------|-------|-------------|-----|
| | | | | | | Int. | Ext. | Total | | |
| IV | Part I | 20UTAG41 | Tamil Paper IV | 6 | 3 | 3 | 25 | 75 | 100 | |
| | | 20UHGD41 | Hindi Paper IV | | | | | | | |
| | Part II | 20UENG41A/ 20UENG41B/ 20UENG41C | English Paper IV | 6 | 3 | 3 | 25 | 75 | 100 | |
| | | Part III | 20UHSC41 | Core Course 6 Dietetics II | 5 | 5 | 3 | 25 | 75 | 100 |
| | | | 20UHSC41P | Core Course Practical II Dietetics Lab | 2 | 2 | 3 | 40 | 60 | 100 |
| | 20UBHA41 | | Allied Course II Functional Foods and Nutraceuticals | 4 | 4 | 3 | 25 | 75 | 100 | |
| | 20UBHA41P | | Allied Course II Practical Biochemical Analysis Lab | 2 | 2 | 3 | 40 | 60 | 100 | |
| | Part IV | 20UHSS41 | Skill Enhancement Course 3 (SEC 3) Interior Design | 2 | 2 | 2 | 40 | 60 | 100 | |
| | | 20UHSN41 | NMEC 2 Basic Nutrition and Dietetics | 2 | 2 | 2 | 40 | 60 | 100 | |
| | | 20UHSI41G | Internship/Field Project | 0 | 1 | - | 100 | - | 100 | |
| | | 20UGEC41/ 20UGEM42/ 20UGEA43/ 20UGED44 | GEC 2 Constitution of India/ Modern Economics/ Adolescent Psychology/ Disaster Management | 1 | 1 | 2 | 100 | - | 100 | |
| | Part V | | Extension Activities | - | 1 | | 100 | | 100 | |
| | | | TOTAL | 30 | 26 | | | | 1100 | |

| Semester | Course Code | Courses | Hours per week | Credits | Exam. Hours | Marks | | | |
|----------|-------------|------------------------------------|--|-----------|-------------|-------|------|-------|------------|
| | | | | | | Int. | Ext. | Total | |
| V | Part III | 20UHSC51 | Core Course 7 Food Microbiology | 4 | 4 | 3 | 25 | 75 | 100 |
| | | 20UHSC52 | Core Course 8 Textiles and Clothing | 4 | 4 | 3 | 25 | 75 | 100 |
| | | 20UHSC53 | Core Course 9 Human Development | 4 | 4 | 3 | 25 | 75 | 100 |
| | | 20UHSC61P | Core Course Practical III Food Analysis Practical | 3 | - | 3 | - | - | - |
| | | 20UHSC62P | Core Course Practical IV Textiles and Clothing Practical | 3 | - | 3 | - | - | - |
| | | 20UHSC63P | Core Course Practical V Art in Everyday Life Practical | 2 | - | 3 | - | - | - |
| | | 20UHSE51/ 20UCFE52/ 20UHSE53 | Discipline Specific Elective Course 1 (DSEC 1) 1. Basic Statistics 2. Fashion and Apparel Marketing 3. Textile Testing | 4 | 4 | 3 | 25 | 75 | 100 |
| | 20UHSC5PR | Core Course 10 Project | 0 | 1 | - | 100 | | 100 | |
| | Part IV | 20UHSS51 | Skill Enhancement Course 4 (SEC 4) Family Resource Management | 2 | 2 | 2 | 40 | 60 | 100 |
| | | 20UHSS52P | Skill Enhancement Course 5 (SEC 5) Food Preservation and Bakery Practical | 2 | 2 | 2 | 40 | 60 | 100 |
| | | 20UGCE51 | Self Study Course Practice for Competitive Examinations - Online | - | 1 | - | 100 | | 100 |
| | | 20UGES51 | Environmental Studies | 2 | 1 | 2 | 100 | | 100 |
| | | | TOTAL | 30 | 23 | | | | 900 |

| Semester | Course Code | Courses | Hours per week | Credits | Exam. Hours | Marks | | | |
|----------|-------------|------------------------------------|---|-----------|-------------|-------|------|------------|-----|
| | | | | | | Int. | Ext. | Total | |
| VI | Part III | 20UHSC61 | Core Course 11 Nutritional Biochemistry | 5 | 4 | 3 | 25 | 75 | 100 |
| | | 20UHSC62 | Core Course 12 Internship - Dietetics | 5 | 4 | 3 | 50 | 50 | 100 |
| | | 20UHSC63 | Core Course 13 Extension Education | 5 | 4 | 3 | 25 | 75 | 100 |
| | | 20UHSC61P | Core Course Practical III Food Analysis Practical | 3 | 3 | 3 | 40 | 60 | 100 |
| | | 20UHSC62P | Core Course Practical IV Textiles and Clothing Practical | 3 | 3 | 3 | 40 | 60 | 100 |
| | | 20UHSC63P | Core Course Practical V Art in Everyday Life Practical | 2 | 2 | 3 | 40 | 60 | 100 |
| | | 20UHSE61/ 20UCFE62/ 20UHSE63 | Discipline Specific Elective Course 2 (DSEC 2) 1. Culinary Art 2. Perspectives of Textiles and Fashion 3. Food Toxicology | 5 | 4 | 3 | 25 | 75 | 100 |
| | | 20UHSQ61 | Self - Study Course Core Courses Quiz - Online | - | 1 | - | 100 | | 100 |
| | Part IV | 20UHSS61 | Skill Enhancement Course 6 (SEC 6) Family Dynamics | 2 | 2 | 2 | 40 | 60 | 100 |
| | | TOTAL | 30 | 27 | | | | 900 | |



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VIRUDHUNAGAR - 626 001

BACHELOR OF HOME SCIENCE – NUTRITION AND DIETETICS

REVISED PROGRAMME CONTENT

Programme Code – 2028

| Semester | Course Code | Courses | Hours per week | Credits | Exam. Hours | Marks | | | |
|----------|--------------|---------------------------------------|---|-----------|-------------|-------|------|-------|------------|
| | | | | | | Int. | Ext. | Total | |
| I | Part I | 20UTAG11 | Tamil Paper I | 6 | 3 | 3 | 25 | 75 | 100 |
| | | 20UHDG11 | Hindi Paper I | | | | | | |
| | Part II | 20UENG11A/ 20UENG11B/ 20UENG11C | English Paper I | 6 | 3 | 3 | 25 | 75 | 100 |
| | Part III | 20UHSC11N | Core Course 1 Food Science I | 4 | 4 | 3 | 25 | 75 | 100 |
| | | 20UHSC12 | Core Course 2 Nutrition Science | 4 | 4 | 3 | 25 | 75 | 100 |
| | | 20UHSC21P | Core Course Practical -1 Food Science Lab | 2 | - | 3 | - | - | - |
| | | 20UCNA11 | Allied Course I Organic , Inorganic and Physical Chemistry-I | 4 | 4 | 3 | 25 | 75 | 100 |
| | | 20UCNA21P | Volumetric Analysis | 2 | - | 3 | - | - | - |
| | Part IV | 20UGVE11 | Value Education | 2 | 2 | - | 100 | - | 100 |
| | TOTAL | | | 30 | 20 | | | | 600 |

| Semester | Course Code | Courses | Hours per week | Credits | Exam. Hours | Marks | | | | |
|----------|-------------|---------------------------------------|--|---|-------------|-----------|------|-------|-----|------------|
| | | | | | | Int. | Ext. | Total | | |
| II | Part I | 20UTAG21 | Tamil Paper II | 6 | 3 | 3 | 25 | 75 | 100 | |
| | | 20UHDG21 | Hindi Paper II | | | | | | | |
| | Part II | 20UENG21A/ 20UENG21B/ 20UENG21C | English Paper II | 6 | 3 | 3 | 25 | 75 | 100 | |
| | | Part III | 20UHSC21N | Core Course 3 Food Science II | 4 | 4 | 3 | 25 | 75 | 100 |
| | | | 20UHSC22 | Core Course 4 Food Service Management | 4 | 4 | 3 | 25 | 75 | 100 |
| | 20UHSC21P | | Core Course Practical I Food Science Lab | 2 | 2 | 3 | 40 | 60 | 100 | |
| | 20UCNA21 | | Allied Course I Organic , Inorganic and Physical Chemistry-II | 4 | 4 | 3 | 25 | 75 | 100 | |
| | 20UCNA21P | | Volumetric Analysis | 2 | 2 | 3 | 40 | 60 | 100 | |
| | Part IV | 20UHSS21PN | Skill Enhancement Course 1 (SEC 1) MS Office Lab | 2 (1T*+1P) | 2 | 2 | 40 | 60 | 100 | |
| | | TOTAL | | | 30 | 24 | | | | 800 |

T* - Tutorial

| Semester | Course Code | Courses | Hours per week | Credits | Exam. Hours | Marks | | | | |
|----------|-------------|---------------------------------------|---|--|-------------|-----------|------|-------|-----|------------|
| | | | | | | Int. | Ext. | Total | | |
| III | Part I | 20UTAG31 | Tamil Paper III | 6 | 3 | 3 | 25 | 75 | 100 | |
| | | 20UHDG31 | Hindi Paper III | | | | | | | |
| | Part II | 20UENG31A/ 20UENG31B/ 20UENG31C | English Paper III | 6 | 3 | 3 | 25 | 75 | 100 | |
| | | Part III | 20UHSC31N | Core Course 5 Dietetics I | 5 | 5 | 3 | 25 | 75 | 100 |
| | | | 20UHSC41P | Core Course Practical II Dietetics Lab | 2 | - | 3 | - | - | - |
| | 20UBHA31 | | Allied Course II Human Physiology | 4 | 4 | 3 | 25 | 75 | 100 | |
| | Part IV | 20UBHA41P | Allied Course II Practical Biochemical Analysis Lab | 2 | - | 3 | - | - | - | |
| | | 20UHSS31 | Skill Enhancement Course 2 (SEC 2) Entrepreneurship Development | 2 | 2 | 2 | 40 | 60 | 100 | |
| | | 20UHSN31 | NMEC 1 Basic Food Science | 2 | 2 | 2 | 40 | 60 | 100 | |
| | | 20UGEH31 20UGEW32 | GEC 1 1. Human Rights/ 2. Women Studies | 1 | 1 | 2 | 100 | - | 100 | |
| | | TOTAL | | | 30 | 20 | | | | 700 |

| Semester | Course Code | Courses | Hours per week | Credits | Exam. Hours | Marks | | | |
|----------|-------------|---|--|-----------|-------------|-------|------|-------|-------------|
| | | | | | | Int. | Ext. | Total | |
| IV | Part I | 20UTAG41 | Tamil Paper IV | 6 | 3 | 3 | 25 | 75 | 100 |
| | | 20UHGD41 | Hindi Paper IV | | | | | | |
| | Part II | 20UENG41A/ 20UENG41B/ 20UENG41C | English Paper IV | 6 | 3 | 3 | 25 | 75 | 100 |
| | Part III | 20UHSC41N | Core Course 6 Dietetics II | 5 | 5 | 3 | 25 | 75 | 100 |
| | | 20UHSC41P | Core Course Practical II Dietetics Lab | 2 | 2 | 3 | 40 | 60 | 100 |
| | | 20UBHA41 | Allied Course II Functional Foods and Nutraceuticals | 4 | 4 | 3 | 25 | 75 | 100 |
| | | 20UBHA41P | Allied Course II Practical Biochemical Analysis Lab | 2 | 2 | 3 | 40 | 60 | 100 |
| | Part IV | 20UHSS41 | Skill Enhancement Course 3 (SEC 3) Interior Design | 2 | 2 | 2 | 40 | 60 | 100 |
| | | 20UHSN41 | NMEC 2 Basic Nutrition and Dietetics | 2 | 2 | 2 | 40 | 60 | 100 |
| | | 20UHSI41G | Internship/Field Project | 0 | 1 | - | 100 | - | 100 |
| | | 20UGEC41/ 20UGEM42/ 20UGEA43/ 20UGED44 | GEC 2 Constitution of India/ Modern Economics/ Adolescent Psychology/ Disaster Management | 1 | 1 | 2 | 100 | - | 100 |
| | Part V | | Extension Activities | - | 1 | | 100 | | 100 |
| | | | TOTAL | 30 | 26 | | | | 1100 |

| Semester | Course Code | Courses | Hours per week | Credits | Exam. Hours | Marks | | | |
|----------|-------------|-------------------------------------|--|-----------|-------------|-------|------|-------|------------|
| | | | | | | Int. | Ext. | Total | |
| V | Part III | 20UHSC51 | Core Course 7 Food Microbiology | 4 | 4 | 3 | 25 | 75 | 100 |
| | | 20UHSC52N | Core Course 8 Textiles and Clothing | 4 | 4 | 3 | 25 | 75 | 100 |
| | | 20UHSC53N | Core Course 9 Human Development | 4 | 4 | 3 | 25 | 75 | 100 |
| | | 20UHSC61P | Core Course Practical III Food Analysis Practical | 3 | - | 3 | - | - | - |
| | | 20UHSC62P | Core Course Practical IV Textiles and Clothing Practical | 3 | - | 3 | - | - | - |
| | | 20UHSC63P | Core Course Practical V Art in Everyday Life Practical | 2 | - | 3 | - | - | - |
| | | 20UHSE51N/ 20UCFE52/ 20UHSE53 | Discipline Specific Elective Course 1 (DSEC 1) 1. Basic Statistics 2. Fashion and Apparel Marketing 3. Textile Testing | 4 | 4 | 3 | 25 | 75 | 100 |
| | 20UHSC5PR | Core Course 10 Project | 0 | 1 | - | 100 | | 100 | |
| | Part IV | 20UHSS51 | Skill Enhancement Course 4 (SEC 4) Family Resource Management | 2 | 2 | 2 | 40 | 60 | 100 |
| | | 20UHSS52P | Skill Enhancement Course 5 (SEC 5) Food Preservation and Bakery Practical | 2 | 2 | 2 | 40 | 60 | 100 |
| | | 20UGCE51 | Self Study Course Practice for Competitive Examinations - Online | - | 1 | - | 100 | | 100 |
| | | 20UGES51 | Environmental Studies | 2 | 1 | 2 | 100 | | 100 |
| | | | TOTAL | 30 | 23 | | | | 900 |

| Semester | Course Code | Courses | Hours per week | Credits | Exam. Hours | Marks | | | |
|--------------|-------------|------------------------------------|---|-----------|-------------|-------|------|------------|-----|
| | | | | | | Int. | Ext. | Total | |
| VI | Part III | 20UHSC61 | Core Course 11 Nutritional Biochemistry | 5 | 4 | 3 | 25 | 75 | 100 |
| | | 20UHSC62 | Core Course 12 Internship - Dietetics | 5 | 4 | 3 | 50 | 50 | 100 |
| | | 20UHSC63 | Core Course 13 Extension Education | 5 | 4 | 3 | 25 | 75 | 100 |
| | | 20UHSC61P | Core Course Practical III Food Analysis Practical | 3 | 3 | 3 | 40 | 60 | 100 |
| | | 20UHSC62P | Core Course Practical IV Textiles and Clothing Practical | 3 | 3 | 3 | 40 | 60 | 100 |
| | | 20UHSC63P | Core Course Practical V Art in Everyday Life Practical | 2 | 2 | 3 | 40 | 60 | 100 |
| | | 20UHSE61/ 20UCFE62/ 20UHSE63 | Discipline Specific Elective Course 2 (DSEC 2) 1. Culinary Art 2. Perspectives of Textiles and Fashion 3. Food Toxicology | 5 | 4 | 3 | 25 | 75 | 100 |
| | | 20UHSQ61 | Self - Study Course Core Courses Quiz - Online | - | 1 | - | 100 | | 100 |
| | Part IV | 20UHSS61 | Skill Enhancement Course 6 (SEC 6) Family Dynamics | 2 | 2 | 2 | 40 | 60 | 100 |
| TOTAL | | | 30 | 27 | | | | 900 | |



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VIRUDHUNAGAR - 626 001

B.Sc. Home Science - Nutrition and Dietetics

(2020 -2021 onwards)

| | | | |
|--------------------------------|-----------------------|----------------|----------------|
| Semester I | FOOD SCIENCE I | Hours/Week: 4 | |
| Core Course-1 | | Credits: 4 | |
| Course Code 20UHSC11 | | Internal 25 | External 75 |

COURSE OUTCOMES

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

- CO1: describe the basic concept of food and cooking, functions of food, sources of food constituents and food guide pyramid, objectives, preliminary preparations and methods of cooking and the role of various foods in cookery. [K1]
- CO2: explain the composition, nutritive value, selection, storage and processing of different foods such as cereals, pulses, vegetables, fruits and sugars. [K2]
- CO3: classify food groups, vegetables, fruits, sugar, food adjuncts, stages of sugar cookery, toxic constituents of pulses, merits and demerits of preliminary preparations of cooking and methods of cooking. [K2]
- CO4: identify the role of food in good health, the medicinal values of food adjuncts and the changes that occur during cooking and processing of different foods. [K3]
- CO5: analyse the factors to be considered while doing the preliminary preparations and cooking of different foods by using different cooking methods. [K4]

UNIT I Introduction

Food- definition, functions, food groups, food guide pyramid, food in relation to health.
Cooking - objectives, preliminary preparations and methods. (7 Hours)

UNIT II Cereals

Cereals - composition and nutritive value of rice, structure of wheat, milling and parboiling of wheat and rice, cereal products, cereal cookery – effect of moist and dry heat, Role of cereals and factors to be considered while cooking cereals. Millets - maize, jowar, ragi and bajra - nutritive value and processing. (13 Hours)

UNIT III Pulses

Pulses and Legumes – nutritive value, processing, storage and infestation and toxic constituents. Pulse Cookery - factors affecting cooking quality – role of pulses in cookery. (10 Hours)

UNIT IV Fruits and Vegetables

Fruits - classification, composition, storage, ripening of fruits, enzymatic and non-enzymatic browning reactions. Vegetables- classification, composition, pigments – water insoluble and water soluble pigments, effect of cooking on pigments, selection and storage. Vegetable cookery-changes during cooking, loss of nutrients during cooking, factors to be considered while cooking vegetables and role of vegetables in cookery. (15 Hours)

UNIT V Sugar and Food Adjuncts

Sugar and sugar products – nutritive value, properties, sugar related products, stages of sugar cookery, role of sugar in cookery. Spices – functions, its medicinal values and role of spices in cookery, Herbs used in cooking. (15 Hours)

TEXTBOOK

1. Srilakshmi,B. (2020). *Food Science*, 8th edition, New Delhi: New Age International Ltd.

REFERENCE BOOKS

1. Swaminathan, M. (2018). *Essentials of Food and Nutrition*, Vol I & II. Bangalore: The Bangalore printing and Publishing Co Ltd.
2. Bali,P.S.(2019).*Theory of Cookery*, New Delhi: Oxford University Press.
3. Manay,S.N. and Shadaksharaswamy, M. (2018). *Foods Facts and Principles*, New Delhi: New Age International Ltd.
4. Sharma,A.(2017).*Textbook of Food Science and Technology*, New Delhi: CBS Publishers and Distributors Pvt Ltd
5. Mudambi,S.R. and Rao,S.M.(2006). *Food Science*, New Delhi: New Age International Ltd.
6. Potter,N.N. and Hotchkiss,J.H. (2006). *Food Science*, New Delhi: CBS Publishers.

| Course Code 20UHSC11 | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|-------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | H | H | M | H | - | - | - | L | - | - |
| CO2 | H | H | M | H | - | - | - | H | - | - |
| CO3 | H | H | H | H | - | - | - | H | - | - |
| CO4 | H | H | H | H | H | H | H | H | - | - |
| CO5 | H | H | H | H | H | H | H | H | - | L |

Dr.D.Vijayarani
Head of the Department

Dr.D.Vijayarani
Course Designer



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B.Sc. Home Science - Nutrition and Dietetics
 (2023 -2024 onwards)

| | | | |
|---------------------------------|-----------------------|-----------------------|-----------------------|
| Semester I | FOOD SCIENCE I | Hours/Week: 4 | |
| Core Course-1 | | Credits: 4 | |
| Course Code 20UHSC11N | | Internal 25 | External 75 |

COURSE OUTCOMES

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

- CO1: describe the basic concept of food and cooking, functions of food, sources of food constituents and food guide pyramid, objectives, preliminary preparations and methods of cooking and the role of various foods in cookery. [K1]
- CO2: explain the composition, nutritive value, selection, storage and processing of different foods such as cereals, pulses, vegetables, fruits and sugars. [K2]
- CO3: classify food groups, cereal food products, pulses, vegetables, fruits, sugar, food adjuncts, stages of sugar cookery, toxic constituents of pulses, merits and demerits of preliminary preparations of cooking and methods of cooking. [K2]
- CO4: identify the role of food in good health, the medicinal values of food adjuncts and the changes that occur during cooking and processing of different foods. [K3]
- CO5: analyse the factors to be considered while doing the preliminary preparations and cooking of different foods by using different cooking methods. [K4]

UNIT I Introduction

Food- definition, functions, food groups, food guide pyramid, food in relation to health.
 Cooking - objectives, preliminary preparations and methods. (12 Hours)

UNIT II Cereals

Cereals – composition, nutritive value and milling of rice and wheat, structure of wheat and parboiling of rice, cereal products, cereal cookery – effect of moist and dry heat, Role of cereals and factors to be considered while cooking cereals. Millets - maize, jowar, ragi and bajra - nutritive value and processing. (12 Hours)

UNIT III Pulses

Pulses and Legumes – classification, nutritive value, processing, storage and infestation and toxic constituents. Pulse Cookery - factors affecting cooking quality – role of pulses in cookery. (12 Hours)

UNIT IV Fruits and Vegetables

Fruits - classification, composition, storage, ripening of fruits, enzymatic and non-enzymatic browning reactions. Vegetables- classification, composition, pigments – water insoluble and water soluble pigments, effect of cooking on pigments, selection and storage. Vegetable cookery-changes during cooking, loss of nutrients during cooking, factors to be considered while cooking vegetables and role of vegetables in cookery. (12 Hours)

UNIT V Sugar and Food Adjuncts

Sugar and sugar products – nutritive value, properties, sugar related products, stages of sugar cookery, factors affecting crystallization and role of sugar in cookery. Spices – functions, its medicinal values and role of spices in cookery, Herbs used in cooking. (12 Hours)

TEXTBOOK

1. Srilakshmi,B. (2020). *Food Science*, 8th edition, New Delhi: New Age International Ltd.

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1. Swaminathan, M. (2018). *Essentials of Food and Nutrition*, Vol I & II. Bangalore: The Bangalore printing and Publishing Co Ltd.
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4. Sharma,A.(2017).*Textbook of Food Science and Technology*, New Delhi: CBS Publishers and Distributors Pvt Ltd
5. Mudambi,S.R. and Rao,S.M.(2006). *Food Science*, New Delhi: New Age International Ltd.
6. Potter,N.N. and Hotchkiss,J.H. (2006). *Food Science*, New Delhi: CBS Publishers.

| Course Code 20UHSC11N | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|--------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | H | H | M | H | - | - | - | L | - | - |
| CO2 | H | H | M | H | - | - | - | H | - | - |
| CO3 | H | H | H | H | - | - | - | H | - | - |
| CO4 | H | H | H | H | H | H | H | H | - | - |
| CO5 | H | H | H | H | H | H | H | H | - | L |

Dr.D.Vijayarani
Head of the Department

Dr.D.Vijayarani
Course Designer



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B.Sc. Home Science - Nutrition and Dietetics
(2020 -2021 onwards)

| | | | |
|--------------------------------|--------------------------|----------------|----------------|
| Semester I | NUTRITION SCIENCE | Hours/Week: 4 | |
| Core Course-2 | | Credits: 4 | |
| Course Code 20UHSC12 | | Internal 25 | External 75 |

COURSE OUTCOMES

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

- CO1: state the concept of health, nutrition, nutritional status, the food sources and deficiency diseases of all nutrients. [K1]
- CO2: discuss the dimensions of health, energy value of food, BMR, quality of protein and classification of macro and micro nutrients. [K2]
- CO3: explain the functions, digestion and absorption of macro and micro nutrients. [K2]
- CO4: identify the factors affecting BMR, absorption of various nutrients and write the recommended Dietary Allowances for different stages of life. [K3]
- CO5: analyze the causes and consequences of nutrient deficiency diseases. [K4]

UNIT I Introduction to Nutrition

Nutrition, health and nutrients – definition

Nutritional status-optimum/ideal nutrition - malnutrition - under and over nutrition, signs of good and poor nutrition.

Energy - unit of energy, definition, RDA, determination of energy value of food and Total Energy Requirements. Basal Metabolic Rate – factors influencing BMR. (12 Hours)

UNIT II Carbohydrates

Carbohydrates – nutritional classification, sources, functions, digestion and absorption.

Dietary Fibre - role of dietary fibre in human nutrition and Recommended Dietary Allowances.
(12 Hours)

UNIT III

Protein: Protein - nutritional classification of protein, sources, functions, digestion and absorption, measurement of protein quality, deficiency diseases and Recommended Dietary Allowances.
(11 Hours)

UNIT IV Lipids

Lipids - nutritional classification, sources, digestion, absorption and functions of lipids on human health.

Fatty acids – types, sources, functions, deficiency diseases, RDA and functions of essential fatty acids. (11 Hours)

UNIT Vitamins and Minerals

Vitamins- Classification, unit of measurements, sources, functions , deficiency diseases and RDA. Fat soluble vitamins -Vitamin A, D, E and K Water soluble vitamins -Vitamin B Complex and C Minerals-Functions, sources, storage in body, RDA and deficiency of macro (Ca,P, Mg)and micro (Fe,I,Fl,cu,zn) minerals. (14 Hours)

TEXTBOOK

Srilakshmi, B. (2018). *Nutrition Science*, 6th Edition, New Delhi: New Age International Ltd.

REFERENCE BOOKS

1. Robinson, H. C. (1978). *Fundamentals of Normal Nutrition*, 3rd Edition. Collier Macmillan International Edition. Macmillan.
2. Williams and Rodewell, S. (1985). *Nutrition and Diet Therapy*, 5th Edition, St. Louis: Times Mirror/Mosby College Publications.
3. Swaminathan, M. (2018). *Essentials of Food and Nutrition*, Vol I & II. Bangalore: The Bangalore printing and Publishing Co Ltd.
4. Kravse, M.V. and Mohan, (1984). *Food, Nutrition and Diet Therapy*, Philadelphia:W.B. Saunders.
5. Gopalan, C. and Vijayaragavan, K. (1971). *Nutrition*, Hyderabad: Atlas of India NIN/ICMR.

| Course Code 20UHSC12 | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|-------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | M | M | M | H | L | L | L | H | - | - |
| CO2 | H | M | M | H | L | L | L | H | - | - |
| CO3 | H | M | M | H | L | M | M | H | - | - |
| CO4 | H | M | M | H | H | H | H | H | - | - |
| CO5 | H | M | M | H | H | H | H | H | - | - |

Dr.D.Vijayarani
Head of the Department

Mrs.S.Balasaraswathi
Course Designer



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VIRUDHUNAGAR - 626 001

**ALLIED COURSE I CHEMISTRY FOR HOME SCIENCE - NUTRITION AND
 DIETETICS**
 (2020 -2021 onwards)

| | | | |
|--------------------------------|---|----------------|----------------|
| Semester I | ALLIED COURSE I- ORGANIC, INORGANIC AND PHYSICAL CHEMISTRY – I | Hours/Week: 4 | |
| Allied Course -I | | Credits: 4 | |
| Course Code 20UCNA11 | | Internal 25 | External 75 |

COURSE OUTCOMES

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

- CO1: know about the basic concepts in organic, inorganic and physical chemistry. [K1]
 CO2: understand the chemical components involved in polymers, drugs, reagents and the removal of hardness of water, types of hydrogen isotopes and colloids. [K2]
 CO3: discuss about the preparations and properties of polymers, antibiotics, different concentrated reagents, soft water and colloids; inter conversion of hydrogen. [K2]
 CO4: apply different type of reactions and steps involved in polymer synthesis, water purification, reagents, drugs and colloidal substances. [K3]
 CO5: analyze various forms of polymers, isotopes of hydrogen, water softening processes, reagent used in laboratory, drug action with side effects and different colloids. [K4]

UNIT I

1. Polymers – Polymerization – Definition – Classification – examples –Preparation and uses of polythene, PVC, teflon, polystyrene, dacron, nylon- 6,6.
2. Natural and synthetic rubbers – examples – vulcanization of rubber- Preparation and uses of SBR, Buna – N and neoprene.
3. Biomedical polymers – characteristics – examples - Biomedical applications of polymer. (12 Hours)

UNIT II

1. Hydrogen

Isotopes of hydrogen– Heavy water – uses- ortho and para hydrogen Interconversion.
 Occluded hydrogen – Nascent hydrogen – uses of hydrogen.

2. Water

Hardness of water – Types of hardness – Removal of hardness – sodalime, Permutit and Ion-exchange processes - Demineralisation process – purification of water using chlorine, Ozone and UV light. (12 Hours)

UNIT III

- a) Preparation of reagents in the laboratory- Tollen's reagent-neutral FeCl_3 - Borsche's reagent-Schiff's reagent-Fehling solution A & B.
- b) Units of concentration of solution-Normality, Molarity, Molality, Mole fraction, Mass percentage and volume percentage- Simple problems dealing with the preparation reagent. (12 Hours)

UNIT IV

Importance of Drugs –terminologies – Pharmacy – Pharmacology – Pharmacodynamics – Pharmacokinetics – Molecular Pharmacology – Pharmacophore – antimetabolites – actinomycetes - Bacteria, Virus, fungi –mutation.

Antibiotics – Definition-classification-uses of Ampicillin, streptomycin, Erythromycin, tetracycline, rifomycin (structure not necessary) – drug action and side effects. (12 Hours)

UNIT V

1. Colloids – Definition and classification.
2. Sols – Different types – examples –Dialysis – electro osmosis – electrophoresis – stability of colloids- Gold number.
3. Emulsion – Types of emulsion – Emulsifier – Examples – Cleansing action of soap.
4. Gels – Types of gels – examples – Properties – Hydration – Swelling – syneresis – Thixotropy.
5. Applications of colloids. (12 Hours)

TEXTBOOKS

1. Soni, P.L. (2008). *Text book of Organic Chemistry*, Latest Edition. Sultan Chand & Sons.
2. Soni, P.L. (2008). *Text book of Inorganic Chemistry*, Latest Edition. Sultan Chand & Sons.
3. Soni, P.L. (2008). *Text book of Physical chemistry*, Latest Edition. Sultan Chand & Sons.

REFERENCE BOOKS

1. Bahl and Arun Bahl, *Advanced Organic Chemistry*, 22nd Edition. S. Chand & Company Ltd.
2. Puri, Sharma and Kalia, (2008). *Principles of Inorganic Chemistry*, 43rd Edition. Vishal Publishing Co.
3. Puri, Sharma and Patania. *Principles of Physical Chemistry*, 43rd Edition. Vishal Publishing Co.

| Course Code 20UCNA11 | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 |
|-------------------------|-----|-----|-----|-----|-----|-----|-----|
| CO1 | H | M | M | L | M | M | H |
| CO2 | H | M | M | L | M | M | H |
| CO3 | M | M | M | L | H | M | H |
| CO4 | H | M | M | L | H | M | H |
| CO5 | M | M | M | L | H | M | H |

Mrs.M.Dhanalakshmi
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VIRUDHUNAGAR - 626 001

B.Sc. Home Science - Nutrition and Dietetics

(2020 -2021 onwards)

| | | | |
|--------------------------------|------------------------|----------------|----------------|
| Semester II | FOOD SCIENCE II | Hours/Week: 4 | |
| Core Course-3 | | Credits: 4 | |
| Course Code 20UHSC21 | | Internal 25 | External 75 |

COURSE OUTCOMES

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

CO1: describe the structure of egg and meat, properties of milk and oils, role of milk, eggs, fleshy foods, fats and oils, nuts and oil seeds in cookery and sensory characteristics of different foods. [K1]

CO2: outline the composition, nutritive value, selection, storage, spoilage, preservation and processing of different foods. [K2]

CO3: classify poultry, fish, nuts and oil seeds, milk products and types of sensory evaluation. [K2]

CO4: find the changes that occur during cooking and processing of different foods and prepare evaluation cards for sensory evaluation. [K3]

CO5: analyse the factors to be considered while cooking of various foods and inspect recipes through sensory evaluation techniques. [K4]

UNIT I Milk and Milk Products

Milk - Composition and nutritive value, physical properties, effect of heat, acid, enzymes and salts on milk, milk products and role of milk in cookery (12 Hours)

UNIT II Eggs

Egg – Structure, composition and nutritive value, pigments, quality of egg, evaluation, preservation, egg white foams and role of egg in cookery. (12 Hours)

UNIT III Flesh Foods

Meat– Structure, composition and nutritive value, post-mortem changes - ageing, tenderizing, curing, cuts and grades, meat cookery. Poultry-Classification, composition and nutritive value, preservation and storage. Fish- Classification, composition and nutritive value, selection, spoilage, storage and preservation and fish cookery. (12 Hours)

UNIT IV Fats and Oils

Fats and Oils – composition and nutritive value, refining and processing of fats, specific fats and oils, emulsions, rancidity, effect of heating and role of fats in cookery.

Nuts and oil seeds - composition and nutritive value of specific nuts and oil seeds – almonds, coconut, groundnut, soya bean and flax seed. Role of nuts and oils seeds in cookery. (12 Hours)

UNIT V Sensory Evaluation

Sensory Evaluation - sensory characteristics of foods, types of test - difference tests, rating test, sensitivity tests and descriptive tests. (12 Hours)

TEXTBOOK

Srilakshmi,B. (2020). *Food Science*, 8th edition, New Delhi: New Age International Ltd.

REFERENCE BOOKS

1. Swaminathan, M. (2018). *Essentials of Food and Nutrition*, Vol I & II. Bangalore: The Bangalore printing and Publishing Co Ltd.
2. Manay,S.,N. and Shadaksharaswamy.M. (2018).*Foods Facts and Principles*, New Delhi: New Age International Ltd.
3. Mudambi,S.R. and Rao,S.M.(2006). *Food Science*, New Delhi: New Age International Ltd.
4. Potter,N.N. and Hotchkiss,J.H. (2006). *Food Science*, New Delhi: CBS Publishers.
5. Bali,P.S (2019). *Theory of Cookery*, New Delhi:Oxford University Press.
6. Sharma,A.(2017). *Textbook of Food Science and Technology*, New Delhi: CBS Publishers and Distributors Pvt Ltd

| Course Code 20UHSC21 | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|-------------------------|-----------|------------|--------------|---------------|----------|------------|------------|----------|----------|----------|
| | PS1. a | PSO 1.b | PSO 3 2.a | PSO 4 2..b | PSO 5 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | H | H | M | H | - | - | - | L | - | - |
| CO2 | H | H | M | H | - | - | - | H | - | - |
| CO3 | H | H | H | H | - | - | - | H | - | - |
| CO4 | H | H | H | H | H | H | H | H | - | - |
| CO5 | H | H | H | H | H | H | H | H | - | L |

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Dr.D.Vijayarani
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B.Sc. Home Science - Nutrition and Dietetics
 (2022 -2023 onwards)

| | | | |
|---------------------------------|------------------------|-----------------------|-----------------------|
| Semester II | FOOD SCIENCE II | Hours/Week: 4 | |
| Core Course-3 | | Credits: 4 | |
| Course Code 20UHSC21N | | Internal 25 | External 75 |

COURSE OUTCOMES

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

- CO1: describe the structure of egg and meat, properties of milk and oils, role of milk, eggs, fleshy foods, fats and oils, nuts and oil seeds in cookery and quality of food. [K1]
- CO2: outline the composition, nutritive value, selection, storage, spoilage, preservation and processing of different foods. [K2]
- CO3: classify poultry, fish, nuts and oil seeds, milk products, methods of improving the quality of foods and types of sensory evaluation. [K2]
- CO4: find the changes that occur during cooking and processing of different foods, prepare evaluation cards for sensory evaluation and fortified foods. [K3]
- CO5: analyse the factors to be considered while cooking of various foods and inspect recipes through sensory evaluation techniques. [K4]

UNIT I Milk and Milk Products

Milk - Composition and nutritive value, physical properties, effect of heat, acid, enzymes and salts on milk, factors to be considered in milk cookery, milk products, storage, processing, spoilage and role of milk in cookery (12 Hours)

UNIT II Eggs

Egg – Structure, composition and nutritive value, pigments, quality of egg, evaluation, storage, preservation, egg white foams, factors affecting egg quality during cooking and role of egg in cookery. (12 Hours)

UNIT III Flesh Foods

Meat– Structure, composition and nutritive value, post-mortem changes - ageing, tenderizing, curing, cuts and grades. Meat cookery. Poultry-Classification, composition and nutritive value, preservation and storage. Fish - Classification, composition and nutritive value, selection, spoilage, storage and preservation and fish cookery. (12 Hours)

UNIT IV Fats and Oils

Fats and Oils – composition and nutritive value, refining and processing of fats, specific fats and oils, emulsions, rancidity, effect of heating and role of fats in cookery. Nuts and oil seeds - composition and nutritive value of specific nuts and oil seeds – almonds, coconut, groundnut, soya bean and flax seed. Role of nuts and oils seeds in cookery (12 Hours)

UNIT V Sensory Evaluation

Sensory Evaluation - sensory characteristics of foods, types of test - difference tests, rating test, sensitivity tests and descriptive tests. Improving the nutritional quality of food – enrichment and fortification of foods. (12 Hours)

TEXTBOOK

Srilakshmi,B. (2020). *Food Science*, 8th edition, New Delhi: New Age International Ltd.

REFERENCE BOOKS

1. Swaminathan, M. (2018). *Essentials of Food and Nutrition*, Vol I & II. Bangalore: The Bangalore printing and Publishing Co Ltd.
2. Manay,S.,N. and Shadaksharaswamy.M. (2018).*Foods Facts and Principles*, New Delhi: New Age International Ltd.
3. Mudambi,S.R. and Rao,S.M.(2006). *Food Science*, New Delhi: New Age International Ltd.
4. Potter,N.N. and Hotchkiss, J.H. (2006). *Food Science*, New Delhi: CBS Publishers.
5. Bali,P.S(2019).*Theory of Cookery*, New Delhi:Oxford University Press.
6. Sharma,A.(2017).*Textbook of Food Science and Technology*, New Delhi: CBS Publishers and Distributors Pvt Ltd

| Course Code 20UHSC21N | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|--------------------------|-----------|------------|--------------|---------------|----------|------------|------------|----------|----------|----------|
| | PS1. a | PSO 1.b | PSO 3 2.a | PSO 4 2..b | PSO 5 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | H | H | M | H | - | - | - | L | - | - |
| CO2 | H | H | M | H | - | - | - | H | - | - |
| CO3 | H | H | H | H | - | - | - | H | - | - |
| CO4 | H | H | H | H | H | H | H | H | - | - |
| CO5 | H | H | H | H | H | H | H | H | - | L |

Dr.D.Vijayarani
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B.Sc. Home Science - Nutrition and Dietetics

(2020 -2021 onwards)

| | | | |
|--------------------------------|--------------------------------|----------------|----------------|
| Semester II | FOOD SERVICE MANAGEMENT | Hours/Week: 4 | |
| Core Course-4 | | Credits: 4 | |
| Course Code 20UHSC22 | | Internal 25 | External 75 |

COURSE OUTCOMES

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

- CO1: describe the concept and history of food service establishment, physical plant and equipment, quantity food production and service, financial management, hygiene, sanitation and safety. [K1]
- CO2: explain the different types of food service establishment, kitchen, storage areas, equipment, menus, styles of service, cost, account, hygiene and accidents. [K2]
- CO3: discuss the functions and laws of food service management, selection criteria of kitchen, storage, service area and equipment, factors influencing menu planning, food losses and safety. [K2]
- CO4: identify the management tools, plant locations, effective use of left over foods, profit and loss account and safety measures in food service establishments. [K3]
- CO5: focus on the organisation structure of the food service establishment, care and maintenance of equipment, method of purchasing, storage, receiving of food, cost control and safe handling of food. [K4]

UNIT I

Management and Organisation: Food service establishment – history, types – commercial and non- commercial food service establishment. Management - functions and tools. (12 Hours)

UNIT II

Physical Plant and Equipment: Kitchen- layout, size and types, Storage areas- space, types and layout, Service area- location and layout, Equipment-classification, selection, care and maintenance. (12 Hours)

UNIT III

Quantity Food Production and Services

Food - Purchasing, receiving, storing and issuing of foods. Menu planning- meaning, types, points to be considered while planning menu, standardisation of recipes, portion control and effective use of left over. Styles of service – waiter service, self- service, vending and mobile catering. (12 Hours)

UNIT IV

Financial Management

Cost – Types of cost, food cost control - factors responsible for losses, method of controlling food cost Books keeping and Accounting –types of account, book of accounts, trial balance, profit and loss account, balance sheet. (12 Hours)

UNIT V

Hygiene, Sanitation and Safety

Hygiene and Sanitation – environmental hygiene and sanitation, hygiene in food handling and personnel hygiene Safety - accidents and its prevention Laws – Factories Act, Catering Establishment Act, FPO, PFA, MPO and AGMARK (12 Hours)

TEXTBOOKS

1. Mohini, S. and Surjeet, M. (2018). *Catering Management and Integrated Approach*, New Delhi: Wiley Eastern Ltd.
2. Suganthi and Premakumari, (2017). *Food Service Management*, Chennai: Dipti Press PVT Ltd.

REFERENCES BOOKS

1. Malhotra,R.K.(2002).*Food Service Management*, New Delhi: Anmol Publishers.
2. George,B. and Chatterjee,S. (2008). *Food and Beverage Service Management*, Chennai: Jaico Publishing House.
3. Verghese,B. (1999). *Professional Food and Beverage Service Management*, Chennai: Rajiv Beri for Macmillan India Ltd.

| Course Code 20UHSC22 | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|-------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | H | M | L | M | - | - | - | M | - | - |
| CO2 | H | M | L | M | - | L | L | M | - | - |
| CO3 | H | L | M | M | L | L | L | M | - | - |
| CO4 | H | L | M | M | H | L | H | M | - | M |
| CO5 | H | M | M | M | H | M | H | M | - | L |

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B.Sc. Home Science - Nutrition and Dietetics

(2020 -2021 onwards)

| | | | |
|---------------------------------|-------------------------|----------------|----------------|
| Semester II | FOOD SCIENCE LAB | Hours/Week: 2 | |
| Core Course Practical – | | Credits: 2 | |
| Course Code 20UHSC21P | | Internal 40 | External 60 |

COURSE OUTCOMES

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

CO1: identify the structure of starches and techniques involved in food preparations. [K3]

CO2: prepare various recipes by using different cooking methods. [K3]

CO3: determine the changes that occur during cooking of different foods such as cereals, pulses, vegetables, fruits, sugars, milk, egg, meat, poultry and fish. [K3]

CO4: calculate the percentage of edible portion of various foods and utilize the prepared score card for evaluating the sensory characteristics of foods and prepare the record. [K3]

CO5: analyse the factors affecting the cooking quality of different foods. [K4]

PRACTICALS

1. Method of measuring ingredients
2. Calculate the percentage of edible portion
3. Cereal Cookery
 - Examine the structure of starch granules.
 - Find out the gelatinization temperature and changes occur during gelatinization.
 - Examine the factors affecting gelatinization.
 - Determine the best cooking method combining cereal flour with water.
 - Examine the gluten formation in wheat flour, maida and ragi flour.
 - Determine the best method of cooking rice.
 - Preparation of cereal based Indian recipes.
4. Pulse cookery
 - Determine the time, temperature and water required for sprouting whole pulses and legumes.
 - Find out the effect of cooking on whole and washed or dehusked/ decorticated pulses and legumes.

- Effect of cooking on pulses and legumes by the addition of salt, acid, alkali and enzymes.
 - Preparation of selected pulses and legumes based recipes.
5. Fruits and vegetables cookery
- Determine the factors affecting chlorophyll pigments in vegetables.
 - Determine the factors affecting carotenoids in vegetables.
 - Determine the factors affecting betalin in vegetables.
 - Determine the factors affecting anthocyanin in vegetables.
 - Determine the factors affecting anthoxanin in vegetables.
 - Analyse the pH in different fruits.
 - Effect of cooking on vegetables by adding acid and alkali.
 - Examine the browning reaction on fruits and vegetables.
 - Preparation of selected fruits and vegetables based recipes.
6. Sugar cookery
- Analyse the stages of sugar cookery.
 - Preparation of selected desserts.

PRACTICAL

7. Milk
- Effect of heat and acid on the milk protein.
 - Effect of added substance on the stability of milk.
 - Effect of fermentation on milk protein.
 - Preparation of milk sweets, sauces, cheese and curds.
8. Egg
- Method of evaluating quality of egg.
 - Effect of cooking on colour, texture and acceptance of the whole egg.
 - Effect of method of cooking on the coagulation properties of eggs.
 - Effect of different factors on the gelatinisation temperature and consistency of egg custard.
 - Best method of preparing stable emulsion like mayonnaise.
 - Effect of salt, sugar, acid, fat and other variables on the stability of egg white foam.
 - Effect of foaming on the volume and texture of omelettes.
 - Preparation of selected egg based cookery.
9. Meat Cookery
- Effect of prepreparation techniques on meat tenderization.
 - Effect of time and temperature on cooking of meat.

- Effect of different methods and ingredients affecting tenderization of meat.
- Methods of judging freshness of fish.
- Preparation of selected meat and fish based recipes.

10. Nuts and Oil Cookery

- Determination of smoking points of fats and oils.
- Effect of roasting on nuts and oil seeds.
- Method of preparing peanut butter.
- Preparation of burfi using nuts and oil seeds.

11. Sensory Evaluation

- Method of assessing different qualities of food
- Difference, rating technique, Numerical scoring, Hedonic scale technique, Composite scoring, Descriptive analysis.

12. Visit to various food processing industries.

REFERENCES BOOKS

1. Srilakshmi,B. (2003). *Food Science - Laboratory Manual*, Chennai: SciTech Publications (India) Pvt, Ltd.
2. Mohini,S. and Rao,E.S. (2013). *Food Science Experiments and Applications*, New Delhi: CBS Publishers and Distributors.

| Course Code 20UHSC21P | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|--------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | H | H | L | L | H | H | H | L | L | L |
| CO2 | H | H | M | M | H | H | H | H | H | M |
| CO3 | H | H | M | M | H | H | H | H | M | L |
| CO4 | H | H | M | M | H | H | H | H | M | - |
| CO5 | H | H | M | M | H | H | H | H | H | M |

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VIRUDHUNAGAR - 626 001

ALLIED COURSE I CHEMISTRY FOR HOME SCIENCE - NUTRITION AND DIETETICS

(2020 -2021 onwards)

| | | | |
|--------------------------------|--|----------------|----------------|
| Semester II | ALLIED COURSE I- ORGANIC, INORGANIC AND PHYSICAL CHEMISTRY – II | Hours/Week: 4 | |
| Allied Course -I | | Credits: 4 | |
| Course Code 20UCNA21 | | Internal 25 | External 75 |

COURSE OUTCOMES

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

CO1: know about the basic concepts in organic, inorganic and physical chemistry. [K1]

CO2: understand the chemical constituent in oils and fats, soaps and detergents, biomolecules, fuels and fertilizers, cosmetics and cleaning agents. [K2]

CO3: identify the methods of preparation for organic and inorganic compounds. [K2]

CO4: comprehension about the classification of biomolecules, fuels, fertilizers and catalyst; properties of oil & fats; application of adsorption ; uses of biomolecule, cleaning agents and cosmetics. [K3]

CO5: Analyze the oils, fats and biomolecule functions, fuel and fertilizers, cleaning agents and cosmetics; characteristics and catalytic properties of chemicals. [K4]

UNIT I

1. Carbohydrates – classification – Differences between glucose and fructose – Inter conversion of glucose and fructose – Haworth structure of glucose and fructose- Differences between starch and cellulose – Derivatives of cellulose and their uses.
2. Amino acids – classification – preparation of α -amino acids– properties – Zwitterion – isoelectric point .
3. Proteins – classification – Biological function – colour reaction of proteins.
4. Nucleic acids – RNA and DNA – Biological functions (Elementary idea only). (12 Hours)

UNIT II

1. Oils and Fats – Definition – Properties - Distinction between them -Hydrogenation, Hydrogenolysis, Rancidification and Drying of oils – Preparation of Vanaspathi- Analysis of oils and Fats – Saponification and iodine number.

2. Soaps and Detergents

Soap – Definition – Different types – Manufacture of soap – Kettle process - Detergent – Definition – Synthetic detergents – examples – Distinction between soaps and detergents.

(12 Hours)

UNIT III

Preparation of washing powder, Cleaning powder, White, black, yellow, rose colored phenoyls.

Preparation of Shampoo, liquid blue, preparation of blue, green, red ink, face powder and pain balm.

(12 Hours)

UNIT IV

1. Fuels – classification – Advantages of gaseous fuels – constituents and uses of water gas, producer gas, LPG, Gobar gas and natural gas.

2. Fertilizers – classification – Macro and micro nutrients – Functions of nutrients preparation and uses of urea, ammonium sulphate, superphosphate, triple superphosphate, potassium nitrate and NPK.

(12 Hours)

UNIT V

1. Adsorption – Characteristics – Types of adsorption and comparison – Factors influencing adsorption – Langmuir and Freundlich adsorption isotherm (No derivation) – Applications of adsorption.

2. Catalysts – Characteristics- Different types with examples – Catalytic poisoning – promoters with examples.

(12 Hours)

TEXTBOOKS

1. Soni, P.L.(2008).*Text book of Organic Chemistry*, Latest Edition. Sultan Chand & Sons.
2. Soni, P.L.(2008).*Text book of Inorganic Chemistry*, Latest Edition. Sultan Chand & Sons.
3. Jayashree Ghosh,(2013). *Fundamental Concepts of Applied Chemistry*, S.Chand & Company Ltd.
4. Soni, P.L. (2008).*Text book of Physical chemistry*, Latest Edition, Sultan Chand & Sons.

REFERENCE BOOKS

1. Jain, P. C. and Sharma, M.K., S.C. (2016). *Modern Organic Chemistry*, 1st Edition. New Delhi: Vishal Publishing Co.
2. Jain, P.C. and Monika, J. (2013). *Engineering Chemistry*. 1st Edition. New Delhi: Dhanpat Rai Publishing Company Pvt.Ltd.
3. Puri, Sharma and Pathania, (2008). *Elements of Physical Chemistry*, 4th Edition. Jalandhar Delhi: Vishal Publishing & Co.

| Course Code | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 |
|-------------|-----|-----|-----|-----|-----|-----|-----|
| 20UCNA21 | | | | | | | |
| CO1 | H | M | M | M | L | M | H |
| CO2 | H | M | M | M | L | M | H |
| CO3 | M | M | M | M | L | M | H |
| CO4 | M | M | M | M | L | M | H |
| CO5 | M | M | M | M | L | M | H |

Mrs.M.Dhanalakshmi
Head of the Department

Dr. C. Vidya Rani
Course Designer



V.V.VANNIAPERUMAL COLLEGE FOR WOMEN

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VIRUDHUNAGAR - 626 001

ALLIED COURSE I CHEMISTRY FOR HOME SCIENCE - NUTRITION AND DIETETICS

(2020 -2021 onwards)

| | | | |
|----------------------------|----------------------------|---------------|----------|
| Semester II | VOLUMETRIC ANALYSIS | Hours/Week: 2 | |
| Allied Course Practical -I | | Credits: 2 | |
| Course Code | | Internal | External |
| 20UCNA21P | | 40 | 60 |

COURSE OUTCOMES

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

CO1: apply the Principles involved in the Volumetric analysis. [K3]

CO2: find out the strength of standard solutions. [K3]

CO3: estimate the amount of the substance present in the given solution by volumetric analysis. [K3]

CO4: determine the concentration of the unknown solutions. [K4]

CO5: analyse and evaluate the accuracy of the results. [K4]

a. Acidimetry and Alkalimetry:

1. Titration between a strong acid and strong base
2. Titration between a strong acid and weak base.
3. Titration between a weak acid and strong base

b. Permanganimetry:

Titration between potassium permanganate and

- i) oxalic acid ii) ferrous sulphate and iii) ferrous ammonium sulphate (Mohr's salt)

c. Iodometry:

Titration between sodium thiosulphate and i) potassium permanganate and ii) potassium dichromate.

| Course Code 20UCNA21P | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 |
|--------------------------|-----|-----|-----|-----|-----|-----|-----|
| CO1 | H | M | H | M | L | H | M |
| CO2 | H | M | H | M | L | H | M |
| CO3 | H | M | H | M | L | H | M |
| CO4 | H | M | H | M | L | H | M |
| CO5 | H | M | H | M | L | H | M |

Mrs.M.Dhanalakshmi
Head of the Department

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VIRUDHUNAGAR - 626 001

B.Sc. Home Science - Nutrition and Dietetics

(2020 -2021 onwards)

| | | | |
|---------------------------------|------------------------|-----------------------|----------------|
| Semester II | MS-OFFICE – LAB | Hours/Week: 2-T-1,P-1 | |
| Skill Enhancement | | Credits: 2 | |
| Course Code 20UHSS21P | | Internal 40 | External 60 |

COURSE OUTCOMES

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

CO1: write the commands for windows and Microsoft Office. [K3]

CO2: apply the technical skills to create the documents in MS Office. [K3]

CO3: execute the prepared documents in MS Word, MS Excel, MS Power point and MS Access. [K3]

CO4: prepare the record with formatted outputs. [K3]

CO5: examine the formatting options and short cut keys used in MS Office. [K4]

UNIT I

Introduction to windows - windows - Graphic User Interface (GUI) - multitasking - format of a Window - icons - selecting, moving, sizing windows - menus - Help menu.

UNIT II

MS-WORD - opening word – Toolbar highlights – changing fonts - settings – documents patterns - Book marks - Auto text – AutoCorrect - Auto save- other major comments.

Exercises

- Preparing a bio data using formatting options.
- Implementing mail merge option.
- Hotel menu card using clipart and word art.

UNIT III

MS-EXCEL - Excel windows - Data in work sheet – Types. Formula - types, entering and editing formula. Functions - Cell referencing - Manipulating worksheet - Formatting cells – MS Excel charts – types and components.

Exercises

- Prepare table for nutrient content of given foods.
- Create a chart for the BMI of the students.
- Perform calculations using formula.

UNIT IV

MS-Power Point – component of a power point window – creates a presentation using Auto Content Wizard and based on Blank presentation, types of auto layouts – power point views – enhancing the presentation – working with charts and tables – importing and exporting charts.

Exercises

- Create PPT slides for Food processing techniques.
- Create a slide show for new product development advertisement.

UNIT V

MS-Access – Database - parts of access window – creating a new database – creating a database through table wizard – creating a new table – saving the database – relationships – creating table through design view – query forms – reports.

Exercises

- Create a database containing details in your class.
- Create a form using design view.
- Create a query using design view.

REFERENCES BOOKS

1. Revathi,M.(2008). *Hand book on MS Office*, 1st Edition. V.V.V. College, Virudhunagar.
2. NellaiKannan, C. (2012). *MS-Office*, Tirunelveli, Tamilnadu: Nels Publications.
3. Nagpal,D.P.(2001). *Computer Course*, New Delhi: Wheelers Publishing.

| Course Code 20UHSS21P | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|--------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | H | H | L | M | L | M | M | H | - | - |
| CO2 | H | H | L | M | H | H | H | H | - | - |
| CO3 | H | H | M | M | H | H | H | H | - | - |
| CO4 | H | H | M | H | L | H | H | H | M | - |
| CO5 | H | H | M | H | L | H | H | H | - | M |

Dr.D.Vijayarani
Head of the Department

Dr.D.Vijayarani
Course Designer



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VIRUDHUNAGAR - 626 001

B.Sc. Home Science - Nutrition and Dietetics

(2022 -2023 onwards)

| | | | |
|---|------------------------------|------------------------------|------------------------|
| Semester II | MS-OFFICE – PRACTICAL | Hours/Week: 2-T-1,P-1 | |
| Skill Enhancement Course Practical-1 | | Credits: 2 | |
| Course Code 20UHSS21PN | | Internal 40 | External 60 |

COURSE OUTCOMES

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

CO1: write the commands for windows and Microsoft Office. [K3]

CO2: apply the technical skills to create the documents in MS Office. [K3]

CO3: execute the prepared documents in MS Word, MS Excel, MS Power point and MS Access. [K3]

CO4: prepare the record with formatted outputs. [K3]

CO5: examine the formatting options and short cut keys used in MS Office. [K4]

UNIT I

Introduction to windows - windows - Graphic User Interface (GUI) - multitasking - format of a Window - icons - selecting, moving, sizing windows - menus - Help menu.

UNIT II

MS-WORD - opening word – Toolbar highlights – changing fonts - settings – documents patterns - Book marks - Auto text – AutoCorrect - Auto save- other major commends.

Exercises

- Design a biodata using formatting options.
- Draft a report for an industrial visit.
- Prepare the steps to be followed for a recipe.
- Implement the mail merge option.
- Hotel menu card using clipart and word art.

UNIT III

MS-EXCEL - Excel windows - Data in work sheet – Types. Formula - types, entering and editing formula. Functions - Cell referencing - Manipulating worksheet - Formatting cells – MS Excel charts – types and components.

Exercises

- Prepare table for nutrient content of given foods.
- Create a chart for the BMI of the students.
- Perform calculations using formula.

UNIT IV

MS-Power Point – component of a power point window – creates a presentation using Auto Content Wizard and based on Blank presentation, types of auto layouts – power point views – enhancing the presentation – working with charts and tables – importing and exporting charts.

Exercises

- Create PPT slides for Food processing techniques.
- Create a slide show for new product development advertisement.

UNIT V

MS-Access – Database - parts of access window – creating a new database – creating a database through table wizard – creating a new table – saving the database – relationships – creating table through design view – query forms – reports.

Exercises

- Create a database containing details in your class.
- Create a form using design view.
- Create a query using design view.

REFERENCES BOOKS

1. Revathi,M.(2008). *Hand book on MS Office*, 1st Edition. V.V.V. College, Virudhunagar.
2. NellaiKannan, C. (2012). *MS-Office*, Tirunelveli, Tamilnadu: Nels Publications.
3. Nagpal,D.P.(2001). *Computer Course*, New Delhi: Wheelers Publishing.

| Course Code 20UHSS21PN | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|---------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | H | H | L | M | L | M | M | H | - | - |
| CO2 | H | H | L | M | H | H | H | H | - | - |
| CO3 | H | H | M | M | H | H | H | H | - | - |
| CO4 | H | H | M | H | L | H | H | H | M | - |
| CO5 | H | H | M | H | L | H | H | H | - | M |

Dr.D.Vijayarani
Head of the Department

Dr.D.Vijayarani
Course Designer



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B.Sc. Home Science - Nutrition and Dietetics

(2020 -2021 onwards)

| | | | |
|--------------------------------|--------------------|----------------|----------------|
| Semester III | DIETETICS I | Hours/Week: 5 | |
| Core Course-5 | | Credits: 5 | |
| Course Code 20UHSC31 | | Internal 25 | External 75 |

COURSE OUTCOMES

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

- CO1: describe the concept, importance and principles of meal planning, food pyramid, space foods and sports nutrition. [K1]
- CO2: explain the factors influencing the meal planning, RDA, nutritional requirements, changes that occur during the various stages of life span and classify space food and energy systems in the human body. [K2]
- CO3: Identify the steps involved in planning a diet and dietary guidelines to be followed, symptoms, preventive measures and treatment for various nutritional problems. [K3]
- CO4: plan the menu for various stages of lifespan and for special conditions and analyse the pros and cons of ergogenic foods and recent trends in space foods. [K4]
- CO5: recommend the menu suitable for various stages of lifespan and for special conditions which help them to get job opportunity in dietary department of hospitals, fitness centers and diet counselling centers. [K5]

UNIT I

Meal planning – definition, principles, factors influencing meal planning and its modification to suit different income levels, age and physiological states. Recommended Dietary Allowances for different age groups of both sexes, food guide pyramid. Importance of Healthy Lifestyle.

Nutrition during Pregnancy

Pregnancy – physiological changes during pregnancy, RDA, nutritional requirements, dietary modification, general dietary problems and complications. (14 Hours)

UNIT II

Nutrition during Lactation and Infancy

Lactation – food and nutritional requirements, RDA, role of hormones in lactation, factors influencing the volume and composition of breast milk.

Infancy – food and nutritional requirements, RDA, breast feeding and artificial feeding of an infant, weaning, types of weaning and supplementary foods, nutritional problems in infancy.

(16 Hours)

UNIT III

Nutrition during Preschool age and School going age

Pre school age – food and nutritional requirements, RDA, factors affecting nutritional status and nutrition related problems of preschoolers.

School going age – food and nutritional requirements, RDA, packed lunches and nutritional problems in school going age.

(16 Hours)

UNIT IV

Nutrition during Adolescent, Adult and Old age

Adolescent – food and nutritional requirements, RDA, food habits of adolescents and nutritional problems.

Adulthood – nutritional requirements, RDA, low cost balanced diet and nutritional problems.

Old age – RDA, physiological changes - ageing factors that influence the nutritional requirements, food requirements, nutrition related problems, degenerative diseases, common complaints, drug and nutrient interaction.

(14 Hours)

UNIT V

Sports and Space Nutrition

Sports - nutritional requirement, pre event meals, food requirement, RDA, weight and body composition of athletes and dietary guidelines.

Space nutrition – classification, preparation and recent trends in space foods (15 Hours)

TEXTBOOK

Srilakshmi, B. (2019). *Dietetics*, 8th Edition, New Delhi: New Age International Ltd.

REFERENCE BOOKS

1. Abraham,S.(2016). *Nutrition Through Lifecycle*, New Delhi:New Age International (P)Limited, Publishers.
2. Paul, S. (2005). *Textbook of Bio-Nutrition, Curing Diseases Through Diet*, 1st Edition, New Delhi: CBS Publications.

3. Raheena Begum, M. (2010). *A Textbook of Food, Nutrition and Dietetics*, 3rd Edition, New Delhi: Sterling Publishers Pvt Ltd, Robinson.
4. C.H., Chenoweth, W.L. and Gaswiwk, A.E. (1986). *Normal and Therapeutic Nutrition*, 17th Edition, U.S.A: Macmillon Publishing Co.
5. Swaminathan, N. (2018). *Handbook of Food and Nutrition*, Bangalore: The Bangalore Printing and Publishing Co., Ltd.
6. Verma, P. (2015). *Food, Nutrition and Dietetics*, Chennai: CBS Publishers and Distributors Pvt. Ltd.

| Course Code 20UHSC31 | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|-------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | H | H | M | H | - | - | - | H | - | - |
| CO2 | H | H | M | H | - | - | - | H | - | - |
| CO3 | H | H | H | H | - | - | - | H | - | - |
| CO4 | H | H | H | H | H | H | H | H | - | L |
| CO5 | H | H | H | H | H | H | H | H | - | M |

Dr.D.Vijayarani
Head of the Department

Dr.D.Vijayarani
Course Designer



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VIRUDHUNAGAR - 626 001

B.Sc. Home Science - Nutrition and Dietetics

(2023 -2024 onwards)

| | | | |
|------------------|--------------------|---------------|----------|
| Semester III | DIETETICS I | Hours/Week: 5 | |
| Core Course-5 | | Credits: 5 | |
| Course Code | | Internal | External |
| 20UHSC31N | | 25 | 75 |

COURSE OUTCOMES

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

- CO1: describe the concept, importance and principles of meal planning, food pyramid, space foods, sports nutrition and nutritional status of men and women. [K1]
- CO2: explain the factors influencing the meal planning, RDA, nutritional requirements, changes that occur during the various stages of life span and classify space food and energy systems in the human body. [K2]
- CO3: Identify the steps involved in planning a diet and dietary guidelines to be followed, symptoms, preventive measures and treatment for various nutritional problems. [K3]
- CO4: plan the menu for various stages of lifespan and for special conditions and analyse the pros and cons of ergogenic foods and recent trends in space foods. [K4]
- CO5: recommend the menu suitable for various stages of lifespan and for special conditions which help them to get job opportunity in dietary department of hospitals, fitness centers and diet counselling centers. [K5]

UNIT I

Meal planning – definition, principles, factors influencing meal planning and its modification to suit different income levels, age and physiological states. Recommended Dietary Allowances for different age groups of both sexes, food guide pyramid. Nutritional status of men and women in India. Importance of Healthy Lifestyle.

Nutrition during Pregnancy

Pregnancy – physiological changes during pregnancy, RDA, nutritional requirements, dietary modification, general dietary problems and complications. (15 Hours)

UNIT II

Nutrition during Lactation and Infancy

Lactation – food and nutritional requirements, RDA, role of hormones in lactation, factors influencing the volume and composition of breast milk.

Infancy – food and nutritional requirements, RDA, breast feeding and artificial feeding of an infant, weaning, types of weaning and supplementary foods, nutritional problems in infancy.

(15 Hours)

UNIT III

Nutrition during Preschool age and School going age

Pre school age – food and nutritional requirements, RDA, factors affecting nutritional status and nutrition related problems of preschoolers.

School going age – food and nutritional requirements, RDA, packed lunches and nutritional problems in school going age.

(15 Hours)

UNIT IV

Nutrition during Adolescent, Adult and Old age

Adolescent – food and nutritional requirements, RDA, food habits of adolescents and nutritional problems.

Adulthood – nutritional requirements, RDA, low cost balanced diet and nutritional problems.

Old age – RDA, physiological changes - ageing factors that influence the nutritional requirements, food requirements, nutrition related problems, degenerative diseases, common complaints, drug and nutrient interaction.

(15 Hours)

UNIT V

Sports Nutrition

Sports - nutritional requirement, pre event meals, post event meal and role of electrolyte and water, food requirement, weight and body composition of athletes and dietary guidelines.

(15 Hours)

TEXTBOOK

- 1.Srilakshmi, B. (2019). *Dietetics*, 8th Edition, New Delhi: New Age International Ltd.

REFERENCE BOOKS

1. Abraham,S.(2016). *Nutrition Through Lifecycle*, New Delhi:New Age International (P)Limited, Publishers.
2. Paul, S. (2005). *Textbook of Bio-Nutrition, Curing Diseases Through Diet*, 1st Edition, New Delhi: CBS Publications.
3. Raheena Begum, M. (2010). *A Textbook of Food, Nutrition and Dietetics*, 3rd Edition, New Delhi: Sterling Publishers Pvt Ltd, Robinson.
4. Chenoweth,W.L. and Gaswiwk,A.E.(1986). *Normal and Therapeutic Nutrition*, 17th Edition, U.S.A: Macmillon Publishing Co.

5. Swaminathan, N. (2018). *Handbook of Food and Nutrition*, Bangalore: The Bangalore Printing and Publishing Co., Ltd.
6. Verma, P. (2015). *Food, Nutrition and Dietetics*, Chennai: CBS Publishers and Distributors Pvt. Ltd.
7. Ross, C and Benjamin, C. (2013) *Modern Nutrition in Health and Disease*, 11th Edition, USA: Lippincott Williams and Wilkins Publishing Co.

| Course Code 20UHSC31N | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|--------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | H | H | M | H | - | - | - | H | - | - |
| CO2 | H | H | M | H | - | - | - | H | - | - |
| CO3 | H | H | H | H | - | - | - | H | - | - |
| CO4 | H | H | H | H | H | H | H | H | - | L |
| CO5 | H | H | H | H | H | H | H | H | - | M |

Dr.D.Vijayarani
Head of the Department

Dr.D.Vijayarani
Course Designer



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VIRUDHUNAGAR - 626 001

B.Sc. Home Science - Nutrition and Dietetics

(2020 -2021 onwards)

| | | | |
|--------------------------------|--|----------------|----------------|
| Semester III | ALLIED BIOLOGY – HUMAN PHYSIOLOGY | Hours/Week: 4 | |
| Allied Course II | | Credits: 4 | |
| Course Code 20UBHA31 | | Internal 25 | External 75 |

COURSE OUTCOMES

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

- CO1: state the structure of important physiological systems including the cardio-respiratory, renal, digestive, nervous and reproductive systems. [K1]
- CO2: generalize the principal tissue structures in the human body. [K2]
- CO3: modify the knowledge and regulate the body functions based on disorders in the human physiology.[K3]
- CO4: identify the composition and mechanism of various organs in the human body. [K3]
- CO5: analyse the knowledge and appreciation of the human physiology. [K4]

UNIT I

Blood and Circulatory System

Blood – structure, composition, functions and volume. Blood cells - Erythrocytes, Leucocytes and Thrombocytes, erythropoiesis, haemoglobin - erythrocyte sedimentation rate. Diseases - leucopenia, leukemia, polycythemia, anaemia. Blood coagulation, blood grouping, transfusion, RH factor, Erythroblastosis foetalis. Structure and functions of heart, cardiac cycle, blood pressure-factors affecting blood pressure. (13 Hours)

UNIT II

Respiratory system

Anatomy-respiratory pathway, lungs-lung unit, mechanism of respiration, lung volumes, physiology of respiration, regulation of respiration, types of breathing, modified forms of respiration – coughing, sneezing, hiccups, yawning, laughing, oxygen debt and artificial respiration. (14 Hours)

UNIT III

Digestive and Excretory System

Anatomy and functions of the organs - digestive system – oral cavity, stomach, small intestine, large intestine, pancreas and liver. Composition and functions of saliva and bile.

Excretory System - kidney, nephron and urinary bladder – its structure and functions, renal circulation, volume and formation of urine and micturition. Skin- structure, functions and regulation of temperature. (13 Hours)

UNIT IV

Nervous system and Sense organs

Structure and functions of neuron, brain and spinal cord, Autonomic nervous system, reflex action. Structure and physiology of eye and ear. (10 Hours)

UNIT V

Reproductive and Endocrine system

Anatomy of male and female reproductive organs-menstrual cycle, process of reproduction and lactation, conception, structure and functions of pituitary, thyroid, adrenal glands and gonads. (10 Hours)

TEXTBOOK

Sampath, T. K. and Uma Maheshwari, B. (2017). *Human Anatomy and Physiology*, 11th Edition, Mumbai: Birla Publications,

REFERENCE BOOKS

1. Vidhya, R. (1993). *Hand Book of Physiology*, New Delhi: Medical Publishers(p) Ltd.
2. Saladin, K.S. (1998). *Anatomy Physiology*, New York:MC Grow-hill.
3. Sarada Subramanyam, MadhavanKutty,K. and Singh,H.D. (1996). *Text Book of Human Physiology*, New Delhi: S.Chand Company.

| Course Code 20UBHA31 | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 |
|-------------------------|-----|-----|-----|-----|-----|-----|-----|
| CO1 | H | H | M | H | H | - | - |
| CO2 | H | H | M | H | H | - | - |
| CO3 | H | H | H | H | H | - | - |
| CO4 | H | H | H | H | H | - | L |
| CO5 | H | H | H | H | H | - | L |

Dr.B.Karunai Selvi
Head of the Department

Tmty.R.Sreebha
Course Designer



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VIRUDHUNAGAR - 626 001

B.Sc. Home Science - Nutrition and Dietetics

(2020 -2021 onwards)

| | | | |
|--------------------------------|-------------------------------------|----------------|----------------|
| Semester III | ENTREPRENEURSHIP DEVELOPMENT | Hours/Week: 2 | |
| Skill Enhancement | | Credits: 2 | |
| Course Code 20UHSS31 | | Internal 40 | External 60 |

COURSE OUTCOMES

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

- CO1: describe the meaning and concept of entrepreneur, business, licensing registration, financial institutions, project report, project appraisal and social responsibilities of an entrepreneur. [K1]
- CO2: explain the importance and functions of an entrepreneur, raw materials, machinery, building, proprietorship, institutional arrangements, project report, business ethics and break even analysis. [K2]
- CO3: classify the types of entrepreneur, plant location, ownership, format of a report, project appraisal and infrastructural facilities for starting a new venture. [K2]
- CO4: identify the qualities of an entrepreneur, procedure for starting a business, role of financial institutions, proprietorship, content of a project report and feasibility of project appraisal. [K3]
- CO5: analyze the role of entrepreneur, form of ownership, commercial banks, and illustrate the project report and SWOT analysis to start a new venture. [K4]

UNIT I

Entrepreneurship – meaning and importance, Entrepreneur- definition, types, qualities and role of entrepreneurs in economic development. (5 Hours)

UNIT II

Procedure for starting a business – product selection – form of ownership – sole proprietorship and partnership, plant location – land, building, water and power – raw materials – machinery – man power – other infrastructural facilities – licensing registration and local bye laws. (7 Hours)

UNIT III

Institutional arrangement for entrepreneurship development – D.I.C., I.T.C.O.T., S.I.D.C.O., M.S.M.E., S.I.S.I. – Institutional finance to entrepreneurs – T.I.I.C., S.I.D.B.I. and role of commercial banks. (6 Hours)

UNIT IV

Project report – meaning and importance – contents of a project report – format of a report (as per requirements of financial institutions). (6 Hours)

UNIT V

Project appraisal- meaning, feasibility – market, technical, financial and economic, Break even analysis. SWOT analysis, Social responsibilities and Business ethics (6 Hours)

TEXTBOOKS

- 1.Sundaram, S.S.M and Muthupandi, M. (2004). *Entrepreneurship Development*, Madurai: Sri Ganapathy Publishers.

REFERENCE BOOKS

1. Shelly,S.C.(2017).*Entrepreneurial Development*, Chennai: Dipti Press OPC Pvt. Ltd.
2. Suresh,J.(2018).*Entrepreneurial Development*, Chennai: Margham Publications.
3. Paul, J., Jajithkumar, N. and Mampilly, T. (1996). *Entrepreneurship Development*, 3rd Edition, New Delhi: Himalaya Publishing House.
4. Sekar, P.C. (1998). *Entrepreneurship and Management of Small Business*, Madurai: ENPEE Publication.

| Course Code 20UHSS31 | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|-------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | M | M | L | H | - | - | - | M | - | - |
| CO2 | M | M | L | H | - | - | - | M | - | - |
| CO3 | M | M | L | H | - | - | - | H | - | - |
| CO4 | H | H | L | H | H | L | L | H | - | - |
| CO5 | H | H | L | H | H | H | H | H | - | - |

Dr.D.Vijayarani
Head of the Department

Mrs.S.Balasaraswathi
CourseDesigner



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Re-accredited with 'A' Grade (3rd Cycle) by NAAC

VIRUDHUNAGAR - 626 001

B.Sc. Home Science - Nutrition and Dietetics

(2020 -2021 onwards)

| | | | |
|--------------------------------|---------------------|----------------|----------------|
| Semester IV | DIETETICS II | Hours/Week: 5 | |
| Core Course-6 | | Credits: 5 | |
| Course Code 20UHSC41 | | Internal 25 | External 75 |

COURSE OUTCOMES

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

- CO1: state the definition, concept and principles of diet therapy, dietitian and various diseases and disorders. [K1]
- CO2: explain the purpose, importance and types of diet therapy, qualities of a dietitian and explain the determination, diagnostic techniques and causes of various diseases and disorders. [K2]
- CO3: identify the mode of special feeding, role of dietitian, IDA, clinical manifestations and consequences of various diseased conditions. [K3]
- CO4: plan the menu for various diseased conditions based on the principles, nutritional requirements, dietary considerations and also focus on the diet counselling. [K4]
- CO5: recommend the diet for various diseased conditions. [K5]

UNIT I

Therapeutic Diets

Diet Therapy – definition, principles of a therapeutic diet, Nutrition screening of the person, routine hospital diets, special feeding methods, pre and post-operative diet.

Dietitian :Dietitian – classification, qualities and role of dietitian in managing hospital diet and diet counselling. Indian Dietetic Association (IDA).

Malnutrition and Febrile Condition:

Obesity – types, aetiology, assessment of obesity, complications and dietary management.
Under weight – aetiology and dietary management. Febrile condition – typhoid, malaria, influenza, TB – aetiology, symptoms and dietary management. AIDS – causes, complications and dietary management. (16 Hours)

UNIT II

Gastrointestinal Diseases

Ulcer -types, aetiology, symptoms and dietary management. Constipation, diarrhoea, dysentery and malabsorption syndrome – types, aetiology and dietary management. Food allergy - types, allergens, diagnosis and treatment. (13 Hours)

UNIT III

Diabetes Mellitus: Diabetes – Types, aetiology, symptoms, diagnosis, glycemic index, complications and dietary management.

Liver Disease: Jaundice, viral hepatitis, cirrhosis, hepatic coma and cholelithiasis – causes, symptoms and dietary management. (16 Hours)

UNIT IV

Cardiovascular Diseases: Atherosclerosis, coronary heart disease, congestive cardiac failure, hypercholesterolemia and hypertension- causes, symptoms and dietary management.

Kidney Diseases: Nephritis, nephrotic syndrome, acute and chronic renal failure and urolithiasis - causes, symptoms and dietary management. (16 Hours)

UNIT V

Cancer, Burns and Trauma

Cancer - types, symptoms and dietary management.

Burns - types, symptoms and dietary management.

Trauma - causes and dietary management.

Nutrition for critically ill patients.

(14 Hours)

TEXTBOOK

Srilakshmi, B. (2019). *Dietetics*, 8th Edition, New Delhi: New Age International Pvt., Ltd Publications,

REFERENCE BOOKS

1. Antia, F.P and Abraham, P. (2002). *Clinical Dietetics and Nutrition*, 4th Edition, Delhi: Oxford University Press.
2. Lutz and Przytulski, (2004). *Nutrition and Diet Therapy*, Philadelphia: F.A. Davis Company.
3. Paul, S. (2005). *Textbook of Bio-Nutrition, Curing Diseases through Diet*, 1st Edition, India: CBS Publications.
4. Robinson, C.H. (1986). *Normal and Therapeutic Nutrition*, 17th Edition, U.S.A: Macmillan Publishing Co.

| Course Code 20UHSC41 | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|-------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | H | M | M | H | M | M | M | H | - | - |
| CO2 | H | M | M | H | M | M | M | H | - | - |
| CO3 | H | H | M | H | H | H | H | H | - | - |
| CO4 | H | M | M | H | H | H | H | H | - | L |
| CO5 | H | M | M | H | H | H | H | H | - | L |

Dr.D.Vijayarani
Head of the Department

Mrs.S.Balasaraswathi
Course Designer



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(2022 -2023 onwards)

| | | | |
|---------------------------------|---------------------|----------------|----------------|
| Semester IV | DIETETICS II | Hours/Week: 5 | |
| Core Course-6 | | Credits: 5 | |
| Course Code 20UHSC41N | | Internal 25 | External 75 |

COURSE OUTCOMES

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

- CO1: state the definition, concept and principles of diet therapy, dietitian and various diseases and disorders. [K1]
- CO2: explain the purpose, importance and types of diet therapy, qualities of a dietitian and explain the determination, diagnostic techniques and causes of various diseases and disorders. [K2]
- CO3: identify the mode of special feeding, role of dietitian, IDA, clinical manifestations and consequences of various diseased conditions. [K3]
- CO4: plan the menu for various diseased conditions based on the principles, nutritional requirements, dietary considerations and also focus on the diet counselling. [K4]
- CO5: recommend the diet for various diseased conditions. [K5]

UNIT I

Therapeutic Diets: Diet Therapy – definition, principles of a therapeutic diet, Nutrition screening of the person, routine hospital diets, special feeding methods, pre and post-operative diet.

Dietitian : Dietitian – classification, qualities and role of dietitian in managing hospital diet and diet counselling. Indian Dietetic Association (IDA).

Malnutrition and Febrile Condition

Obesity – types, aetiology, assessment of obesity, complications and dietary management.
Under weight – aetiology and dietary management. Febrile condition – typhoid, malaria, influenza, TB – aetiology, symptoms and dietary management. AIDS – causes, complications and dietary management. (15 Hours)

UNIT II

Gastrointestinal Diseases: Ulcer -types, aetiology, symptoms and dietary management.

Constipation, diarrhoea, dysentery and malabsorption syndrome – types, aetiology and dietary management. Food allergy - types, allergens, diagnosis and treatment. (15 Hours)

UNIT III

Diabetes Mellitus: Diabetes – Types, aetiology, symptoms, diagnosis, glycemic index, complications and dietary management.

Liver and Pancreas Diseases: Jaundice, viral hepatitis, cirrhosis, hepatic coma, cholelithiasis and pancreatitis – causes, symptoms and dietary management. (15 Hours)

UNIT IV

Cardiovascular Diseases: Atherosclerosis, coronary heart disease, congestive cardiac failure, hypercholesterolemia and hypertension- causes, symptoms and dietary management.

Kidney Diseases: Nephritis, nephrotic syndrome, acute and chronic renal failure and urolithiasis - causes, symptoms and dietary management. (15 Hours)

UNIT V

Cancer, Burns and Trauma

Cancer - types, symptoms and dietary management.

Burns - types, symptoms and dietary management.

Trauma - causes and dietary management. (15 Hours)

Nutrition for critically ill patients.

Special Diet – Ketogenic and paleo diet

TEXTBOOK

1.Srilakshmi, B. (2019). *Dietetics*, 8th Edition, New Delhi: New Age International Pvt., Ltd Publications,

REFERENCE BOOKS

1. Antia, F.P and Abraham, P. (2002). *Clinical Dietetics and Nutrition*, 4th Edition, Delhi: Oxford University Press.
2. Lutz and Przytulski, (2004). *Nutrition and Diet Therapy*, Philadelphia:F.A. Davis Company.
3. Paul,S. (2005). *Textbook of Bio-Nutrition, Curing Diseases through Diet*, 1st Edition, India: CBS Publications.
4. Robinson, C.H. (1986). *Normal and Therapeutic Nutrition*, 17th Edition, U.S.A: Macmillan Publishing Co.

| Course Code 20UHSC41N | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|--------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | H | M | M | H | M | M | M | H | - | - |
| CO2 | H | M | M | H | M | M | M | H | - | - |
| CO3 | H | H | M | H | H | H | H | H | - | - |
| CO4 | H | M | M | H | H | H | H | H | - | L |
| CO5 | H | M | M | H | H | H | H | H | - | L |

Dr.D.Vijayarani
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B.Sc. Home Science - Nutrition and Dietetics

(2020 -2021 onwards)

| | | | |
|---------------------------------|----------------------|----------------|----------------|
| Semester IV | DIETETICS LAB | Hours/Week: 2 | |
| Core Course Practical -II | | Credits: 2 | |
| Course Code 20UHSC41P | | Internal 40 | External 60 |

COURSE OUTCOMES

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

- CO1: apply the nutrition and diet principles, RDA recommended by ICMR and identify the foods to be included and excluded for normal and diseased persons. [K3]
- CO2: plan the suitable diet for normal and diseased persons. [K3]
- CO3: prepare the planned menu for normal and diseased persons. [K3]
- CO4: make use of ICMR recommended RDA value and compute the nutritional value for the planned menu of the normal and diseased persons and prepare the record. [K3]
- CO5: compare the recommended nutritive values and obtained nutritive values and comment its results. [K4]

PRACTICALS:

1. Planning and preparation of balanced diet for low income, middle income and high income family.
2. Planning and preparation of indigenous weaning mix.
3. Planning and preparation of a menu for
 - a) Pregnancy
 - b) Lactation
 - c) Pre schooler
 - d) School going child
 - e) Adolescence
 - f) Adulthood
 - g) Aged
 - h) Athletes
4. Healthy Snacks for all age group.
5. Planning and preparation of diet for

- a) Kwashiorkar
- b) Night blindness
- c) Anaemia

Practicals:

6. Planning and Preparation of

- a) Liquid diet
- b) Full fluid diet
- c) Soft diet and bland diet
- d) High, moderate and low calorie diet with modified fat and CHO levels
- e) High and restricted CHO diet
- f) Cholesterol restricted diet
- g) Low calcium diet
- h) High fibre diet
- i) Gluten free diet

7. Planning and Preparation of diet for

- a) Obesity and underweight
- b) Febrile conditions – typhoid, malaria and tuberculosis.
- c) GI diseases – peptic ulcer, diarrhoea and constipation
- d) Diabetes Mellitus
- e) Liver diseases – jaundice, cirrhosis and cholelithiasis
- f) CVD – atherosclerosis, hypertension and stroke.
- g) Kidney disorders – nephritis, nephrosis and urolithiasis (acid and alkali ash diet)
- h) Burns
- i) Cancer and AIDS

| Course Code 20UHSC41P | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|--------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | H | M | M | H | L | M | M | H | L | L |
| CO2 | H | H | M | H | H | H | H | H | H | M |
| CO3 | H | H | M | H | H | H | H | H | H | M |
| CO4 | H | H | M | H | H | H | H | H | H | M |
| CO5 | H | H | M | H | H | H | H | H | H | M |

Dr.D.Vijayarani
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Mrs.S.Balasaraswathi
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VIRUDHUNAGAR - 626 001

B.Sc. Home Science - Nutrition and Dietetics

(2020 -2021 onwards)

| | | | |
|--------------------------------|---|----------------|----------------|
| Semester IV | ALLIED BIOLOGY - FUNCTIONAL FOODS AND NUTRACEUTICALS | Hours/Week: 4 | |
| Allied Course - II | | Credits: 4 | |
| Course Code 20UBHA41 | | Internal 25 | External 75 |

COURSE OUTCOMES

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

CO1: recall the nutraceuticals and functional food. [K1]

CO2: compare the nutraceuticals present in the natural foods. [K2]

CO3: interpret the effect of functional food and nutraceuticals in health. [K3]

CO4: determine the functional foods and nutraceuticals of microbial origin. [K3]

CO5: conclude the concepts about the physical and chemical properties of the food constituents.

[K4]

UNIT I

Functional Foods and Nutraceuticals

Definition, classification of functional foods and nutraceuticals. Traditional foods, designer foods and pharma foods. Significance of nutraceuticals and functional foods.

(10 Hours)

UNIT II

Categorization of Nutraceuticals.

Classification of plants and animals based on functional food source. Plant sources - herbs (tea leaves, coriander leaves), spices (turmeric, pepper), vegetables (tomato, onion), and fruits (apple, banana) as functional foods. Animal sources - Fish, milk, meat and egg. (14 Hours)

UNIT III

Chemical composition of Functional Foods

Natural occurrence of certain phytochemicals- antioxidants and flavonoids, omega 3 and 6 fatty acids, glucosinates, phytoestrogens, organosulphur compounds, isoprenoid derivatives, phenolic substances, carotenoids and lycopene. Spirulina as bioactive compounds. (14 Hours)

UNIT IV

Functional Foods and Nutraceuticals of Microbial origin Advantages of Probiotics with examples - Lactobacillus and Bifidobacterium. Prebiotics - types, ingredients in foods, its effect in gut microbes and advantages. Symbiotics - gut microflora and its advantages. (10 Hours)

UNIT V**Functional Foods and Nutraceuticals in Health and Disease**

Dietary supplements, phytochemicals, phytosterols and importance of dietary fiber in human health. Role of nutraceuticals in health and management of obesity, diabetes mellitus, hypertension, UTI and cancer. Importance of vitamins and minerals in health and diseases.

(12 Hours)

REFERENCE BOOKS

1. Bakhru, H.K. (2010). *The Complete Handbook of Nature Cure*, 5th Edition. Mumbai: Jaico Publishing House.
2. Bamji, M.S. (2016). *Textbook of Human Nutrition*, 4th Edition. New Delhi: Oxford and IBH Publishing Co., Pvt. Ltd.
3. Srilakshmi, B. (2017). *Nutrition Science*, 7th Edition. New Delhi: New Age International Pvt. Ltd.
4. Srilakshmi, B. (2015). *Food Science*, 6th Edition. New Delhi: New Age International Pvt. Ltd.
5. Sunil, N.M. (2015). *Essentials of Nutrition*, 1st Edition. New Delhi: CBS Publishers and Distributors Pvt. Ltd.
6. Wildman, R.E.C. (2007). *Handbook of Nutraceuticals and Functional Foods*. 2nd Edition. London: CRC Press, Taylor and Francis, Boca Raton.

| Course Code 20UBHA41 | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 |
|-------------------------|-----|-----|-----|-----|-----|-----|-----|
| CO1 | H | H | H | H | H | - | - |
| CO2 | H | H | H | H | H | - | - |
| CO3 | H | H | H | H | H | - | - |
| CO4 | H | H | H | H | H | - | - |
| CO5 | H | H | H | H | H | - | - |

Dr.B.Karunai Selvi
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R.Sreebha
Course Designer



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| | | | |
|---------------------------------|---------------------------------|----------------|----------------|
| Semester IV | BIOCHEMICAL ANALYSIS LAB | Hours/Week: 2 | |
| Allied Course Practical | | Credits: 2 | |
| Course Code 20UBHA41P | | Internal 40 | External 60 |

COURSE OUTCOMES

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

CO1: apply the basic concepts learnt in food science for the experiment to estimate the amount of Dietary fibers present in dried leafy vegetables. [K3]

CO2: sketch the structure and interpret the functions of human organs. [K3]

CO3: identify the phytochemicals present in the functional foods. [K3]

CO4: calculate and interpret the amount of Dietary fibers and the phytochemicals present in the food sample. [K3]

CO5: analyze the importance and role of biochemical properties in human body. [K4]

PRACTICALS:

| | |
|--|-----------------|
| I. A. Estimate the amount of Dietary fibers present in the given samples. Write down the procedures. | 20 Marks |
| II. B. Qualitative analysis of the phytochemicals present in the given samples. Write down the procedures. | 10 Marks |
| III. Identify and comment on C, D, E, F and G. | 20 Marks |
| IV. Record Note Book Submission. | 10 Marks |
| TOTAL | 60 Marks |

KEY AND SCHEME OF VALUATION**PRACTICALS:**

| | | |
|-----|---|-----------------|
| I. | A. Amount of Dietary fiber present in the sample (Procedure - 10 Marks Experiment with result - 8+2 Marks) | 20 Marks |
| II | B. Qualitative analysis of phytochemicals (Procedure - 4 Marks Experiment with result - 4+2 Marks) | 10 Marks |
| II. | C, D and E –Structure and Functions of Human organs. (Identification – 1, Diagram – 1, Description – 2) F and G - Phytochemicals present in food sources (Identification – 1, Description - 3) | 20 Marks |
| IV. | Submission of Record note book. | 10 Marks |
| | TOTAL | 60 Marks |

PRACTICALS:

- I. Estimation of the amount of Dietary fibers present in the given samples –
 - Curry leaves
 - Drumstick leaves
 - Tea leaves.
- II. Qualitative analysis of phytochemicals –
 - Flavanoids
 - Fattyacids
 - Alkaloid
 - Carotenoids
 - Saponin.
- III. Determination of -
 - ABO Blood grouping,
 - Bleeding time
 - Clotting time.
- IV. Spotters -

Structure and functions of organs - Pancreas, Liver, Kidney, Heart, Lungs, Thyroid, Adrenal glands, Brain, Eye and Ear.

Identification of Phytochemicals present in functional food source – Apple, Banana, Tulasi, Pepper, Tomato, Onion and milk, egg.

| Course Code 20UBHA41P | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 |
|--------------------------|-----|-----|-----|-----|-----|-----|-----|
| CO1 | H | H | H | H | H | H | H |
| CO2 | H | H | H | H | H | H | H |
| CO3 | H | H | H | H | H | H | H |
| CO4 | H | H | H | H | H | H | H |
| CO5 | H | H | H | H | H | H | H |

Dr.B.Karunai Selvi
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Dr.R.Sreebha
Course Designer



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B.Sc. Home Science - Nutrition and Dietetics

(2020-2021 onwards)

| | | | |
|--------------------------------|------------------------|----------------|----------------|
| Semester IV | INTERIOR DESIGN | Hours/Week: 2 | |
| Skill Enhancement Course - 3 | | Credits: 2 | |
| Course Code 20UHSS41 | | Internal 40 | External 60 |

COURSE OUTCOMES

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

- CO1: describe the concept of design, elements and principles of design, colour, accessories, furniture, window treatment and flower arrangement in interior decoration. [K1]
- CO2: discuss the characteristics of design and elements, ways of creating designs, qualities of colour and general rules to be followed in window treatment, furniture and flower arrangement. [K2]
- CO3: describe the various types of design, colour, accessories, curtains and flower arrangements. [K2]
- CO4: identify the role of elements and principles of design, accessories, flower arrangements, furniture and colour in everyday life. [K3]
- CO5: plan the suitable elements and principles of design, colour, accessories, furniture and flower arrangement in interior decoration. [K4]

UNIT I

Importance of arts in everyday life. Design - meaning, Types of design – structural and decorative design and its characteristics. Elements of design. (6 Hours)

UNIT II

Principles of design- harmony, proportion, balance, emphasis and rhythm. (6 Hours)

UNIT III

Colour - qualities of colour, prang colour system, colour and emotions, advancing and receding colours, colour harmonies and applications of colour in the interior. (6 Hours)

UNIT IV

Accessories - meaning, classification and selection. Role of accessories in interior design - window treatments - types of curtains and draperies. (6 Hours)

UNIT V

Furniture –selection and general rules for furniture arrangement. Flower arrangements-principles, accessories, types and general rules for flower arrangement. (6 Hours)

TEXTBOOK

Varghese, M.A., Ogale, N. N. and Srinivasan, K. (2000). *Home Management*, New Delhi: New Age International (P) Limited, Publishers.

REFERENCE BOOKS

1. Faulkner, S. (1979). *A Practical Guide to Interior Design Planning a Home*, New York: Halt Rinehart and Winston.
2. Goldstein, V. (1958). *Art in Everyday Life*, U.S.A: Macmillan Company.
3. Morton, R. (1970). *The Home and its Furnishings*, New York: McGraw Hill Book Company, Inc.

| Course Code 20UHSS41 | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|-------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | H | H | M | H | L | - | - | H | - | - |
| CO2 | H | M | M | H | L | - | - | H | - | L |
| CO3 | H | H | M | H | - | - | - | H | - | - |
| CO4 | H | H | M | H | H | H | H | H | - | L |
| CO5 | H | H | M | H | H | H | H | H | - | M |

Dr.D.Vijayarani
Head of the Department

Dr.D.Vijayarani
Course Designer



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| | | |
|---------------------------------|--|-----------------|
| Semester IV | Internship / Field Project (2020 -21 onwards) | Hours/Week: 0 |
| PART IV | | Credit: 1 |
| Course Code 20UHSI41G | | Internal 100 |

COURSE OUTCOMES

On completion of the Internship/Field Project, students will be able to

- CO1: relate their theoretical insights with hands-on experience. [K3]
- CO2: develop technical skills to their respective field of study. [K3]
- CO3: demonstrate the attributes such as observational skills, team spirit and interpersonal skills built through site visits. [K3]
- CO4: exhibit the written communication skills acquired through internship/field project. [K3]
- CO5: analyze the observations and results and communicate their academic and technological knowledge appropriately oral means. [K4]

GENERAL INSTRUCTIONS:

- **Internship:** A designated activity that carries one credit involving not less than 15 days of working in an organization under the guidance of an identified mentor
- **Field Project:** Students comprising of maximum 5 members in a team need to undertake a project that involves conducting surveys inside/outside the college premises and collection of data from designated communities or natural places.
- Internal Assessment only.

| Course Code 20UHSI41G | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 |
|--------------------------|-----|-----|-----|-----|-----|-----|-----|
| CO1 | H | M | M | M | M | H | - |
| CO2 | H | M | M | M | M | H | |
| CO3 | H | M | - | - | - | H | |
| CO4 | H | H | M | M | - | M | H |
| CO5 | H | M | H | H | M | - | |

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B.Sc. Home Science - Nutrition and Dietetics

(2020 - 2021 onwards)

| | | | |
|--------------------------------|--------------------------|----------------|----------------|
| Semester V | FOOD MICROBIOLOGY | Hours/Week:4 | |
| Core Course - 7 | | Credits: 4 | |
| Course Code 20UHSC51 | | Internal 25 | External 75 |

COURSE OUTCOMES

On completion of the course, students will be able to

- CO1: describe the basic concept of microbiology, food spoilage, fermented foods, food-borne diseases and control of microbes. [K1]
- CO2: discuss the types of microbe, food spoilage, food - borne diseases, food fermentation and agents to preserve foods. [K2]
- CO3: identify the features of microbes, the factors responsible for food spoilage and fermentation technology and preventive measures to control food - borne disease outbreaks. [K3]
- CO4: examine the role of microbes in economic development, food fermentation, food spoilage, food - borne diseases and methods to control microbes in food handling units. [K4]
- CO5: interpret the microbes in food with spoilage, food-borne diseases and recommend suitable methods to prepare fermented foods and preserve various foods. [K5]

UNIT-I

Microbiology – definition, scope, classification of microorganisms -bacteria, fungi, virus, protozoa and algae – morphology, reproduction and economic importance. (12 Hours)

UNIT-II

Control of microbes - Sterilization – meaning, physical agents – dry and moist heat methods. Removal of microbes - filtration and sedimentation. Disinfection – meaning, property, classification, mode of action, preservatives and antibiotic. (12 Hours)

UNIT III

Food spoilage –definition, types, sources, causes, factors influencing, microbial spoilage of foods and their prevention - cereals and cereal products, vegetables and fruits, sea foods, meat, egg, poultry, canned foods, milk and milk products. (12 Hours)

UNIT-IV

Food - borne diseases –definition, classification, symptoms, mode and sources of transmission, food - borne disease outbreaks and methods of prevention. Food poisoning –

Staphylococcus, botulism, Bacillus cereus, perfringens and aflatoxicoasis.

Food infections – salmonellosis, typhoid, shigellosis, cholera, amoebic dysentery and hepatitis.

importance of sanitation and hygiene in food handling. (12 Hours)

UNIT- V

Fermentation – definition, advantages, disadvantages, types, steps, bioreactor design, factors affecting fermentation and significance. Fermented foods - meaning, importance and role of microbes in fermented foods - cereal products, milk products, soy products and alcoholic beverages. (12 Hours)

REFERENCES

1. Adams,M.R.(2018). *Food microbiology*, New Delhi: New age international private limited.
2. Dushyant Kumar Sharma. (2013). *Microbiology*, New Delhi: Narosapublishing house.
3. Frazier, W.C. and Westhoff, D.C.(2017). *Food microbiology*, 5th edition. New York: John wiley and sons, inc.
4. Joshua, A.K. (1998).*Microbiology*: 3rd Edition, Madras: Popular book depot.
5. Khetarpaul, N. and Sudesh Jood. (2003). *Food microbiology*, Udaipur: Agrotechpublishing academy.
6. Roday, S. (1999). *Hygiene and sanitation in food Industry*, New Delhi: Tata mcgraw hill publishing company Ltd.
7. Satyanarayana,U.(2019). *Biotechnology*, Kolkata: Books and allied ltd.

| Course Code 20UHSC51 | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|-------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | L | L | L | L | - | - | - | M | - | - |
| CO2 | L | L | L | L | - | - | M | M | - | L |
| CO3 | M | M | H | H | - | - | M | M | - | H |
| CO4 | H | H | H | H | H | M | M | H | - | H |
| CO5 | H | H | H | H | H | H | H | H | - | H |

Dr.D.Vijayarani
Head of the Department

Mrs.S.Balasaraswathi
Mrs.A.Jeevarathinam
Course Designers



V.V.VANNIAPERUMAL COLLEGE FOR WOMEN

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Re-accredited with 'A' Grade (3rd Cycle) by NAAC

VIRUDHUNAGAR - 626 001

B.Sc. Home Science - Nutrition and Dietetics

(2020 - 2021 onwards)

| | | | |
|-----------------|------------------------------|--------------|----------|
| Semester: V | TEXTILES AND CLOTHING | Hours/Week:4 | |
| Core Course – 8 | | Credits: 4 | |
| Course Code | | Internal | External |
| 20UHSC52 | | 25 | 75 |

COURSE OUTCOMES

On completion of the course, students will be able to

CO1: describe the concept and importance of textile fibres, fabric construction, finishes, dyeing, printing, pattern making, wardrobe planning and dry cleaning. [K1]

CO2: discuss the types of textile fibre, yarn and fabric construction, finishes, dyeing and printing, pattern making and laundry and also explain the manufacturing process of textile fibres and methods of dry cleaning and stain removal. [K2]

CO3: write the principles of design, garment construction, wardrobe planning, laundry and dry cleaning and uses of textile fibres, woven and non-woven fabric, dyeing, printing, traditional textiles, evaluation of finishes and wardrobe planning. [K3]

CO4: analyze the properties of textile fibres and yarn, qualities of fabric and merits and demerits of pattern making and factors to be considered in dry cleaning, selection of clothes for dyeing, printing, garment construction and different age group of people and selection of design in relation to figure types. [K4]

CO5: recommend the suitable cloth for different age group of people by understanding the processing, properties and uses of textile fibres, fabric production and cloth construction. [K5]

UNIT I

Textiles – definition and scope. Fibre – meaning, classification, general properties - primary and secondary properties and identification of textile fibres.

Textile Fibres - properties, manufacturing process, importance and end uses of the following fibres

1. Natural fibres – cotton, linen, wool and silk
2. Manmade fibres – rayon, polyester, nylon and acrylic (12 Hours)

UNIT II

Yarn - definition, importance, process and types - simple, complex and textured yarns. Spinning – hand spinning, mechanical spinning and chemical spinning. Yarn properties – thread count, yarn count, yarn numbering and yarn twist.

Fabric Construction - weaving - definition, applications and types- Basic -plain, twill and satin.

Decorative – dobby, pile, leno and jacquard – durability and appearance. Care and uses of woven fabric. Non-Woven -meaning and applications of knitting, braiding, lacing, felting and bonding. Care and uses of non-woven fabric. (12 Hours)

UNIT III

Finishing- definition, need, types- Basic finishes - boiling, bleaching, desizing, weighing, degumming, mercerizing, texturising and calendaring. Special finishes- shrinkage control, water repellency, wrinkle resistance, permanent press, water proof and water resistant – moth proof, mildew proof and chemical finishes - acid and alkali finishes. Evaluation of finishes.

Dyeing and Printing - classification of dyes and their suitability to different fibres and methods of dyeing. Printing – hand printing- stencil, block, tie and dye and batik. Machine Printing – process and types - roller, screen and stencil. Traditional textiles and embroideries in India. (12 Hours)

UNIT IV

Clothing - definition, scope and importance of clothing. Household linen – types, choice and selection. Furnishing – selection and use of curtains and draperies.

Selection of clothes for construction - qualities in fabric – thread count, slippage, off grain and on grain, shrinkage, textile labels and brand names. Factors influencing the choice of clothes – different age groups, sex, income, family size, occupation, customs and tradition, climate, fashion, occasion and suitability.

Principles of clothing construction - preparation and importance of fabric for clothing construction – knowledge of measuring points and taking body measurements for different types of garment. Pattern making – concept, principles, importance and methods – drafting, draping and paper pattern making- its types, merits and demerits – calculating the amount of materials required for different garments. (12 Hours)

UNIT V

Aesthetic in dress design – principles of design – harmony, balance, rhythm, proportion and emphasis, colour – use in relation to season, occasion, size and figure. Line and shape analysis and its uses. Fashion – sources, factors favouring and retarding. Figure analysis – selection of design in relation to figure types. Wardrobe planning – meaning, importance, uses, principles, clothing inventory and wardrobe planning for an adolescent girl. Care of clothing - laundry – principles, methods – cotton, silk, wool, rayon, nylon and uses. Dry cleaning – principles and methods. Stain removal – types and methods. (12 Hours)

REFERENCE BOOKS

1. Dantyagi, S. (1983). *Fundamentals of textiles and their care*, New Delhi: Orient longman limited.
2. Gowan, E.B. (2018). *Textiles and clothing*, Forgotten books publishers.
3. Gobi, E.P. and Vileusky, L.D. (1977). *Textiles for modern living*, Melbourne: Longman cheshire.
4. Joseph, M. (1972). *Introductory textile sciences*, New York: Holtrinehart and winston.
5. Majumdar. (2020). *Functional textiles and clothing*. Delhi: Indian institute of technology.
6. Nayak, R.(2019). *Sustainable technologies for fashion and textiles*, 1st edition, USA
7. Yadav, J.P.(2018). *Introduction to textiles and clothing*, 1st edition, USA: Cyber tech publications.

| Course Code 20UHSC52 | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|-------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | M | M | M | H | M | M | M | H | - | M |
| CO2 | M | M | M | H | M | M | M | H | - | M |
| CO3 | H | H | M | H | M | M | M | H | - | M |
| CO4 | H | H | H | H | H | H | H | H | - | H |
| CO5 | H | H | H | H | H | H | H | H | - | H |

Dr.D.Vijayarani

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Mrs. Ameena Beebi
Mrs.S.Mathangi
Course Designers



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VIRUDHUNAGAR - 626 001

B.Sc. Home Science - Nutrition and Dietetics

(2023 - 2024 onwards)

| | | | |
|---------------------------------|------------------------------|----------------|----------------|
| Semester: V | TEXTILES AND CLOTHING | Hours/Week:4 | |
| Core Course – 8 | | Credits: 4 | |
| Course Code 20UHSC52N | | Internal 25 | External 75 |

COURSE OUTCOMES

On completion of the course, students will be able to

- CO1: describe the concept and importance of textile fibres, fabric construction, finishes, dyeing, printing, pattern making, wardrobe planning and dry cleaning. [K1]
- CO2: discuss the types of textile fibre, yarn and fabric construction, finishes, dyeing and printing and colour fastness testing methods, pattern making and laundry and also explain the manufacturing process of textile fibres and methods of dry cleaning and stain removal. [K2]
- CO3: write the principles of design, garment construction, wardrobe planning, laundry and dry cleaning and uses of textile fibres, woven and non-woven fabric, dyeing, printing, colour fastness, traditional textiles, evaluation of finishes and wardrobe planning. [K3]
- CO4: analyze the properties of textile fibres and yarn, qualities of fabric and merits and demerits of pattern making and factors to be considered in dry cleaning, selection of clothes for dyeing, printing, garment construction and different age group of people and selection of design in relation to figure types. [K4]
- CO5: recommend the suitable cloth for different age group of people by understanding the processing, properties and uses of textile fibres, fabric production and cloth construction. [K5]

UNIT I

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Textile Fibres - properties, manufacturing process, importance and end uses of the following fibres

1. Natural fibres – cotton, linen, wool and silk
2. Manmade fibres – rayon, polyester, nylon and acrylic (12 Hours)

UNIT II

Yarn - definition, importance, process and types - simple, complex and textured yarns. Spinning – hand spinning, mechanical spinning and chemical spinning. Yarn properties – thread count, yarn count, yarn numbering and yarn twist. Fabric Construction - weaving - definition, applications and types- Basic - plain, twill and satin. Decorative – dobby, pile, leno and jacquard – durability and appearance. Care and uses of woven fabric. Non-Woven - meaning and applications of knitting, braiding, lacing, felting and bonding. Care and uses of non-woven fabric. (12 Hours)

UNIT III

Finishing- definition, need, types- Basic finishes - boiling, bleaching, desizing, weighing, degumming, mercerizing, texturising and calendaring. Special finishes- shrinkage control, water repellency, wrinkle resistance, permanent press, water proof and water resistant – moth proof, mildew proof and chemical finishes - acid and alkali finishes. Evaluation of finishes. Dyeing and Printing - classification of dyes and their suitability to different fibres and methods of dyeing. Printing – hand printing- stencil, block, tie and dye and batik. Machine printing – process and types - roller, screen and stencil. Quality control - Principles of colour fastness testing and testing methods – light, washing and perspiration. Traditional textiles and embroideries in India. (12 Hours)

UNIT IV

Clothing - definition, scope and importance of clothing. Household linen – types, choice and selection. Furnishing – selection and use of curtains and draperies. Selection of clothes for construction - qualities in fabric – thread count, slippage, off grain and on grain, shrinkage, textile labels and brand names. Factors influencing the choice of clothes – different age groups, sex, income, family size, occupation, customs and tradition, climate, fashion, occasion and suitability.

Principles of clothing construction - preparation and importance of fabric for clothing construction – knowledge of measuring points and taking body measurements for different types of garment. Pattern making – concept, principles, importance and methods – drafting, draping and paper pattern making- its types, merits and demerits – calculating the amount of materials required for different garments. (12 Hours)

UNIT V

Aesthetic in dress design – principles of design – harmony, balance, rhythm, proportion and emphasis, colour – use in relation to season, occasion, size and figure. Line and shape analysis and its uses. Fashion – sources, factors favouring and retarding. Figure analysis – selection of design in relation to figure types. Wardrobe planning – meaning, importance, uses, principles, clothing inventory and wardrobe planning for an adolescent girl. Care of clothing - laundry –

principles, methods – cotton, silk, wool, rayon, nylon and uses. Dry cleaning – principles and methods. Stain removal – types and methods. (12 Hours)

REFERENCE BOOKS

1. Dantyagi, S. (1983). *Fundamentals of textiles and their care*, New Delhi: Orient longman limited.
2. Gowan, E.B. (2018). *Textiles and clothing*, Forgotten books publishers.
3. Gobi, E.P. and Vileusky, L.D. (1977). *Textiles for modern living*, Melbourne: Longman cheshire.
4. Joseph, M. (1972). *Introductory textile sciences*, New York: Holtrinehart and winston.
5. Majumdar. (2020). *Functional textiles and clothing*, Delhi: Indian institute of technology.
6. Nayak, R. (2019). *Sustainable technologies for fashion and textiles*, 1st edition, USA
7. Yadav, J.P. (2018). *Introduction to textiles and clothing*, 1st edition, USA: Cyber tech publications.

| Course Code 20UHSC52N | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|--------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | M | M | M | H | M | M | M | H | - | M |
| CO2 | M | M | M | H | M | M | M | H | - | M |
| CO3 | H | H | M | H | M | M | M | H | - | M |
| CO4 | H | H | H | H | H | H | H | H | - | H |
| CO5 | H | H | H | H | H | H | H | H | - | H |

Dr.D.Vijayarani

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VIRUDHUNAGAR - 626 001

B.Sc. Home Science - Nutrition and Dietetics

(2020 - 2021 onwards)

| | | | |
|-----------------|--------------------------|--------------|----------|
| Semester V | HUMAN DEVELOPMENT | Hours/Week:4 | |
| Core Course - 9 | | Credits: 4 | |
| Course Code | | Internal | External |
| 20UHSC53 | | 25 | 75 |

COURSE OUTCOMES

On completion of the course, students will be able to

- CO1: state the concept of growth and development, children with special needs, preschool education and characteristics of various stages of life span.[K1]
- CO2: explain the areas of growth and development for various stages of life span, child birth, functioning of preschool, methods of child study, play, discipline, habits, behavioural problems, needs of children and children with special needs. [K2]
- CO3: identify the principles of growth and development, preschool programme and habits and find the changes that occur and care to be taken in various stages of lifespan. [K3]
- CO4: analyse the causes, treatment and preventive measures of problems in various stages of lifespan and children with special needs and examine the factors influencing growth and development. [K4]
- CO5: recommend the best method of rearing the child at various stages of lifespan to achieve positive human relationship. [K5]

UNIT I

Growth and development - definition, principles and factors affecting.Stages in life span – meaning, characteristics, and importance.Conception to Babyhood – Pregnancy-symptoms, discomforts and complications.Prenatal stage, factors affecting prenatal development, birth process, types of birth, antenatal and postnatal care.APGAR ScaleInfancy (0 – 2 weeks) – characteristics – size, physiological features, physical proportions, physiological functions, activities – mass, specific and sensory, emotions, adjustments and care of the new born.

Babyhood (2 weeks - 2 years) - characteristics, physical and motor, social, emotional and cognitive development and care during babyhood. (13 Hours)

UNIT II

Early childhood - characteristics, physical and motor, social, emotional and cognitive development. Preschool – meaning, objectives, importance, types. Preschool programme – principles, types, preschool setup, equipments and personnel. Methods of child study - observation, interview, questionnaire, case study, rating scale, projective techniques, experimental method, cross sectional and longitudinal method. Play - definition, types, theories and values. Communicable diseases – types and care. Accidents – causes, prevention and care.

(13 Hours)

UNIT III

Late childhood - characteristics, physical and motor, social, emotional and cognitive development. Needs of children –biological, psychosocial and egoistic. Habits - definition, advantages and principles of habit formation. Behavioural problems– meaning, types, causes and prevention - temper tantrum, thumb sucking, bed wetting, stealing, truancy and masturbation.

(11 Hours)

UNIT IV

Adolescence –characteristics, problems, physical and motor, social, emotional and cognitive development. Adulthood - characteristics, developmental tasks and factors influencing social participation, vocational satisfaction and adjustment to parenthood. Discipline- meaning, types. Juvenile delinquency - causes, treatment and prevention.

(11 Hours)

UNIT V

Old age - characteristics, problems, physical, physiological and psychological changes. Children with special needs - definition, classification, causes, prevention and care - physically handicapped, hearing impaired, visually impaired, speech impaired, mentally handicapped, gifted, emotionally and socially maladjusted children.

(12 Hours)

Field Visits

- Visit to preschools

REFERENCES:

1. Berk, L. E. (2017). *Child development*, 9th edition, India: Pearson education.
2. Devadas, R.P. and Jaya.N. (1991). *Textbook on child development*, India: Macmillan and co.
3. Gupta, S. et. al., (1990). *Text book of food and nutrition, child care and psychology*, New Delhi : Kalyani publishers.
4. Hurlock, B. (1980). *Developmental psychology*, NewDelhi: McGraw- Hill publishing company ltd.
5. Hurlock, B. (2007). *Child growth and development*, NewDelhi: McGraw- Hill publishing company ltd.

6. Hurlock, B. (2017). *Child development – Indian edition*, 6th edition, New Delhi: McGraw- Hill publishing company Ltd.
7. Keshan, S. (2000). *Child care*, 1st edition, Delhi: Pushtak mahal.
8. Suriakanthi, A. (1989) *Child development an introduction*, Tamilnadu: Kavitha publications.

| Course Code 20UHSC53 | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|-------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | H | H | M | H | L | L | M | H | - | L |
| CO2 | H | H | M | H | L | M | H | H | - | L |
| CO3 | H | H | M | H | M | M | H | H | - | L |
| CO4 | H | H | M | H | H | H | H | H | - | - |
| CO5 | H | H | M | H | H | H | H | H | - | L |

Dr.D.Vijayarani
Head of the Department

Dr.D.Vijayarani
Mrs.R.Subha
Course Designers



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VIRUDHUNAGAR - 626 001

B.Sc. Home Science - Nutrition and Dietetics

(2023 - 2024 onwards)

| | | | |
|---------------------------------|--------------------------|----------------|----------------|
| Semester V | HUMAN DEVELOPMENT | Hours/Week:4 | |
| Core Course - 9 | | Credits: 4 | |
| Course Code 20UHSC53N | | Internal 25 | External 75 |

COURSE OUTCOMES

On completion of the course, students will be able to

- CO1: state the concept of growth and development, children with special needs, preschool education and characteristics of various stages of life span. [K1]
- CO2: explain the areas of growth and development for various stages of life span, child birth, functioning of preschool, methods of child study, play, discipline, habits, behavioural problems, needs of children and children with special needs. [K2]
- CO3: identify the principles of growth and development, preschool programme and habits and find the changes that occur and care to be taken in various stages of lifespan. [K3]
- CO4: analyse the causes, treatment and preventive measures of problems in various stages of lifespan and children with special needs and examine the factors influencing growth and development.[K4]
- CO5: recommend the best method of rearing the child at various stages of lifespan to achieve positive human relationship. [K5]

UNIT I

Growth and development - definition, principles and factors affecting. Stages in life span – meaning, characteristics, and importance. Conception to Babyhood – Pregnancy - symptoms Prenatal stage, factors affecting prenatal development, birth process, types of birth, antenatal and postnatal care. APGAR Scale Infancy (0 – 2 weeks) – characteristics – size, physiological features, physical proportions, physiological functions, activities – mass, specific and sensory, emotions, adjustments and care of the new born. Babyhood (2 weeks - 2 years) - characteristics, physical and motor, social, emotional and cognitive development and care during babyhood. (12 Hours)

UNIT II

Early childhood - characteristics, physical and motor, social, emotional and cognitive development Preschool – meaning, objectives, importance, types. Preschool programme – principles, types, preschool setup, equipments and personnel. Methods of child study - observation, interview, questionnaire, case study, rating scale, projective techniques, experimental method, cross sectional and longitudinal method. Play - definition, types, theories and values. Accidents – causes, prevention and care. (12 Hours)

UNIT III

Late childhood - characteristics, physical and motor, social, emotional and cognitive development. Needs of children – biological, psychosocial and egoistic. Habits - definition, advantages and principles of habit formation. Behavioural problems– meaning, types, causes and prevention - temper tantrum, thumb sucking, bed wetting, stealing, truancy and masturbation.

(12 Hours)

UNIT IV

Adolescence – characteristics, problems, physical and motor, social, emotional and cognitive development. Adulthood - characteristics, developmental tasks and factors influencing social participation, vocational satisfaction and adjustment to parenthood. Discipline- meaning and types. Juvenile delinquency - causes, treatment and prevention.

(12 Hours)

UNIT V

Old age - characteristics, problems, physical, physiological and psychological changes. Children with special needs - definition, classification, causes, prevention and care - physically handicapped, hearing impaired, visually impaired, speech impaired, mentally handicapped, gifted, emotionally and socially maladjusted children.

(12 Hours)

Field Visits

- Visit to preschools

REFERENCES:

1. Berk, L. E. (2017). *Child development*, 9th edition, India: Pearson education.
2. Devadas, R.P. and Jaya.N. (1991). *Text book on child development*, India: Macmillan and co.
3. Gupta, S. et. al., (1990). *Text book of food and nutrition, child care and psychology*, New Delhi : Kalyani publishers.
4. Hurlock, B. (1980). *Developmental psychology*, New Delhi: McGraw- Hill publishing company ltd.
5. Hurlock, B. (2007). *Child growth and development*, New Delhi: McGraw- Hill publishing company ltd.
6. Hurlock, B. (2017). *Child development – Indian edition*, 6th edition, New Delhi: McGraw-Hill publishing company Ltd.
7. Keshan, S. (2000). *Child care*, 1st edition, Delhi: Pushtak mahal.
8. Suriakanthi, A. (1989) *Child development an introduction*, Tamilnadu: Kavitha publications.

| Course Code 20UHSC53N | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|--------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | H | H | M | H | L | L | M | H | - | L |
| CO2 | H | H | M | H | L | M | H | H | - | L |
| CO3 | H | H | M | H | M | M | H | H | - | L |
| CO4 | H | H | M | H | H | H | H | H | - | - |
| CO5 | H | H | M | H | H | H | H | H | - | L |

Dr.D.Vijayarani
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Course Designers



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VIRUDHUNAGAR - 626 001

B.Sc. Home Science - Nutrition and Dietetics

(2020 - 2021 onwards)

| | | | |
|--------------------------------|-------------------------|----------------|----------------|
| Semester V | BASIC STATISTICS | Hours/Week: 4 | |
| DSEC – 1 | | Credits: 4 | |
| Course Code 20UHSE51 | | Internal 25 | External 75 |

COURSE OUTCOMES

On completion of the course, students will be able to

CO1: define the basic concept of research, statistics, sampling and sampling methods, data representation, measures of central tendency, dispersion, correlation and regression. [K1]

CO2: explain the types of research, data, sampling, data representation, measures of central tendency, dispersion, correlation and regression. [K2]

CO3: identify the sources of data, frequency distribution, sampling techniques and manipulate the collected data using statistical techniques. [K3]

CO4: analyse the properties, advantages and disadvantages of methods involved in collection, sampling, summarization and analysis of data. [K4]

CO5: assess the various statistical techniques to manage research work in the field of health and sciences. [K5]

UNIT I

Research – meaning, importance, types and criteria of good research.

Statistics - meaning, importance and limitations. Data - definition, classification of data, collection of data - primary data and secondary data, sources, collection methods, advantages and disadvantages. Frequency distribution- definition, discrete and continuous frequency distribution – frequency graphs. (12 Hours)

UNIT II

Diagrammatic representation - advantages, limitations, types - one dimensional, two dimensional, three dimensional, pictogram and cartogram – rules for making diagram. Graphic representation - advantages, types - graphs of frequency distribution and graphs of time series. Tabulation - meaning, parts of tabulation, types of table, objectives and rules. (12 Hours)

UNIT III

Sampling- definition, procedure, advantages, limitations. Probability sampling – simple random sampling, restricted random sampling, stratified sampling. Non probability sampling – judgment sampling, quota sampling and convenience sampling. (12 Hours)

UNIT IV

Measures of central tendency – mean, median, mode. Measures of dispersion - range, interquartile range, quartile deviation, mean deviation, standard deviation and co-efficient of variation- meaning, formula, steps involved in calculation, advantages and disadvantages (12 Hours)

UNIT V

Correlation - meaning, significance, properties, types and methods of studying correlation- Scatter diagram method, Graphic method, Karl Pearson's coefficient, Rank correlation and Concurrent Deviation method- meaning, formula, steps involved in calculation, advantages and disadvantages. Regression - meaning, regression line, regression equation, significance, properties, calculation of regression equation, advantages and disadvantages. Difference between correlation and regression (12 Hours)

REFERENCES

1. Arumugam, N. (2010). *Biostatistics computer application bioinformatics instrumentation*, Nagercoil: Saras publication.
2. Gupta, S.P. (2005). *Statistical methods*, New Delhi: Sultan chand and sons.
3. Gurumani, N.(2005). *An introduction to biostatistics*, Chennai: MJP publishers.
4. Kothari, C.R. (2019). *Research methodology methods and techniques*, 4th edition, New Delhi: New age international publishers.
5. Krishnaswamy, O.R. (2014). *Methodology of research in social sciences*, Mumbai: Himalaya publishing house pvt ltd.
6. Kulkarni, A.P. (2020). *Biostatistics*, New Delhi: CBS publishers and distributors pvt ltd.
7. Manoharan, M. (2012). *Statistical methods*, 7th edition, Palani: Palani paramount publications.
8. Pillai, R.S.N. (2005). *Statistics*, New Delhi: Chand and company ltd.

| Course Code 20UHSE51 | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|-------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | M | M | L | M | M | M | - | M | - | - |
| CO2 | M | M | M | M | M | M | - | M | - | M |
| CO3 | M | M | H | H | H | M | - | M | - | M |
| CO4 | H | H | H | H | H | M | - | H | - | M |
| CO5 | H | H | H | H | H | M | - | H | - | H |

Dr.D.Vijayarani

Head of the Department

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Mrs.P.Ramalakshmi
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(2023 - 2024 onwards)

| | | | |
|---------------------------------|-------------------------|----------------|----------------|
| Semester V | BASIC STATISTICS | Hours/Week: 4 | |
| DSEC – 1 | | Credits: 4 | |
| Course Code 20UHSE51N | | Internal 25 | External 75 |

COURSE OUTCOMES

On completion of the course, students will be able to

- CO1: define the basic concept of research, statistics, sampling and sampling methods, data representation, measures of central tendency, dispersion, correlation and research report. [K1]
- CO2: explain the types of research, data, tools, sampling, data representation, measures of central tendency, dispersion and correlation. [K2]
- CO3: identify the sources of data, frequency distribution, sampling techniques and manipulate the collected data using statistical techniques. [K3]
- CO4: analyse the properties, advantages and disadvantages of methods involved in collection, sampling, summarization and analysis of data. [K4]
- CO5: assess the various statistical techniques to manage research work in the field of health and sciences. [K5]

UNIT I

Research – meaning, importance, Research types – Descriptive, Experimental, Evaluative, Analytical and Survey, Tools – Observation, Interview schedule, Questionnaire and Attitude scale, Characteristics of research tool – reliability and validity, practicability and objectivity and criteria of good research. Statistics - meaning, importance and limitations. Data - definition, classification of data, collection of data - primary data and secondary data, sources, collection methods, advantages and disadvantages. (12 Hours)

UNIT II

Sampling- definition, procedure, advantages, limitations. Probability sampling – simple random sampling, restricted random sampling, stratified sampling. Non probability sampling – judgment sampling, quota sampling and convenience sampling. (12 Hours)

UNIT III

Frequency distribution- definition, discrete and continuous frequency distribution – frequency graphs.

Diagrammatic representation - advantages, limitations, types - one dimensional, two dimensional, three dimensional, pictogram and cartogram – rules for making diagram. Graphic representation - advantages, types - graphs of frequency distribution and graphs of time series. Tabulation - meaning, parts of a table, types of table, objectives and rules. (12 Hours)

UNIT IV

Measures of central tendency – mean, median and mode - meaning, steps involved in calculation, advantages and disadvantages.

Measures of dispersion - range, standard deviation and co-efficient of variation- meaning, steps involved in calculation, advantages and disadvantages. (12 Hours)

UNIT V

Correlation - meaning, significance, properties, types and methods of studying correlation- Scatter diagram method, Graphic method, Karl Pearson's coefficient and Rank correlation.

Test of significance, T-test, Chi Square test – uses and limitations

Fundamentals of writing research report (12 Hours)

REFERENCES

1. Vijayalakshmi,G and Sivapragasam ,C.(2016).Research methods tips and techniques. Chennai: MJP Publishers.
2. Arumugam, N. (2010). *Biostatistics computer application bioinformatics instrumentation*, Nagercoil: Saras publication.
3. Gupta, S.P. (2005). *Statistical methods*, New Delhi: Sultan chand and sons.
4. Gurumani, N.(2005). *An introduction to biostatistics*, Chennai: MJP publishers.
5. Kothari, C.R. (2019). *Research methodology methods and techniques*, 4th edition, New Delhi: New age international publishers.
6. Krishnaswamy, O.R. (2014). *Methodology of research in social sciences*, Mumbai: Himalaya publishing house pvt ltd.
7. Kulkarni, A.P. (2020). *Biostatistics*, New Delhi: CBS publishers and distributors pvt ltd.
8. Manoharan, M. (2012).*Statistical methods*, 7th edition, Palani: Palani paramount publications.
9. Pillai, R.S.N. (2005). *Statistics*, New Delhi: Chand and company ltd.

| Course Code 20UHSE51N | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|--------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | M | M | L | M | M | M | - | M | - | - |
| CO2 | M | M | M | M | M | M | - | M | - | M |
| CO3 | M | M | H | H | H | M | - | M | - | M |
| CO4 | H | H | H | H | H | M | - | H | - | M |
| CO5 | H | H | H | H | H | M | - | H | - | H |

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Course Designers



V.V.VANNIAPERUMAL COLLEGE FOR WOMEN

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An Autonomous Institution Affiliated to Madurai Kamaraj University, Madurai
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VIRUDHUNAGAR - 626 001

B.Sc. Home Science – Nutrition and Dietetics

(2020 -2021 onwards)

| | | | |
|--------------------------------|--------------------------------------|----------------|----------------|
| Semester V | FASHION AND APPAREL MARKETING | Hours/Week: 4 | |
| DSEC – 1 | | Credits: 4 | |
| Course Code 20UCFE52 | | Internal 25 | External 75 |

COURSE OUTCOMES

On completion of the course, students will be able to

- CO1: describe the concept and importance of fashion marketing, advertising, consumer market and buyer behavior, marketing environment, standardization and grading in an apparel industry. [K1]
- CO2: explain the types and functions of marketing environment, marketing assembling fashion industry, fashion advertising, advertising agencies, standardization and grading in an apparel industry. [K2]
- CO3: find the techniques to be followed in fashion marketing, advertising agencies and the role of fashion designers, buyers, predictors, manufacturers, wholesalers, and retailers.[K3]
- CO4: examine the merits and demerits of fashion advertising and advertising agencies and analyze the usage of fashion marketing in an apparel industry. [K4]
- CO5: interpret the new trends involved in fashion marketing and advertising. [K5]

UNIT I

Fashion Marketing

Marketing – definition, classification. Fashion marketing- definition, types. Fashion market – size and structure. Analysis of consumer markets and buyer behavior. (11 Hours)

UNIT II

Marketing Environment

Introduction – micro marketing environment – designers, international sourcing, manufactures, marketing intermediaries, fashion predictors, consumers, competition within the fashion market, direct and indirect competition for fashion products and public. Macro marketing – political and legal, technological, demographics, social and cultural environments, green issues and economy. Trends in marketing environment. (13 Hours)

UNIT III**Marketing Functions**

Meaning and classification of marketing functions, functions of exchange, functions of physical supply. Marketing assembling-advantages of assembling, problems in assembling. Standardization – meaning. Stranded – meaning and types. Grading – meaning, need and types. Standardization and grading – differentiation and benefits. Packaging – meaning, growth, functions, materials and types. (12 Hours)

UNIT IV**Fashion Advertising**

Definition and methods of advertising. Advertising media used in apparel market – indoor advertising – types, merits and demerits. Outdoor advertising - types, merits and demerits. Direct advertising –types, merits and demerits. Promotional advertising – types, merits and demerits. (12 Hours)

UNIT V**Advertising Agency**

Advertising agency – selection of an advertising agency. Structure and functions of advertising agency – interest of advertising agency. Advertising budget- affordable method, percentage of sales methods. Advantages to manufactures, advantages to salesman, advantages to whole sellers and retailers, advantages of customers and advantages of community. Limitations of advertising – economic objection, social objection and ethical objection. Structure and functions of advertising department – advertising function, managerial function and general set-up of advertising department. (12 Hours)

TEXTBOOK

Easey, M. (2008). *Fashion marketing*, 3rd Edition. Singapore: John Wiley and Black Well Publisher.

REFERENCE BOOKS

1. Harriet Posner, (2015). *Marketing Fashion*, 2nd edition . United Kingdom: Laurence King Publishing.
2. Kotler, K., Kolter, B. & Keller, K. (2009). *Marketing management*, 13th Edition. India: Dorling Kindersley Publishing Inc.
3. Pillai, R.S.N., Bagavathi, & Kala, S. (2010). *Marketing management*, 1st Edition. New Delhi: S Chand and Company Limited.
4. Sodha, M. & Chatley, S. (2008). *Fashion marketing and merchandising*, New Delhi: Kalyani Publication.

| Course Code 20UCFE52 | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|-------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | H | H | M | M | L | - | - | - | M | M |
| CO2 | H | H | M | M | M | - | - | - | M | M |
| CO3 | H | H | M | M | M | - | - | - | H | M |
| CO4 | H | H | M | M | M | - | - | - | H | M |
| CO5 | H | H | M | M | L | - | - | - | M | M |

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VIRUDHUNAGAR - 626 001

B.Sc. Home Science - Nutrition and Dietetics

(2020 - 2021 onwards)

| | | | |
|--------------------------------|------------------------|----------------|----------------|
| Semester V | TEXTILE TESTING | Hours/Week: 4 | |
| SEC – 1 | | Credits: 4 | |
| Course Code 20UHSE53 | | Internal 25 | External 75 |

COURSE OUTCOMES

On completion of the course, students will be able to

CO1: state the concept and importance of testing the fibres, yarns, wet ability and fabric. [K1]

CO2: discuss the methods and machineries used in testing the fibres, yarns, wet ability, fabric and also the standards for textile testing. [K2]

CO3: find the changes that occur in textile processing. [K3]

CO4: assess the properties of fibres, yarns, dyed and finished fabrics. [K4]

CO5: predict the suitable method for physical testing of fibres, yarns and fabric. [K5]

Unit I

Textile testing – definition, objectives, significance. Samples - definition, types, selection of samples and sampling techniques - fibre, yarn and fabric. Textile testing types - testing of fibres length – importance and methods of measuring fibre length –hand stapling method, baer sorter and digital fibrograph, fibre fineness – importance and methods of measurement – gravimetric method for cotton and wool, microscopic and micronaire, fibre maturity – importance and estimation by swelling method, fibre strength measurement - importance and pressley tester method. (12 Hours)

Unit II

Evaluation of yarns – direct, indirect and metric systems, quadrant balance and beesley balance. Yarn twist - importance of twist, twist estimation- single yarn, untwist and twist method. Yarn diameter, yarn strength - single yarn strength tester and lea strength tester. Yarn evenness – types of irregularity and uster evenness tester. (12 Hours)

Unit III

Evaluation of woven fabrics- physical tests, tensile strength, length and width, IS method, fabric thickness, fabric weight, count, stiffness, drape, abrasion, pilling, crease recovery and air permeability. (12 Hours)

Unit IV

Evaluation of Knitted fabrics - bursting strength analysis, wales, coarse, GSM, drapability, thickness and colour fastness properties. Dimensional stability, absorbency tests, sinking, drop and capillary raise test. (12 Hours)

Unit V

Evaluation of wet ability – importance, sinking, wicking, drop, water repellency , color fastness – factors affecting, sunlight, artificial sunlight, wash, crocking and pressing. Various textile testing standards – ISO, BIS, BSI, AATCC, ASTM, ANSI. (12 Hours)

REFERENCES:

1. Amutha, K. (2016). *A practical guide to textile testing*. New york: CRC press.
2. Anandjiwala,R., Hunter, L., Kozlowski, R. and Zaikov, G.(2007). *Textiles for sustainable development*, New York : Nova science publications, Inc.
3. Dolez, P et.al., (2017). *Advanced characterization and testing of textiles*, United kingdom: Elsevier science.
4. Jewel, R. (2009). *Textile testing*, New Delhi: APH publishing corporation.
5. Jinlian H.U.(2008). *Fabric testing*, Cambridge England: Wood head publishing limited.
6. Lijing, W. (2016), *Performance testing of textiles, methods, technology and applications*, Wood head publishing, Elsevier ltd., USA.
7. Rastogi, M. (2009). *Fibres and yarn*, New Delhi: Sonali publications.
8. Saville, B.P. (2000). *Physical testing of textiles*. USA:Wood head publishing limited.
9. Sheraz, A., Rasheed Abher, R., Afzal, A. and Faheem, A. (2017), *Advanced textile testing techniques*, US: Taylor and Francis.
10. Venkatraman, P and Hayes, S. (2016). *Materials and technology for sportswear and performance apparel*, NW: CRC press.

| Course Code 20UHSE53 | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|-------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | L | M | L | M | - | - | - | L | - | - |
| CO2 | M | M | L | M | L | L | L | L | - | L |
| CO3 | M | H | L | H | H | H | H | H | - | - |
| CO4 | H | H | L | H | H | H | H | H | - | - |
| CO5 | H | H | L | H | H | H | H | H | - | - |

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Mrs. R.Subha

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VIRUDHUNAGAR - 626 001

B.Sc. Home Science - Nutrition and Dietetics

(2020 - 2021 onwards)

| | | |
|---------------------------------|----------------|----------------|
| Semester V | PROJECT | Hours/Week: 0 |
| Core Course - 10 | | Credits:1 |
| Course Code 20UHSC5PR | | Internal - 100 |

COURSE OUTCOMES

On completion of the course, students will be able to

CO1: find out the existing problems of the community.[K3]

CO2: plan the research design, write the methodology for the study and carry out it.[K3]

CO3: make use of the collected data to prepare the research report. [K3]

CO4: analyze the results and infer it. [K4]

CO5: defend the research findings which in turn helpful for human upliftment. [K5]

Candidate is expected to select a project in the field of Home Science and related fields.

The report on the completed project work shall be submitted to the department in the month of November during V semester. Two typed copies (one for candidates and one for Department) of the project report will be submitted to the COE through the Head of the department. Evaluation will be done internally. Minimum pages for project report should be 20 pages. The number of students for each project is two.

Project work and Report - 60 marks

Presentation and Viva-voce- 40 marks

| Course Code 20UHSC5PR | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|--------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | M | H | L | M | H | H | H | H | M | - |
| CO2 | H | H | H | H | H | H | H | H | H | L |
| CO3 | H | H | H | H | H | H | H | H | H | H |
| CO4 | H | H | H | H | H | H | H | H | H | H |
| CO5 | H | H | H | H | H | H | H | H | H | H |

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VIRUDHUNAGAR - 626 001

B.Sc. Home Science - Nutrition and Dietetics

(2020 - 2021 onwards)

| | | | |
|--------------------------------|-----------------------------------|----------------|----------------|
| Semester V | FAMILY RESOURCE MANAGEMENT | Hours/Week: 2 | |
| Skill Enhancement Course - 4 | | Credits: 2 | |
| Course Code 20UHSS51 | | Internal 40 | External 60 |

COURSE OUTCOMES

On completion of the course, students will be able to

- CO1: describe the concept and importance of management, motivating factors in management, decision, decision making, resources and resource management. [K1]
- CO2: discuss the types of motivating factors in management, decision, resource, efforts in energy management, fatigue, income, budget, saving and investment.[K2]
- CO3: explain the process of management, methods of handling money, process of decision making, time management and budget making. [K2]
- CO4: write the principles of home management, body mechanism in energy management, resources, decision making and investment, theories of needs and Mundel's classes of change, Engel's law of consumption and techniques involved in work simplification. [K3]
- CO5: analyse the characteristics of home management, motivating factors in management, resource management, income and factors influencing the resources, time and standard of living. [K4]

UNIT I

Management – definition, importance and process of management- planning, controlling and evaluation. Home management-definition, concept, characteristics and principles. Motivating factors in management - Values, goals and standards – concept, importance, characteristics and types. Interrelationship of values, goals and standards. Maslow's Theory of Hierarchical Needs.

(6 Hours)

UNIT II

Decision – meaning and classification. Decision making- meaning, characteristics, importance, principles and steps in decision making process.

Resources-meaning, importance, characteristics, classification - human and non-human resources, principles and factors affecting the use of the resources.

(6 Hours)

UNIT III

Time Management – concept, importance, factors influencing on time use, time plan and steps in making plan and tools in time management. Energy management - concept, importance, types of effort and principles of body mechanics in energy management. Work simplification - definition, importance, techniques, Mundel’s classes of changes. Fatigue – causes, types and ways to overcome fatigue. (6 Hours)

UNIT IV

Management of money - income - definition, characteristics, types, sources, supplementary income, methods of handling the family income. Family Budget – definition, objectives, principles, importance, types, steps in preparing budget, advantages and limitations, factors affecting budget and Engel’s law of consumption. Account Keeping – meaning, importance, classification of records – household accounts, ledger, balance sheet, guidelines for account keeping and criteria for selecting suitable method of accounting. (6 Hours)

UNIT V

Savings- definition, importance and advantages. Types – compulsory savings - provident fund, pension fund, gratuity. Voluntary savings – post office, bank, insurance and methods of raising and investing money and factors determining saving. Investment - meaning, types – bonds, shares and stocks and principles involved in investment. (6 Hours)

REFERENCE BOOKS

1. Deacon, R.E. and Firebaugh, F.M. (1975). *Home management context and concept*, Boston: Houghton, miffen company.
2. Gross, I.H., Crandall, E.W., and Knoll, M.M. (1980). *Management for modern families*, New Jersey: prentice hall.
3. Moore, J.T. (2017) *Family resource management*, 3rd edition New Delhi: SAGE publications India pvt
4. Nickell, P. and Dorsey, J.M. (1978). *Management in family living*, New Delhi: John Wiley and sons.
5. Varghese, M.A. (2011). *Home management*, New Delhi: New age International private ltd.

| Course Code 20UHSS51 | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|-------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | H | H | M | H | M | L | M | H | - | L |
| CO2 | H | H | M | H | L | M | H | H | - | L |
| CO3 | H | H | M | H | L | M | H | H | - | L |
| CO4 | H | H | M | H | M | M | H | H | - | L |
| CO5 | H | H | M | H | H | H | H | H | - | - |

Dr.D.Vijayarani

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Mrs. S.Mathangi
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VIRUDHUNAGAR - 626 001

B.Sc. Home Science - Nutrition and Dietetics

(2020 - 2021 onwards)

| | | | |
|---------------------------------|---|--------------------------|----------------|
| Semester V | FOOD PRESERVATION AND BAKERY PRACTICAL | Hours/Week:2 T-1, P-1 | |
| Skill Enhancement Course - 5 | | Credits: 2 | |
| Course Code 20UHSS52P | | Internal 40 | External 60 |

COURSE OUTCOMES

On completion of the course, students will be able to

- CO1: write the aim and suitable ingredients required for preparing fruits, vegetables and bakery products. [K3]
- CO2: write the procedure for making fruits, vegetables and bakery products. [K3]
- CO3: prepare the fruits, vegetables and bakery products. [K3]
- CO4: calculate the cost of the prepared items. [K3]
- CO5: analyse and comment the quality parameters of the prepared items. [K4]

UNIT I

Food preservation – definition, objectives, importance and principles.

Preservation by using sugar- preparation, problems encountered and FPO specification - jam, jelly, marmalade, preserves, candies, glazed and crystallized fruits.

PRACTICALS

1. Preparation of jam, jellies and marmalade.
2. Preparation of preserves and candies.

UNIT II

Preservation by using chemicals and salt - principle, preparation and problems encountered – juice and pickles.

PRACTICALS

3. Preparation of sauce, ketchup and chutneys.
4. Preparation of synthetic syrups and squashes.
5. Preparation of pickles, dried vegetables and vadams.

UNIT III

Bakery – definition and principles. Ingredients – role and types - essential and optional.
Cookies- ingredients, principles, types, preparation, methods, faults and their causes.

PRACTICALS

6. Preparation of cookies – short bread, melting moments, sweet and salt biscuits.

UNIT IV

Cake - ingredients, principles involved while preparing cake, methods, characteristics of cake, cake faults and their causes. Icing- types and importance.

PRACTICALS

7. Preparation of cakes - plain cake, sponge cake, christmas cake and plum cake.

Icings - butter cream and royal icing

UNIT V

Bread making –principle, methods, steps, characteristics of bread, bread faults and their causes. Preparation of pizza and burger Pastries- principle, ingredients, types, methods of preparing pastries, faults and their causes in each pastry.

PRACTICALS

1. Preparation of pastries –puffs, danish pastry, jam tarts, burger and pizza

REFERENCE BOOKS

1. Ashokkumar, Y. (2012). *Theory of bakery and confectionery*, 2nd edition, TamilNadu: Visiga publication.
2. John. K J. (2019). *A professional text to bakery and confectionary*, New Delhi: New age international publication.
3. Lal, G. (2009). *Preservation of fruits and vegetables*, New Delhi: Indian council of agricultural research publisher.
4. Norman. M.T. (2004). *Principles of fruit preservation*, 3rd revised edition, India: Biotech books publisher.
5. Srivastava, R.P, and Kumar, S. (2019). *Fruits and vegetable preservation*, 3rd edition, Lucknow: International book distributing co.
6. Sudheer, K. P. and Indira, V. (2007). *Postharvest technology of horticultural crops*, Delhi: New India publishing.
7. Vennila, P. (2003). *Principles on preservation of fruits and vegetables*, Tamilnadu: Ratna publications.
8. Verma, L. R and Joshi, V. K. (2000). *Postharvest technology of fruits and vegetables*, Delhi: Indus publishing house.

| Course Code 20UHSS52P | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|--------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | H | H | L | L | L | M | L | H | L | H |
| CO2 | H | H | L | L | H | H | M | H | L | H |
| CO3 | H | H | M | M | H | H | M | H | M | H |
| CO4 | H | H | L | L | H | H | M | H | L | H |
| CO5 | H | H | L | L | H | H | M | H | L | H |

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B.Sc. Home Science - Nutrition and Dietetics

(2020 - 2021 onwards)

| | | |
|--------------------------------|----------------------------|-----------------|
| Semester V | COMMUNITY NUTRITION | Hours/Week: 0 |
| Extra Credit Course | | Credits: 2 |
| Course Code 20UHSO51 | | Internal 100 |

COURSE OUTCOMES

On completion of the course, students will be able to

- state the concept of community nutrition, malnutrition, healthcare, nutrition monitoring, nutrition education, food and nutrition security.
- identify the causative factors and consequences of the nutrition and health problems in the community.
- describe the methods to assess the nutritional status and intervention programmes to combat nutritional problems of the community.
- illustrate the frame work for health care system, food security, nutrition security, nutrition surveillance system and nutrition education.
- analyse the role of food security, nutritional assessment, nutrition education and public nutritionists in prevention of nutritional problems.

Unit I

Community nutrition-definition, factors influencing community nutrition and health.

Health Care - concept, levels and primary health care.

Health care delivery system – definition, meaning, principles. Health system in India - central, state, district, block and village levels.

Role of public nutritionists in health care delivery

Unit II

Malnutrition- meaning, definition, types, risk, aetiology, prevalence of malnutrition, poverty -malnutrition interaction, consequences, impact of malnutrition on national development, indicators of malnutrition and prevention of malnutrition.

Unit III

Food Security-definition, meaning, dimensions, determinants of food security, framework for assessment of food security, food security system in India.

Nutrition security - definition, meaning, inputs, factors underlying the current status of food and nutrition security - Global perspective and Indian perspective, principles of ensuring food and nutrition security.

Unit IV

Nutrition monitoring and surveillance - objectives, components, nutrition monitoring and surveillance system in India.

Nutritional assessment methods – objectives, types - anthropometric measurement, clinical method, biochemical analysis and diet survey.

Unit V

Nutrition education – definition, importance, components, steps and methods – individual, group and mass.

REFERENCE BOOK

1. Boyle, M.A. (2016). *Community nutrition in action: An entrepreneurial approach*, 7th edition, USA: Brooks cole publishers.
2. Das, S. (2020). *Text book of community nutrition*, Kolkata: Academic publishers.
3. Edelstein, S, (2010). *Nutrition in public health: A handbook for developing programmes and services*, 3rd edition, USA: Jones and bartlett publishers.
4. Park, A.(2015). *Textbook of preventive and social medicine*, 23rd edition, India: Bhanot publishers.
5. Srilakshmi, B.(2016). *Human nutrition*, Delhi: New age international pvt ltd.



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B.Sc. Home Science - Nutrition and Dietetics

(2020 - 2021 onwards)

| | | | |
|--------------------------------|---------------------------------|----------------|----------------|
| Semester VI | NUTRITIONAL BIOCHEMISTRY | Hours/Week: 5 | |
| Core Course -11 | | Credits: 4 | |
| Course Code 20UHSC61 | | Internal 25 | External 75 |

COURSE OUTCOMES

On completion of the course, students will be able to

CO1: outline the basic concept and biological importance of buffer systems, water, enzymes and biomolecules in human being. [K1]

CO2: describe the types, structure and properties of biomolecules present in human body. [K2]

CO3: identify the various biochemical mechanisms and metabolic pathway occurs in human body. [K3]

CO4: analyse the causes and clinical manifestations of dehydration and metabolic disorders of human body. [K4]

CO5: assess the interrelationships between biomolecules within the human body to maintain the sustainable health. [K5]

Unit I

Water - functions, water balance, dehydration and rehydration. pH – introduction, biological importance- pH measurement and pH regulation. Buffer- acid base balance, bicarbonate, phosphate and haemoglobinbuffer systems. Enzymes - types, mechanism of enzyme action, factors affecting enzyme activity and applications of enzymes. (15 Hours)

Unit II

Carbohydrates – structure, types, properties and biological importance. Metabolism – glycolysis, citric acid cycle, glycogenesis, glycogenolysis, HMP shunt and gluconeogenesis.

Metabolic disorders- glycosuria, galactosemia and glycogen storage diseases. (15 Hours)

Unit III

Amino acids and Proteins - structure, types, properties and biological importance.

Reactions of amino acids- transamination, deamination, decarboxylation, transmethylation and urea cycle. Metabolic disorders - alkaptonuria, phenylketonuria, tyrosinemias and albinism.

(15 Hours)

Unit IV

Fatty acids and Lipids - structure, types, properties and biological importance. Metabolism -beta oxidation of fatty acids, ketogenesis, ketolysis, biosynthesis and catabolism of cholesterol.

Metabolic disorders - Ketosis, Gauchers' disease, Niemann pick disease and Taysach's diseases. (15 Hours)

Unit V

Nucleic acids - types, structure and biological importance. Difference between DNA and RNA. Metabolism -biosynthesis and catabolism of purine and pyrimidine nucleotides. Metabolic disorders- Gout, xanthanuria and lesch-nyhan syndrome. (15 Hours)

TEXT BOOK

Arumugam, N. (2014). *Biochemistry*, 5th edition, Nagercoil: Saras publications.

REFERENCE BOOKS

1. Chatterjea, M.N. (2012). *Textbook of medical biochemistry*, 8th edition, New Delhi: Jaypee brothers medical publishers.
2. Denise R. Ferrier. (2020). *Lippincott illustrated reviews biochemistry*, South asian edition, New Delhi: wolters kluwer India pvt ltd.
3. Nagini, S. (2007). *Textbook of biochemistry*, 2nd edition, Chennai: Scitech publications.
4. Sathyanarayana, U. (2020). *Biochemistry*, 5th edition, Netherland: Elsevier.
5. Sharma, D.C. (2017). *Nutritional biochemistry*, New Delhi: CBS publishers and distributors.
6. Singh, S.P. (2006). *Principles of biochemistry*, New Delhi: CBS publishers.

| Course Code 20UHSC61 | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|-------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | H | L | - | L | L | M | M | L | - | L |
| CO2 | H | L | - | L | H | H | M | M | - | M |
| CO3 | H | L | - | L | H | H | M | M | - | M |
| CO4 | H | L | - | L | H | H | H | H | - | H |
| CO5 | H | L | - | L | H | H | H | H | - | H |

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Mrs.P.Ramalakshmi
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VIRUDHUNAGAR - 626 001

B.Sc. Home Science - Nutrition and Dietetics

(2020 - 2021 onwards)

| | | | |
|--------------------------------|-------------------------------|----------------|----------------|
| Semester VI | INTERNSHIP - DIETETICS | Hours/Week:5 | |
| Core Course - 12 | | Credits: 4 | |
| Course Code 20UHSC62 | | Internal 50 | External 50 |

COURSE OUTCOMES

On completion of the course, students will be able to

- CO1: identify the procedure followed in the dietary department of the hospital, nutritional assessment techniques and clinical manifestations of the patients.[K3]
- CO2: plan and prepare the routine hospital and special feeding diet for the diseased persons based on the diet principles and RDA recommended by ICMR.[K3]
- CO3: make use of ICMR recommended RDA value and compute the nutritional value for the planned menu of the diseased persons.[K3]
- CO4: analyze the nutritive values for the planned menu and infer the result and prepare the record. [K4]
- CO5: recommend the suitable therapeutic diet for the patients to improve the health status. [K5]

CONTENT

1. Observation and study of organization and management of the dietary department.
2. Understanding the medical history of the patients, study of case sheets and diagnostic tests used.
3. Planning therapeutic diets and computation of nutritive value.
4. Observation and study of
 - a. Purchase storage and issue
 - b. Production
 - c. Service
 - d. Evaluation and follow up
5. Participation in diet counselling units, experience in imparting diet counselling and understanding therecords maintained in diet counseling units.
6. Develop practical experience in the management of the dietary department and patient counseling for a period of one month.

| Course Code 20UHSC62 | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|-------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | H | H | H | H | H | H | H | H | H | H |
| CO2 | H | H | M | H | H | H | H | H | H | H |
| CO3 | H | H | H | H | H | H | H | H | H | H |
| CO4 | H | H | H | H | H | H | H | H | H | H |
| CO5 | H | H | H | H | H | H | H | H | H | H |

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| | | | |
|--------------------------------|----------------------------|----------------|----------------|
| Semester VI | EXTENSION EDUCATION | Hours/Week:5 | |
| Core course - 13 | | Credits: 4 | |
| Course Code 20UHSC63 | | Internal 25 | External 75 |

COURSE OUTCOMES

On completion of the course, students will be able to

- CO1: state the definition, concept, scope, objectives, need and importance of extension education, communication, extension teaching methods, extension teaching aids, programme planning and poverty alleviation programmes and also the qualities of the extension workers. [K1]
- CO2: discuss the types of education, communication, teaching methods, audio visual aids, three tier system of panchayat raj, poverty alleviation programmes and evaluation techniques. [K2]
- CO3: write the principles and philosophy of extension education and programme planning, role and functions of extension workers, communication, extension methods, audio visual aids, panchayat raj system and poverty alleviation programmes.[K3]
- CO4: analyze the techniques of teaching methods and models of communication, steps in preparation of audio visual aids, programme planning process, activities of poverty alleviation programmes, barriers in communication, criteria for programme planning and the selection of audio visual aids. [K4]
- CO5: choose the suitable extension methods, audio visual aids to overcome the community problems. [K5]

UNIT I

Education - Formal, informal and non-formal education – meaning and their differences.

Extension education - meaning, types, objectives, principles and philosophy. Extension worker – definition, qualities and role. Communication – definition, objectives, types, elements, models – Aristotle's model, Shammon - Weaver model and Berlo model and barriers. (15 Hours)

UNIT II

Extension teaching methods- individual methods - farm and home visit, farmer's call and personal letters. Group methods - result demonstration, method demonstration, group meetings and study tour. Mass methods and media - farm publications, mass meetings, exhibition,

campaign, newspaper, radio, T.V and puppet show. Basic understanding of new communication technology. (15 Hours)

UNIT III

Audio – Visual Aids - Definition, classification, criteria for selection and evaluation of audio-visual aids and PPT with animation. Audio aids - Tape records, public address system, F.M.Radio Visual Aids - Projected - slides, filmstrip, overhead projector and LCD. Non-projected - Chalkboard, Bulletin board, flannel graph, flash card, poster, diagram, map, chart, graph, specimen and models. (15 Hours)

UNIT IV

Programme planning - meaning, importance, principles, criteria for good programme planning and steps in programme development process. Democratic decentralization - meaning and definition. Panchayat Raj - meaning, three tier system of Panchayat Raj and its functions, 73rd Amendment. (15 Hours)

UNIT V

History of earlier poverty alleviation programme-Rural livelihood – NRLM, Rural housing – PMAYG, Rural connectivity – PMGSY, Rural employment – MGNREGA, Rural skills- DDUGKY and National Social Assistance Scheme – Self Help Group. (15 Hours)

TEXT BOOKS

1. Dahama,O.P. and Bhatnagar,O.P. (1985). *Education and communication for development*, New Delhi: Oxford and IBH publishing co pvt ltd.
2. Reddy, A. A.(1971). *Extension education*, Andhra Pradesh: Sri Lakshmi press.

REFERENCE BOOKS

1. Crouch, R. (1981). *Extension education and rural development*, New York:John wiley and sons ltd.
2. Rathore, O.S. *et al.*,(2001). *Handbook of extension education*, Udaipur:Agrotech publishing academy.
3. Supe, S.V. (2017). *An introduction to extension education*, 2nd edition, New Delhi: Oxford and IBH publishing company.
4. Swaminathan, M.S. (1987). *Integrated rural development*, New Delhi: Oxford publishing.

| Course Code 20UHSC63 | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|-------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | H | H | M | M | M | M | M | H | - | H |
| CO2 | H | H | M | M | H | H | M | H | - | H |
| CO3 | H | H | H | H | H | H | M | H | - | H |
| CO4 | H | H | M | L | H | H | M | H | - | H |
| CO5 | H | H | M | L | H | H | M | H | - | H |

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Mrs.S.Mathangi
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VIRUDHUNAGAR - 626 001

B.Sc. Home Science - Nutrition and Dietetics

(2020 - 2021 onwards)

| | | | |
|---------------------------------|--------------------------------|----------------|----------------|
| Semester VI | FOOD ANALYSIS PRACTICAL | Hours/Week:3 | |
| Core Course Practical - III | | Credits: 3 | |
| Course Code 20UHSC61P | | Internal 40 | External 60 |

COURSE OUTCOMES

On completion of the course, students will be able to

CO 1: identify the various equipment used in food analysis laboratory. [K3]

CO 2: write the aim, principle and procedure of the food analysis methods. [K3]

CO 3: determine the quality of food by using various food analytical techniques. [K3]

CO 4: calculate the amount of nutrients and microbial load present in the food sample and record it. [K3]

CO5: comment on the reagents, reactions and techniques involved in analyzing the food samples. [K4]

PRACTICALS

1. Personal protection and conduct in food analysis Laboratory.
2. Identification of equipments used in food analysis lab.
3. Sterilization Techniques.
4. Examination of yeasts, moulds, protozoa and bacteria under the microscope
5. Examination of shape and arrangement of bacteria using simple staining.
6. Differentiation of bacteria using Grams staining.
7. Preparation of media for cultivation of microorganisms – agar slant, agar stab and agar plate.
8. Methods of obtaining pure culture of microorganisms – pour plate, spread plate and streak plate.
9. Enumeration of microorganisms from food samples.
10. Determination of milk quality using resazurin and phosphatase test.
11. Determination of moisture content in food samples.
12. Qualitative analysis of carbohydrates – glucose, fructose, maltose, lactose and sucrose.
13. Qualitative analysis of protein
14. Estimation of reducing sugar by Benedict's method.
15. Estimation of protein by Lowry's method.
16. Estimation of ascorbic acid by titration method.

17. Determination of ash content in food samples.
18. Estimation of phosphorus by ANSA method.
19. Estimation of iron by Wong's method.
20. Visit to food processing industries.

| Course Code 20UHSC61P | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|--------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | L | H | L | H | H | M | M | M | - | L |
| CO2 | H | H | L | H | H | H | H | H | - | M |
| CO3 | H | H | L | H | H | H | H | H | - | M |
| CO4 | H | H | L | H | H | H | H | H | - | H |
| CO5 | H | H | L | H | H | H | H | H | - | H |

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VIRUDHUNAGAR - 626 001

B.Sc. Home Science - Nutrition and Dietetics

(2020 -2021 onwards)

| | | | |
|---------------------------------|--|----------------|----------------|
| Semester VI | TEXTILES AND CLOTHING PRACTICAL | Hours/Week: 3 | |
| Core Course Practical – IV | | Credits: 3 | |
| Course Code 20UHSC62P | | Internal 40 | External 60 |

COURSE OUTCOMES

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

- CO1: find the principles involved in removing the stains, identification of fibre and clothing construction.[K3]
- CO2: identify the procedure involved in sample stitches, embroidery and garment construction.[K3]
- CO3: make use of the basic drafting and stitching procedure for constructing the sample stitches, embroidery and garments. [K3]
- CO4: prepare the sample stitches and garments with novel ideas and prepare the record. [K3]
- CO5: analyse the factors influencing the construction of sample stitches and garments. [K4]

PRACTICALS

1. Simple test for fibre identification.
2. Care of fabric, stain removal – blood, grease, dye, oil, coffee, tea, nail polish, curry and ink.
3. Study the parts of a machine, care and maintenance.
4. Preparation of sample stitches for basic hand stitches - temporary stitches, permanent stitches
5. Preparation of sample stitches for seams - plain, single top, double top, french, flat fell, welt, lapped, piped and slots.
6. Preparation of sample stitches for seam finishes - herring bone, pinked, edge stitched and double stitched finish.
7. Preparation of sample stitches for fasteners -press button, shank button, hook and eye, shirt button with buttonhole.
8. Simple embroidery stitching – stem, chain, lazy daisy knot, bullion knot, satin, herring bone and blanket.
9. Drafting and construction of the following garments

- a. A line frock with puff sleeve and peter pan collar
- b. Saree petticoat
- c. Saree blouse
- d. Churidar
- e. Nighty

| Course Code 20UHSC62P | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|--------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | M | M | M | M | M | M | M | H | M | H |
| CO2 | M | M | M | M | M | M | M | H | M | H |
| CO3 | M | M | M | M | M | M | M | H | M | H |
| CO4 | H | H | H | H | H | H | H | H | H | H |
| CO5 | H | H | H | H | H | H | H | H | H | H |

Dr.D.Vijayarani

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Dr.D.Vijayarani

Mrs.S.Mathangi

Course Designers



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(2020 - 2021 onwards)

| | | | |
|---------------------------------|---------------------------------------|----------------|----------------|
| Semester VI | ART IN EVERYDAY LIFE PRACTICAL | Hours/Week:2 | |
| Core Course Practical - V | | Credits: 2 | |
| Course Code 20UHSC63P | | Internal 40 | External 60 |

COURSE OUTCOMES

On completion of the course, students will be able to

CO1: identify the materials required, principle and procedure involved in preparing art objects, visual aids and furnishing a room.[K3]

CO2: find the utility of the art objects and visual aids in an effective and attractive way.[K3]

CO3: prepare the art objects and visual aids needed for day today life and teaching.[K3]

CO4: utilize the prepared art objects and visual aids for interior decoration and teaching for preschool and extension activities respectively and prepare the record.[K3]

CO5: analyze the quality of the prepared items.[K4]

PRACTICALS:

1. Preparation of low cost play equipment for preschool children
2. Preparation of puppets - finger and glove puppet
3. Preparation of charts, posters, flip books, flash cards and news bulletin – community outreach activities for all age groups
4. Soft toy making
5. Preparation of accessories – bangles, anklets, earrings and rings
6. Preparation of greeting cards
7. Preparation of flower vases by using various materials
8. Flower arrangement
9. Readymade floor decoration
10. Preparation of wall hangings
11. Napkin folding
12. Preparation of mat
13. Cottage stay

| Course Code 20UHSC63P | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|--------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | M | M | L | L | L | L | M | H | - | L |
| CO2 | M | M | L | L | M | L | M | H | - | L |
| CO3 | H | H | M | H | M | L | H | H | - | L |
| CO4 | H | H | H | H | H | L | H | H | - | L |
| CO5 | H | H | H | H | H | L | H | H | - | L |

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Mrs.B.Ameenabeebi
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| | | | |
|--------------------------------|---------------------|----------------|----------------|
| Semester VI | CULINARY ART | Hours/Week: 5 | |
| DSEC – 2 | | Credits: 4 | |
| Course Code 20UHSE61 | | Internal 25 | External 75 |

COURSE OUTCOMES

On completion of the course, students will be able to

- CO1: state the concept and definition of culinary art, cooking, equipment, menu, food services, food preparations, table appointments, stocks, soups, sauces, custards, salads, garnishes, sections of kitchen, job description, attributes and etiquette of kitchen personal. [K1]
- CO2: discuss the types of cuisine, cookery, equipment, menu, food service, stock, soup, sauce, custard, salad, sections of kitchen, napkin folding, job description and attributes. [K2]
- CO3: discover the history of culinary services and write the criteria for selecting different tools and equipment, methods and importance of preparing stock, soup, sauce, custard, salad, napkin and duties, styles of food services and responsibilities of various chefs in kitchen. [K3]
- CO4: analyse the advantages and disadvantages of cookery, care and maintenance of equipment, table appointment, menu planning, standards for quality sauces, ingredients used in stocks, soups, sauce, custard, salad, job description of kitchen personnel and coordination of kitchen with other departments. [K4]
- CO5: predict the culinary art practices in different regions of India. [K5]

Unit I

Culinary art – definition – objectives-history of culinary services. Different cuisines - Indian regional cuisines and popular International cuisines- French, Italian and Chinese cuisines. Cooking aims and objectives of cooking- different cooking methods, basic food preparation techniques- advantages and disadvantages. (15 Hours)

Unit II

Equipment used in culinary services- equipment- heat generating equipment, cold generating equipment and other equipment - care and maintenance. Table service tools and equipment- criteria for selecting different tools. Table ware - flat ware, cutlery, hollow ware and glassware crockery. (15 Hours)

Unit III

Menu -types of menu, menu classification on the basis of price, menu classification on the basis of schedule, menu classification on the basis of meal time, french classical menu and menu planning styles of services- Buffet service, English service, Russian and French service. Table Appointments- table linen, table cloths, placemats, table runners, table napkins, functions of table napkins, choice of table linen, table layout, napkin folding, waiting at table and table manners.

(15 Hours)

Unit IV

Stocks-principles of stock making and types of stock. Soups-definition, classification – national/international soups and preparation of soups. Sauce - importance of sauces in food preparation, standards for quality sauces, classification, tips for making a good sauce, sauces used in different cuisines, additional seasoning and flavoring ingredients used in sauces. Custards-different types of sweet and savoury custards- baked custards - jelly and glaze preparation- brine, curing, marinades- seasoning and sandwiches. Salad and garnishes.

(15 Hours)

Unit V

Hierarchy of food service establishments -sections of kitchen -larder section, sauce section, roast section, vegetable section, soup section, Indian section and pastry section. Duties and responsibilities of various chefs in kitchen - job description -design, uses, job description of kitchen staff, executive chef, sous chef, pastry chef, kitchen executive, chef de partie, demi-chef de partie, commis and jobchef garde manger. Attributes, attitude and etiquettes of kitchen personal -physical attributes, work related attributes, attitude of kitchen staff, etiquette of kitchen staff and coordination of kitchen with other departments.

(15 Hours)

Field Visit

- Visit to hotels

REFERENCE BOOKS

1. Andrews, S. (2008). *Textbook of front office management and operations*, 3rd edition, New York: Delmar publication, a division of thomson learning Inc.
2. Arora, R.K. (2007), *Food service and catering management*, Kinton : APH publishing Co-
3. Hoffman, P. (2007). *Southern lady gracious tables -the perfect setting for any occasion.*, 1st edition, William morrow publishers.
4. James, A.B. (2010). *Hotel front office management*, USA: Wiley publication.
5. Jeremy, M.V. (2008). *International cuisine*, Cengage learning publishers. operation.
6. Thomas, J.A. (2008). *Professional management of housekeeping operation*, 5th edition.
7. Yadav, M.K. (2010). *Textbook of hotel front office*. Aman publication.

| Course Code 20UHSE61 | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|-------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | M | M | L | M | M | L | L | M | - | - |
| CO2 | M | M | L | M | M | L | L | M | - | L |
| CO3 | H | H | L | H | H | H | H | M | - | M |
| CO4 | H | H | L | H | H | H | H | H | L | M |
| CO5 | H | H | L | H | H | M | H | H | L | M |

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Course Designers



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B.Sc. Home Science – Nutrition and Dietetics
(2020-2021 onwards)

| | | | |
|--------------------------------|---|----------------|----------------|
| Semester VI | PRESPECTIVES OF TEXTILES AND FASHION | Hours/Week: 5 | |
| DSEC - 2 | | Credits: 4 | |
| Course Code 20UCFE62 | | Internal 25 | External 75 |

COURSE OUTCOMES

On completion of the course, students will be able to

- CO1: state the concept and importance of textile testing and technical textiles recall the history of fashion accessories and embroideries and list the characteristics of knitted fabrics. [K1]
- CO2: classify the types of knitting, textile testing, technical textiles, embroideries and fashion accessories and write the functions of textile testing and knitting. [K2]
- CO3: find out the applications of textile testing, technical textiles, embroidery threads and fashion accessories and find out the techniques involved in knitting process. [K3]
- CO4: analyze the changes occur in textile testing, factors to be considered in selection of fashion accessories, defects in stitches and differentiation in perspectives of textiles and fashion. [K4]
- CO5: interpret the new trends in the perspectives of textiles and fashion. [K5]

UNIT I

KNITTING

Knitting – types - jacquard knitting, weft knitting and warp knitting, – definition, types of machineries and mechanisms. Characteristics and defects of warp and weft knitted fabric. Difference between warp and weft knitting. (15 Hours)

UNIT II

TEXTILE TESTING

Textile testing– definition, purpose and general aspects. Types, functions and applications of yarn testing – lea strength tester. Fabric testing –tensile strength tester, bursting strength, thickness gauge, grams per square meter (GSM) cutter, abrasion resistance and crease recovery. Colour Fastness – crock meter, perspirometer, launder meter and light fastness tester. (16 Hours)

UNIT III

TECHNICAL TEXTILES

Technical textiles – definition, classification and types of fibers used in sports tech, oak tech, cloth tech and pack tech and their applications. (14 Hours)

UNIT IV

NEEDLE ART

Embroidery-Introduction, history, tools and general rules. Methods to transfer embroidery design and applications of threads. Types and methods of outline stitches – running and its variations, back and its variations, chain and its variations. Filling stitches – satin, herring bone, fishbone and long and short. Knotted stitches - double knot, bullion knot and french knot. Common defects in embroidery stitches. (15 Hours)

UNIT V

FASHION ACCESSORIES

Fashion accessories - history, styles selection and usage - hand bag, foot ware, hat, watches, eye wear and jewellery. Cosmetics and fragrances- categories and their applications. (15Hours)

TEXT BOOK

1. Elliot, B. Grover & Hamby, D.S. (2011). *Hand book of textile testing and quality control*, New Delhi: Wiley Pvt Ltd.

REFERENCE BOOKS

1. Bettybarden, (2003). *The embroidery stitch*, Kent: Search Press.
2. Dr Kin –fan au, (2011). *Advanced knitting technology*, New Delhi: Wood Head Publishing Ltd.
3. Dr Anbumani, N. (2007). *Knitting fundamentals, machines, structures, developments*, New Delhi: New age International Publishing.
4. Gopalarishnan, & Vinayagamurthi, P. (2019). *Technical textiles*, New Delhi: Daya Publishing.
5. Horrocks, A.R. & Anand, S.C. (2000). *Hand book of technical textiles*, England: The Textiles Institute, Wood Head Publishing Ltd.
6. Olivier gerval, (2009). *Fashion accessories*, Great Britain: A&C Black Publishing.

| Course Code 20UCFE62 | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|-------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | H | H | H | M | M | L | M | L | - | - |
| CO2 | H | H | H | M | M | L | M | L | - | - |
| CO3 | H | H | H | M | M | M | M | M | - | - |
| CO4 | H | H | H | M | L | M | M | M | - | - |
| CO5 | H | H | H | M | L | M | M | M | - | - |

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V.V.VANNIAPERUMAL COLLEGE FOR WOMEN

(Belonging to Virudhunagar Hindu Nadars)

An Autonomous Institution Affiliated to Madurai Kamaraj University, Madurai

Re-accredited with 'A' Grade (3rd Cycle) by NAAC

VIRUDHUNAGAR - 626 001

B.Sc. Home Science - Nutrition and Dietetics

(2020 -2021 onwards)

| | | | |
|-----------------|------------------------|--------------|----------|
| Semester VI | FOOD TOXICOLOGY | Hours/Week:5 | |
| DSEC – 2 | | Credits: 4 | |
| Course Code | | Internal | External |
| 20UHSE63 | | 25 | 75 |

COURSE OUTCOMES

On completion of the course, students will be able to

CO1: state the basic concept of toxicology and toxic constituents in foodstuffs. [K1]

CO2: explain the divisions of toxicology and types of toxin present in various foodstuffs. [K2]

CO3: identify the principle of toxicology, mode of action and occurrence of toxicants in foods. [K3]

CO4: analyse the toxicity level and effect of toxicants present in foods. [K4]

CO5: recommend the preventive measures to overcome the health problems to attain sustainable community health. [K5]

UNIT I

Toxicology – definition, scope and divisions. Toxicants – definition, sources and classification. Principles of toxicology - dose response, safety, absorption, translocation, storage and excretion. Effect of toxins –types, teratogens, carcinogens and mutagens – causes and mode of action. (15 Hours)

UNIT II

Natural toxins in animal foodstuffs - occurrence, toxicity and mode of action. Natural toxins in land animal foodstuffs -bile acids and vitamin A,transmissible spongiform encephalopathies (TSES) and prions. Toxins occurring in marine animals - scombroid poisoning, saxitoxin, tetramine, tetrodotoxin and ciguatoxin. (15 Hours)

UNIT III

Natural toxins in plant foodstuffs- occurrence, toxicity and mode of action. Natural goitrogens, cyanogenic glycosides, favism, lathyrism, lectins (hemagglutinins),pyrrolizidine alkaloids, enzyme inhibitors, vasoactive amines, protease inhibitors and trypsin inhibitors, mutagens in natural plants. (15 Hours)

UNIT IV

Toxicants formed during food processing - polycyclic aromatic hydrocarbons, benzol[a]pyrene, maillard reaction products, amino acid pyrolysates, n-nitrosamines –occurrence, toxicity and mode of action. (15 Hours)

UNIT V

Microbial toxins in foods –bacterial, fungal and viral toxins.Determination of toxicants in foods - decision-tree protocol proposed by U.S. food safety council, sample preparations, qualitative and quantitative analyses of toxicants in foods, toxicity testing. (15 Hours)

REFERENCES BOOKS

1. Helferich, W. and Winter, K. (2001). *Food toxicology*. New york: CRC press.
2. Manay, S.M. and Shadaksharaswamy, M. (2020). *Food facts and principles*, 4th edition, New Delhi: New age international ltd.
3. Sharma, P.D.(2008). *Toxicology*, Meerut: Rastogi publications.
4. Shibamoto, T. and Bjeldanes, L.B.(1993). *Introduction to food toxicology*, California: Academic press inc.
5. Sivasankar, B. (2002). *Food processing and preservation*, New Delhi: Prentice-hall of India private ltd.
6. Sri Lakshmi, B. (2018). *Food science*, 7th edition, New Delhi: New age international ltd.
7. Subramanian, M.A. (2004). *Toxicology principles and methods*, Chennai: MJP publishers.

| Course Code 20UHSE63 | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|-------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | L | L | L | M | - | - | - | M | - | - |
| CO2 | L | L | M | H | - | - | H | M | - | M |
| CO3 | M | M | H | H | - | - | M | M | - | M |
| CO4 | H | H | H | H | H | - | M | H | - | M |
| CO5 | H | H | H | H | H | H | H | H | - | M |

Dr.D.Vijayarani
Head of the Department

Mrs.S.Balasaraswathi
Mrs.T.Devi
Course Designers



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|--------------------------------|------------------------|----------------|----------------|
| Semester VI | FAMILY DYNAMICS | Hours/Week: 2 | |
| Skill Enhancement Course - 6 | | Credits: 2 | |
| Course Code 20UHSS61 | | Internal 40 | External 60 |

COURSE OUTCOMES

On completion of the course, students will be able to

- CO1: state the concept of family, marriage, crisis, stress, population education, sex education and counselling. [K1]
- CO2: explain the types of family, gender roles, marriage, marital adjustments, crisis, stress, family planning and counselling. [K2]
- CO3: discuss the functions of family and marriage, marriage ceremonies and laws of Hindu, Christian and Muslim, family problems, factors influencing marital adjustments, content of population education, methods of imparting sex education and counselling process. [K2]
- CO4: find the changes in the family, marriage, family crisis and the techniques involved in marital adjustments, coping strategies, population education, sex education and also counselling at various levels. [K3]
- CO5: analyze the causes for the contemporary issues in the family and develop the skills in handling real life situations. [K4]

Unit I

Family – definition, functions, characteristics and types - Joint family, Nuclear family – merits and demerits, causes for the disintegration of joint family system. Modern democratic family – characteristics, problems and changing trends in family. Gender Roles – traditional, egalitarian and changes in gender roles. Achieving harmonious interpersonal relationship in the family. Contemporary issues in families – maternal employment, single parenthood and influence of extra familial factors – films, T.V and social media. (6 Hours)

Unit II

Marriage – definition, functions, types, pre - preparation for marriage and alternative lifestyles. Areas of readiness for marriage – physiological readiness, psychological, intellectual, social, emotional and moral. Identifying the characteristics of readiness for marriage. Marriage rituals and ceremonies – Hindu, Christian and Muslim. Indian laws for Hindus, Muslims and Christian in relation to marriage – Hindu Marriage Act - 1955, Hindu Marriage Amendment Act -

1976, Muslim Personal Law (Shariat) Application Act – 1937, Indian Christian Marriage Act-1872, and Special Marriage Act, 1954. Marital adjustments – definition, areas, factors influencing, techniques of marital adjustments and factors contributing for a successful marriage.(7 Hours)

Unit III

Family crisis – meaning, characteristics, causes, effects, adjustment, types – prolonged illness, bereavement, divorce, desertion, alcoholism and separation. Family stress – meaning, types, causes, symptoms, coping strategies for chronically ill and families, effect and factors affecting family's response to stress. (6 Hours)

Unit IV

Population – definition, population growth, causes and effect of population explosion. Population education – definition, objectives, need and content of population education at various levels. Family planning – meaning, objectives, importance, methods – temporary, permanent-advantages and limitations. Sex education – concept, objectives, importance, methods of imparting sex education, role of the school and the community in sex education. (6 Hours)

Unit V

Counselling – meaning, process, skills, importance and types - pre-marital counselling – objectives, benefits, role and challenges, marital counselling – meaning, reasons, techniques and benefits and family counselling - meaning, importance, techniques and benefits. Role of family counselling centres. (5 Hours)

REFERENCE BOOKS

1. Ahuja, R. (1992). *Social problems in India*, New Delhi: Rawat publications
2. Devadas, R.P. and Jaya. N. (1991). *Textbook on child development*, India : Macmillan and co.
3. Hurlock, E.B.(1984). *Child growth and development*, 5thed. New Delhi: McGraw hill, Inc.
4. Sharma, R.N. (1982). *Indian social problems*, Bombay: Dia promoters and publishers.
5. Suriakanthi, A. (1991). *Child development an introduction*, Gandhigram, Tamilnadu: kavitha publications.
6. Turner and Helms. (1988). *Marriage and family – traditions and transitions*, U.S.A : Harcourt brace jovanovich publishers.

| Course Code 20UHSS61 | PO1 | | PO2 | | PO3 | PO4 | | PO5 | PO6 | PO7 |
|-------------------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| | PSO 1.a | PSO 1.b | PSO 2.a | PSO 2.b | PSO 3 | PSO 4.a | PSO 4.b | PSO 5 | PSO 6 | PSO 7 |
| CO1 | L | L | L | H | - | - | - | L | - | - |
| CO2 | M | M | M | H | - | - | - | M | - | L |
| CO3 | M | M | M | H | - | - | L | M | - | M |
| CO4 | H | H | H | H | H | - | L | H | - | M |
| CO5 | H | H | H | H | H | - | H | H | - | M |

Dr.D.Vijayarani

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