

ANNEXURE 18B12

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

**CHOICE BASED CREDIT SYSTEM
REGULATIONS AND SYLLABUS
(with effect from Academic Year 2018 - 2019)**

V.V. Vanniaperumal College for Women, Virudhunagar, established in 1962, offers 19 UG Programmes, 14 PG Programmes, 6 M.Phil. Programmes and 3 Ph.D. Programmes. All these programmes, except Ph.D. Programmes, have been framed as per the guidelines given by UGC under Choice Based Credit System (CBCS).

The Departments of Commerce, English and History 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.

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 Students' performance will be 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 and Tamil |
| Physical & Life Sciences | : | Mathematics, Zoology, Chemistry, Physics, Biochemistry, Home Science - Nutrition and Dietetics, Costume Design and Fashion, Microbiology, Biotechnology, Computer Science, Information Technology and Computer Applications. |
| Commerce & Management | : | Commerce, Commerce with Computer Applications, Commerce with Professional Accounting Business Administration. |

PG PROGRAMMES

Arts & Humanities	:	History, English, Tamil
Physical & Life Sciences	:	Mathematics, Physics, Biochemistry, Food Processing & Quality Control, Chemistry, Zoology, 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

1. Core Courses
2. Elective Courses
 - 2.1. Discipline Specific Elective Courses (DSEC)
 - 2.2. Dissertation / Project
3. Non Major Elective Courses (NMEC)
4. Generic Elective Courses (GEC)
5. Ability Enhancement Courses (AEC)
 - 5.1 Ability Enhancement Compulsory Courses (AECC)
 - 5.2. Skill Enhancement Courses (SEC)

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	
இக்காலநீதி 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 – I	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 –
Basic Nutrition and Dietetics	IV	Nutrition and Dietetics
Women and Health	III	Biochemistry
Life style 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
Interior Designing	IV	Fashion
Introduction to Computers and Office Automation	III	Computer Science
Introduction to Internet and HTML 5	IV	
Computer Fundamentals and E-mail	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	

List of Generic Elective Courses (GEC) Offered

GENERIC ELECTIVE COURSES – 1 (Any one)

1. Human Rights/
2. Women Studies

GENERIC ELECTIVE COURSES – 2 (Any one)

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

ABILITY ENHANCEMENT COMPULSORY COURSES (AECC)

1. Environmental Studies
2. Value Education

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

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

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 COURSE

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

MEDIUM OF INSTRUCTION

English

SUBJECTS OF STUDY

Part I-Tamil/Hindi

Part II-English

Part-III - Core Courses

Core Elective: Discipline Specific Electives and Project

Allied Courses: 1. Chemistry

2. Allied Biology

Part IV- Skill Enhancement Courses (SEC)

Non-Major Elective Courses (NMEC)

Generic Elective Courses (GEC)

Dissertation / Field Project/Internship

Ability Enhancement Compulsory Courses (AECC)

Part V -National Service Scheme, Physical Education, Youth Red Cross

Society, Red Ribbon Club, Science Forum, Eco Club, Library and

Information Science, Consumer Forum, Health and Fitness Club,

National Cadet Corps

Study Tour/ Field visit is mandatory for UG students.

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

Internship: A designated activity that carries one credit involving more than 7 days of working in an organization under the guidance of an identified mentor

Field Project: Project students comprising of maximum 5 members in a team need to undertake project that involve conducting surveys inside/outside the college premises and collection of data from designated communities or natural places.

EVALUATION SCHEME

Core Courses, Discipline Specific Electives Courses & Allied Courses

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

PART III - Core Courses, Discipline Specific Elective Courses & Allied Courses

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

Mode of Evaluation		Marks
Periodic Test	:	15
Assignment	:	5
Quiz	:	5
Total	:	25

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

Two Assignments - Best of the two will be considered

Three Quiz Tests - Best of the three will be considered

Practical

Mode of Evaluation		Marks
Model Test	:	30
Performance	:	10
Total	:	40

Two Model Tests - Best one will be considered

Performance - Attendance and Record

Internship

One month internship training in well reputed hospitals. Internal evaluation carried out by project guide (Dietitian) and external evaluation by University practical examiner.

Question Pattern for Periodic Assessment**Duration: 2 Hours**

Section	Type 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)	Either or type	3	3	7	21
C Q. No.(8-10)	Open Choice	3	2	10	20
Total					45

EXTERNAL EXAMINATION**Question Pattern****Duration: 3 Hours**

Section	Type of Question	No. of Questions	No. of Questions to be answered	Marks for each question	Total Marks
A Q. No.(1- 10)	Multiple choice (At least Two question from each unit)	10	10	1	10
B Q. No.(11 -15)	Either or type (one set from each unit)	5	5	7	35
C Q. No.(16-20)	Open Choice (one from each unit)	5	3	10	30
				Total	75

CORE COURSES ASSESSMENT

Online Test will be conducted for the Core Courses in V & VI Semester.

Multiple Choice questions Pattern is followed.

PART IV- Skill Enhancement Courses and Non Major Elective Courses

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

Mode of Evaluation		Marks
Periodic Test	:	25
Assignment	:	10
Quiz	:	5
Total	:	40

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

Two Assignments - Best of the two will be considered

Three Quiz Tests - Best of the three will be considered

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.(5- 6)	Open Choice	2	1	10	10
Total					25

External 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	6	5	30
B Q. No.(9- 13)	Open Choice	5	3	10	30
Total					60

PART IV- Generic Elective Courses & Ability Enhancement Compulsory Courses

- 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.

ASSESSMENT PATTERN

Mode of Evaluation		Marks
Periodic Test	:	30
Assignment	:	10
Model Examination	:	60
Total		100

Two Periodic tests - Best of the two will be considered

Two Assignments - Best 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.(5- 6)	Open Choice	2	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

ELIGIBILITY FOR THE DEGREE

- i) The candidate will not be eligible for degree without completing the prescribed Courses of study and a minimum Pass marks in all the Courses.
- ii) Attendance, progress and conduct certification from the Head of the Institution will be required for the students to write the examination.
 - No Pass minimum for Internal Assessment.
 - Pass minimum for External Examination is 27 marks out of 75 marks for Core Courses, Allied Courses and Discipline Specific Elective Courses.
 - Pass minimum for External Examination is 21 marks out of 60 marks for Non Major Elective Courses and Skill Enhancement Courses.
 - The aggregate minimum pass percentage is 40.
 - Pass minimum for External Practical Examination is 21 marks out of 60 marks.
 - Pass minimum for Generic Elective Course and Ability Enchantment Compulsory Course is 40.

B.Sc. HOME SCIENCE - NUTRITION AND DIETETICS

Program Code -2028

PROGRAMME OUTCOMES

- Encourage intellectually disciplined process of thinking in analyzing, synthesizing, evaluating and applying scientific concepts.
- Develop good rapport with fellow-beings through efficient oral, written and technical communication.
- Connect with the society to transform ideas into action.
- Volunteer support in spreading scientific temperament and stand for the national cause in all core issues.
- Uphold the values and beliefs inherent in the nation's tradition and culture.
- Strive to preserve nature in all forms for a sustainable future.
- Develop an independent and self-disciplined specialized learning in tune with the changing socio-technological scenario

PROGRAMME SPECIFIC OUTCOMES

- ✚ Develop professional competencies in the areas of Home Science such as Food Science, Nutrition, Dietetics, Human Development, Textiles and Clothing, Family Resource Management, Food Service Management and Extension Education
- ✚ Acquire the skills necessary for employment in institutions, industries and organizations related to the field of Home Science or for self-employment
- ✚ Develop research skills in the areas of Home Science
- ✚ Acquire expertise on food utilization and preservation to improve food and nutrition security and overall nutritional status of the communities



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PART – I-TAMIL

S.No.	Sem.	Code	Title of the Course	Credits	Marks
1.	I	18UTAG11	தாள்: 1 பொதுத்தமிழ்	3	100
2.	II	18UTAG21N	தாள்: 2 பொதுத்தமிழ்	3	100
3.	III	18UTAG31	தாள்: 3 பொதுத்தமிழ்	3	100
4.	IV	18UTAG41	தாள்: 4 பொதுத்தமிழ்	3	100
TOTAL				12	400

PART I -HINDI

S.No.	Sem.	Code	Title of the Course	Credits	Marks
1.	I	18UHDG11	Prose – I & II, Ancient Stories - I, General Essays, Functional Hindi – I & Grammar	3	100
2.	II	18UHDG21	Drama, Ancient Stories - II, Letter Correspondence, Functional Hindi-II & Grammar	3	100
3.	III	18UHDG31	Ancient Poetry, Drama, Indian History, Hindi Grammar & Functional Hindi III	3	100
4.	IV	18UHDG41	Modern Poetry, Hindi Literary Essays, Letter Correspondence, Conversation & Functional Hindi IV	3	100
TOTAL				12	400

PART II

S.No.	Se m.	Code	Title of the Course	Credits	Marks
1.	I	18UENG11A	English for Advanced Learners I	3	100
		18UENG11B	English for Career Guidance - I		
		18UENG11C	English for Communicative Competence-I		
2.	II	18UENG21A	English for Advanced Learners II	3	100
		18UENG21B	English for Career Guidance - II		
		18UENG21C	English for Communicative Competence - II		
3.	III	18UENG31A	English for Advanced Learners III	3	100
		18UENG31B	English for Career Guidance – III		
		18UENG31C	English for Communicative Competence - III		
4.	IV	18UENG41A	English for Advanced Learners IV	3	100
		18UENG41B	English for Career Guidance – IV		
		18UENG41C	English for Communicative Competence - IV		
TOTAL				12	400

PART III – CORE, DISCIPLINE SPECIFIC ELECTIVE COURSES

S.No.	Sem.	Code	Title of the Course	Credits	Marks
1	I	18UHSC11	Food Science I	4	100
2	I	18UHSC12	Nutrition Science	4	100
3	II	18UHSC21	Food Science II	4	100
4	II	18UHSC22	Food Service Management	4	100
5	II	18UHSC21P	Food Science Lab	2	100
6	III	18UHSC31	Dietetics I	5	100
7	IV	18UHSC41	Dietetics II	5	100
8	IV	18UHSC41P	Dietetics Lab	2	100
9	V	18UHSC51	Food Microbiology	4	100
10	V	18UHSC52	Food Preservation and Bakery	4	100
11	V	18UHSC53	Human Development	4	100
12	V	18UHSE51/ 18UHSE52	Family Resource Management/ Bio Statistics	4	100
13	V	18UHSO51	Online Assessment	1	50
14	VI	18UHSC61	Nutritional Biochemistry	4	100
15	VI	18UHSC62	Internship	4	100
16	VI	18UHSC63	Extension Education	4	100
17	VI	18UHSE61/ 18UHSE62	Textiles and Clothing/ Family Dynamics	4	100
18	VI	18UHSO61	Online Assessment	1	50
19	VI	18UHSC61P	Food Analysis Lab	3	100
20	VI	18UHSC62P	Food Preservation and Bakery Lab	3	100
21	VI	18UHSC63P	Art in Everyday Life	2	100
Total				72	2000

PART III – ALLIED COURSE I- CHEMISTRY

S.No.	Sem.	Code	Title of the Course	Credits	Marks
1.	I	18UCHA11	Inorganic, Organic and Physical Chemistry I	4	100
2.	II	18UCHA21	Inorganic, Organic and Physical Chemistry II	4	100
3.	II	18UCHA21P	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	18UBHA31	Human Physiology	4	100
2.	IV	18UBHA41	Functional Foods and Nutraceuticals	4	100
	IV	18UBHA41P	Biochemical Analysis	2	100
Total				10	300

PART IV - SKILL ENHANCEMENT COURSES

S.No.	Sem.	Code	Title of the Course	Credits	Marks
1.	II	18UHSS21P	MS-Office - Lab	2	100
2.	III	18UHSS31	Entrepreneurship Development	2	100
3.	IV	18UHSS41	Interior Design	2	100
4.	V	18UHSS51	Food Safety and Quality Control	2	100
5.	V	18UHSS52	Public Nutrition and Hygiene	2	100
6.	VI	18UHSS61	Food Toxicology	2	100
Total				12	600

PART IV – NON MAJOR ELECTIVE COURSES

S.No.	Sem.	Code	Title of the Course	Credits	Marks
1.	III	18UHSN31	Basic Food Science	2	100
2.	IV	18UHSN41	Basic Nutrition and Dietetics	2	100
Total				4	200

PARTIV–GENERIC ELECTIVE AND ABILITY ENHANCEMENT COMPULSORY COURSES

S.No.	Sem.	Code	Title of the Course	Credits	Marks
1.	I	18UGVE11	Value Education	2	100
2	III	18UGEH31/ 18UGEW32	Human Rights Women studies	1	100
3.	IV	18UGEC41	Constitution of India	1	100
		18UGEM42	Modern Economics		
		18UGEA44	Adolescent Psychology		
		18UGED45	Disaster Management		
4		18UPHI41G	Internship/Field Project	1	100
		PART V	Extension Activities	1	-
5	V	18UGES51	Environmental Studies	2	100
Total				8	500

PART –V EXTENSION ACTIVITIES

S.No.	Sem.	Code	Title of the Course	Credit
1	I, II, III & IV	18UVNS1 18UVNS2	National Service Scheme	1
2		18UVPE1 18UVPE2	Physical Education	
3		18UVYR1 18UVYR2	Youth Red Cross Society	
4		18UVRR1	Red Ribbon Club	
5		18UVSF1	Science Forum	
6		18UVEC1	Eco Club	
7		18UVLI1	Library and Information Science	
8		18UVCC1	Consumer Forum	
9		18UVHF1	Health and Fitness Club	
10		18UVNC1 18UVNC2	National Cadet Corps	



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DEPARTMENT OF HOME SCIENCE

B.Sc. HOME SCIENCE - NUTRITION AND DIETETICS

PROGRAMME STRUCTURE

Semester	Course Code	Courses	Hours per week	Credits	Total Marks		
					Int.	Ext.	
I	Part I	18UTAG11	Tamil/Hindi I	6	3	25	75
	Part II	18UENG11	English I	6	3	25	75
	Part III	18UHSC11	Core Course -1 Food Science I	4	4	25	75
		18UHSC12	Core Course - 2 Nutrition Science	4	4	25	75
		18UHSC21P	Core Course Practical – 1 Food Science Lab	2	-	-	-
		18UCHA11	Allied Course –I Inorganic , Organic and Physical	4	4	25	75
		18UCHA11P	Chemistry -1 Allied Practical 1	2			
	Part IV	18UGVE11	Value Education	2	2	100	
	TOTAL			30	20	600	

Semester	Course Code	Courses	Hours per week	Credits	Total Marks		
					Int.	Ext.	
II	Part I	18UTAG21	Tamil /Hindi II	6	3	25	75
	Part II	18UENG21	English II	6	3	25	75
	Part III	18UHSC21	Core Course - 3 Food Science II	4	4	25	75
		18UHSC22	Core Course - 4 Food Service Management	4	4	25	75
		18UHSC21P	Core Course Practical –1 Food Science Lab	2	2	40	60
		18UCHA21	Allied Course –I Inorganic , Organic and Physical Chemistry -2	4	2	25	75
		18UCHA21P	Allied Practical- 1	2	2	40	60
	Part IV	18UHSS21P	SEC -1 MS Office Lab	2 T-1,P-1	2	40	60
	TOTAL			30	24	800	

Semester	Course Code	Courses	Hours per week	Credits	Total Marks			
					Int.	Ext.		
III	Part I	18UTAG31	Tamil/ Hindi III	6	3	25	75	
	Part II	18UENG31	English III	6	3	25	75	
	Part III	18UHSC31	Core Course -5 Dietetics I	5	5	25	75	
		18UHSC41P	Core Course Practical – 2 Dietetics Lab	2	-	-	-	
		18UBHA31	Allied II -Course 1 Allied Biology – Human Physiology	4	4	25	75	
		18UBHA41P	Biochemical Analysis Lab	2	-	-	-	
	Part IV	18UHSS31	SEC -2 Entrepreneurship Development	2	2	40	60	
		18UHSN31	NMEC-1 Basic Food Science	2	2	40	60	
	Part IV	18UGEH31/ 18UGEW32	Generic Elective -1 1.Human Rights/ 2. Women studies	0	1	40	60	
		18UGEC41/ 18UGEM42/ 18UGEA43/ 18UGED44	Generic Elective -2 Constitution of India/ Modern Economics/ Adolescent Psychology/ Disaster Management	1	-	-	-	
		TOTAL			30	20	700	

Semester	Course Code	Courses	Hours per week	Credits	Total Marks		
					Int	Ext	
IV	Part I	18UTAG41	Tamil /Hindi IV	6	3	25	75
	Part II	18UENG41	English IV	6	3	25	75
		18UHSC41	Core Course - 6 Dietetics II	5	5	25	75
		18UHSC41P	Core Course Practical-2 Dietetics Lab	2	2	40	60
	Part III	18UBHA41	Allied II -Course – 2 Allied Biology – Functional Foods and Nutraceuticals	4	4	25	75
		18UBHA41P	Biochemical Analysis Lab	2	2	40	60
	Part IV	18UHSS41	SEC -3 Interior Design	2	2	40	60
		18UHSN41	NMEC-2 Basic Nutrition and Dietetics	2	2	40	60
		18UHS41G	Internship/Field Project	0	1	100	-
			Generic Elective -2	1	1	100	-
		18UGEC41/	Constitution of India/				
		18UGEM42/	Modern Economics/				
			18UGEA43/	Adolescent Psychology/			
		18UGED44	Disaster Management				
Part V		Extension Activities	-	1	-		
		TOTAL	30	26	1000		

Semester	Course Code	Courses	Hours per week	Credits	Total Marks		
					Int.	Ext.	
V	Part III	18UHSC51	Core Course – 7 Food Microbiology	4	4	25	75
		18UHSC52	Core Course - 8 Food Preservation and Bakery	4	4	25	75
		18UHSC53	Core Course – 9 Human Development	4	4	25	75
		18UHSC61P	Core Course Practical - 3 Food Analysis Lab	3	-	-	-
		18UHSC62P	Core Course Practical - 4 Food Preservation and Bakery Lab	3	-	-	-
		18UHSC63P	Core Course Practical -5 Art in Everyday Life	2	-	-	-
		18UHSE51 18UHSE52	DSEC -1 1. Family Resource Management 2. Bio Statistics	4	4	25	75
		18UHSO51	Online Assessment	-	1	50	
	Part IV	18UHSS51	SEC -4 Food Safety and Quality Control	2	2	40	60
		18UHSS52	SEC -5 Public Nutrition and Hygiene	2	2	40	60
		18UGES51	Environmental Studies	2	2	100	
			TOTAL	30	23	750	

Semester	Course Code	Courses	Hours per week	Credits	Total Marks		
					Int.	Ext.	
VI	Part III	18UHSC61	Core Course -10 Nutritional Biochemistry	5	4	25	75
		18UHSC62	Core Course -11 Internship	5	4	50	50
		18UHSC63	Core Course -12 Extension Education	5	4	25	75
		18UHSC61P	Core Course Practical -3 Food Analysis Lab	3	3	40	60
		18UHSC62P	Core Course Practical -4 Food Preservation and Bakery Lab	3	3	40	60
		18UHSC63P	Core Course Practical -5 Art in Everyday Life	2	2	40	60
		18UHSE61/ 18UHSE62	DSEC -2 1. Textiles and Clothing 2. Family Dynamics	5	4	25	75
		18UGOL61	Online Assessment	-	1	50	
	Part IV	18UHSS61	SEC -6 Food Toxicology	2	2	40	60
TOTAL			30	27	850		

DSEC : Discipline Specific Elective Course

SEC : Skill Enhancement Course



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B.Sc. Home Science - Nutrition and Dietetics (Semester) (2018 -19 onwards)

Semester III	DIETETICS I	Hours/Week: 5	
Core Course-5		Credits: 5	
Course Code 18UHSC31		Internal 25	External 75

COURSE OUTCOMES

On completion of the course, students will be able to

- understand the concept of an adequate diet and the importance of meal planning.
- acquire the knowledge of the principles of planning diet for various stages of life cycle.
- develop the ability to plan balanced diet for adults doing various occupations and also for various socio economic levels.
- plan and prepare nutritionally adequate diet in relation to age and physiological state.
- know the factors affecting nutrients need during the life cycle and RDA for various age groups.
- understand the causes, preventive measures and treatment for various nutritional problems which will improve the health status of the individuals and the community.

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, nutritional requirements, dietary modification, general dietary problems and complications. (14 Hours)

UNIT II

Nutrition during Lactation and Infancy

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

Infancy – food and nutritional requirements, 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

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

School going age – food and nutritional requirements, packed lunches, nutritional problems in school going age. (16 Hours)

UNIT IV

Nutrition during Adolescence, Adult and Old age

Adolescence – food and nutritional requirements, food habits of adolescence, nutritional problems.

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

Old age – physiological changes - ageing factors that influence the nutritional requirements, food requirements, nutrition related problems, degenerative diseases, common complaints, drug and nutrient interaction. (16 Hours)

UNIT – V

Sports and Space Nutrition

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

Space nutrition – space foods. (13 Hours)

TEXT BOOKS

Srilakshmi, B. (2014). *Dietetics*, New Delhi: New Age International Ltd, 7th Edition.

REFERENCE BOOKS

1. Paul, S. (2005). *Textbook of Bio-Nutrition, Curing Diseases Through Diet*, New Delhi: CBS Publications, 1st Edition.
2. Raheena Begum, M. (2010). *A Textbook of Food, Nutrition and Dietetics*, New Delhi: Sterling Publishers Pvt Ltd, 3rd Edition.
3. Robinson, C.H., Chenoweth, W.L. & Gaswiwk, A.E. (1986). *Normal and Therapeutic Nutrition*, U.S.A: Macmillon Publishing Co, 17th Edition.
4. Swaminathan, N. (2006). *Handbook of Food and Nutrition*, Bangalore: The Bangalore Printing and Publishing Co., Ltd,
5. Verma, P. (2015). *Food, Nutrition and Dietetics*, Chennai: CBS Publishers and Distributors Pvt.Ltd.



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VIRUDHUNAGAR - 626 001

B.Sc. Home Science - Nutrition and Dietetics (Semester) (2018 -19 onwards)

Semester III	ALLIED BIOLOGY – HUMAN PHYSIOLOGY	Hours/Week: 4	
Allied II		Credits: 4	
Course Code 18UBHA31		Internal 25	External 75

COURSE OUTCOMES

On completion of the course, students will be able to

- gain knowledge regarding the structure and physiology of Human beings
- understand the organs of the body and their functions
- be familiar with the different systems of the body

UNIT I

Digestive and Excretory System

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

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 & functions of heart, cardiac cycle, blood pressure-factors affecting blood pressure. (13 Hours)

UNIT III

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 IV

Reproductive & 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, gonads. (10 Hours)

UNIT V

Nervous system & 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)

TEXT BOOK

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

REFERENCE BOOKS

1. Vidhya Ratan. (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, Madhavan Kutty, K. & Singh, H.D. (1996). *Text Book of Human Physiology*, New Delhi: S.Chand Company.



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B.Sc. Home Science - Nutrition and Dietetics (Semester) (2018 -19 onwards)

Semester III	ENTREPRENEURSHIP DEVELOPMENT	Hours/Week: 2	
Skill Enhancement Course- 2		Credits: 2	
Course Code 18UHSS31		Internal 40	External 60

COURSE OUTCOMES

On completion of the course, students will be able to

- familiarize the concept and overview of entrepreneurship with a view to enhance entrepreneurial talents.
- analyze environmental set up relating to small scale industry and promoting it and understand the procedure involved in setting up small scale units.
- develop and strengthen entrepreneurial qualities and make them know the sources of help and support available for starting a small-scale industry.
- explore new vistas of entrepreneurship in 21st century environment to generate innovative business ideas.

UNIT I

Entrepreneurship – meaning, importance, types, role of entrepreneurs in economic development – qualities of an entrepreneur. (5 Hours)

UNIT II

How to start 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., N.S.I.C., 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, market feasibility, technical feasibility – financial feasibility and economic feasibility – break even analysis. (6 Hours)

TEXT BOOKS

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

REFERENCE BOOKS

1. Paul, J., Jajithkumar, N. & Mampilly, T. (1996). *Entrepreneurship Development*, New Delhi: Himalaya Publishing House, 3rd Edition.
2. Sekar, P.C. (1998). *Entrepreneurship and Management of Small Business*, Madurai: ENPEE Publication.



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B.Sc. Home Science - Nutrition and Dietetics (Semester) (2018 -19 onwards)

Semester III	BASIC FOOD SCIENCE	Hours/Week: 2	
NMEC-1		Credits: 2	
Course Code 18UHSN31		Internal 40	External 60

COURSE OUTCOMES

On completion of the course, students will be able to

- understand the functions of food in relation to health.
- obtain knowledge of basic five food groups and their contribution to nutrition.
- understand the different methods of cooking
- understand the various methods of food preservation

UNIT I

Food and its functions – food groups – ICMR basic five food groups, food guide pyramid, food in relation to health. (5 Hours)

UNIT II

Methods of cooking - moist heat methods, dry heat methods, combination methods. (7 Hours)

UNIT III

Cereals, pulses, nuts and oil seeds, milk and milk products, egg, flesh foods, vegetables and fruits - composition and nutritive value. (7 Hours)

UNIT IV

Food adulteration – definition, intentional adulterants, PFA (5 Hours)

UNIT V

Food preservation – meaning, principles and methods of food preservation. (6 Hours)

TEXT BOOK

Srilakshmi, B. (2015). *Food Science*. New Delhi: New Age International Ltd.

REFERENCE BOOKS

1. Potter, N. (2006). *Food Science*, New Delhi: CBS Publishers.
2. Shakuntala Manay, N & Shadaksharaswamy, M. (2008). *Foods Facts and Principles*, New Delhi: New Age International Ltd.
3. Sumati, R. (2006). *Food Science*, New Delhi: New Age International Ltd.
4. Vennila, P & Kanchana, (2003). *Principles of Preservation of Fruits and Vegetables*, Madurai: Ratna Publications.

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VIRUDHUNAGAR - 626 001

Semester: III	HUMAN RIGHTS (2018 -19 onwards)	Hours/Week: 0	
Generic Elective - 1		Credits : 1	
Course Code: 18UGEH31		<u>Internal</u> 100	<u>External</u> -

COURSE OUTCOMES

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

- understand the basic concepts on Human Rights and Human values.
- learn the definition and the development of Human Rights.
- understand the various theories on Human Rights.
- know the International instruments and conventions on human Rights.
- acquire idea of the evolution of Human Rights in India.
- imbibe the knowledge of Human Rights violation in India.

UNIT I

Human Rights - Definition – Development of Human Rights: The Magna Carta (1215) - The Declaration on Rights of Man and Citizen (1789) - The Bill of Rights (1791).

UNIT II

Universal Declaration of Human Rights (1948) - International Covenant on Civil and Political Rights– International Covenant on Economic, Social and Cultural Rights.

UNIT III

Human Rights in India - Constitutional Guarantees on Human Rights - The Protection of Human Rights Act (1993).

UNIT IV

National Human Rights Commission - State Human Rights Commission – Human Rights Court.

UNIT V

Human Rights Violations in India- Children – Women – Refugees – Minorities – SCs & ST – Trans-gender.

TEXT BOOK

Study Material prepared by the faculty in Department of History.

REFERENCE BOOKS

1. Basu,L.N. (2006). *Human Rights: Practice and Limitations*, Jaipur: Pointer Publishers.
2. Chauhan,S.R, & Chauhan, N.S (ed.), (2007). *International Dimension of the Human Rights*, Vol. I – III, New Delhi: Rajdhani Publishers.
3. Gupta,U.N. (2004). *Human Rights*, Vol.I – IV, New Delhi: Atlantic Publishers.
4. Natarajan,A. (2004). *Human Rights in International Perspectives*, Madurai: Munnetra Pathipagam.
5. Raja Muthirulandi, E. (2003). *Manidha Urimaigal (Tamil)*, Madurai: BPI Publishers.

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VIRUDHUNAGAR - 626 001

Semester: III	WOMEN STUDIES (2018 -19 onwards)	Hours/Week: 0	
Generic Elective - 1		Credits : 1	
Course Code: 18UGEW32		<u>Internal</u> 100	<u>External</u> -

COURSE OUTCOMES

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

- understand the concept of Feminism.
- acquire the knowledge on the atrocities committed against women.
- know more of women's organisations and political rights.
- know about the various Government welfare schemes for women.
- gain knowledge on the legal rights of women.
- analyse the real empowerment of women in all fields.

UNIT I

Women Studies - Definition - Feminism- Kinds of Feminism.

UNIT II

Violence Against Women – Female Foeticide–Domestic violence - Problems of working women -Eve-Teasing - Sexual Harassment- Portrayal of women in Mass Media.

UNIT III

Women Indian Association -National Council of Women in India - Self Help Groups – Panchayat Raj and role of women in politics -NGOs and women Development.

UNIT IV

Central Government's Social Welfare schemes- State Government's Social Welfare Programmes for Women – Women and Children.

UNIT V

Dowry Prohibition Act 1961 - Equal Remuneration Act 1976 – Hindu Women’s Right to Property Act 1989 – Prohibition of indecent Representation of Women Act 1987 – Domestic Violence (Prevention) Act 2005 – POCSO Act 2012.

TEXT BOOK

Study Material prepared by the faculty in Department of History.

REFERENCE BOOKS

1. Anwarul Yaquin, Badar Anwar, (1982). *Protection of Women Under the Law*, New Delhi.
2. Chatterjee, B.B, (1971). *Impact of Social Legislation on Social Change*, Calcutta.
3. Gandhi, M.K., (1962). *Women and Social Injustice*, Ahemadabad.
4. Gangrade, K.D, (1978). *Social Legislation in India, Vol.I and II*, Delhi.
5. Mandakini Das, Pritirekha, Das Pathnayak (ed)., (2010). *Empowering Women: Issues and Challenges and Strategies*, New Delhi.

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VIRUDHUNAGAR - 626 001

Semester: III & IV	CONSTITUTION OF INDIA	Hours/Week: 1 + 1	
Generic Elective - 2		Credits : 1	
Course Code: 18UGEC41		(2018 -19 onwards)	<u>Internal</u> 100

COURSE OUTCOMES

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

- understand the basic tenets of the Constitution.
- realize the duties and responsibilities as a citizen of India.
- shine in competitive examinations.
- understand that the constitution is a base for the functioning of the Government
- aware of the actual working of political institutions.
- know the powers of Judiciary in the protection of citizen.

UNIT I

Constituent Assembly - Sources – Salient Features of the Constitution – Fundamental Rights – Fundamental Duties – Directive Principles of State Policy.

UNIT II

President and Vice-President – Election, Position, Powers and Functions – Prime Minister and his cabinet.

UNIT III

Indian Parliament – Lok Sabha and Rajya Sabha – Composition – Powers and Functions.

UNIT IV

Process of Law making – Committee system – Mode of Amendments-
Constitutional Amendments.

UNIT V

Judiciary – Supreme Court – Composition - Powers and Functions – Judicial
Review - State Government – Governor - Chief Minister- High court.

TEXT BOOK

Study Material prepared by the faculty in Department of History.

REFERENCE BOOKS

1. Gomathinayagam,P& Anusuya,R. (1980). *Modern Governments*, Rajapalayam: Sri Vinayaga Pathipagam.
2. Kapur,A.C. (1975). *Select Constitutions*, New Delhi: S.Chand & Co.
3. Kasthuri,J. (1998). *Modern Governments*, Udumalpet: Ennes Publications.
4. Mahajan, V.D. (1969). *Select Modern Governments*, New Delhi: S.Chand & Co.
5. Ramalingam, T.S. (1971). *Modern Governments*, Madurai: T.S.R. Publications.

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VIRUDHUNAGAR - 626 001

Semester: III & IV	MODERN ECONOMICS (2018-2019 Onwards)	Hours/Week: 1 +1	
Generic Elective - 2		Credits: 1	
Course Code 18UGEM42		Internal 100	External -

COURSE OUTCOMES

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

- understand **the economic development and the various sectors of Indian Economy.**
- get clear knowledge about economic issues.
- get introduced to the framework of Budgets and Income and Expenditure of the Government.
- understand the role of banks in economic development.
- apply the E-payment methods in day to day life.

UNIT I: Economic Development: Economic Development – Meaning – Nature of Indian Economy – Features of Indian Economy - Agriculture and Economic Development – Industrial Sector and Economic Development – LPG – Advantages and Disadvantages – MNCs – Obstacles to Economic Development.

UNIT II: Economic Issues: Population growth in India –Causes – Measures –Poverty – Causes – Measures – Unemployment – Causes – Types – Measures.

UNIT III: Government Budget and the Economy: Meaning –Types –Principles of Budgeting –Budgetary Procedure –Direct and Indirect Taxes –Merits –Demerits –Causes for Growth of Public Expenditure.

UNIT IV: Role of Commercial Banks in Economic Development: Commercial Banks – Classifications – Public Sector Banks – Merits - Private Sector Banks – Merits –

Differences between Public Sector Banks and Private Sector Banks - Role of Commercial Banks in Economic Development —Innovative Schemes for developing Infrastructure – Demonetization – Reasons for Demonetisation – Merits and Demerits of Demonetisation.

UNIT V: E-Banking: E-Banking – Advantages – Disadvantages – Mobile Banking – Facilities – Advantages – Disadvantages - Internet Banking – Types – Features – Advantages – Disadvantages – Electronic Payment System (EPS) – Meaning – Benefits – Disadvantages – Methods of EPS– ATM – Debit Card – Credit Card – Smart Card– Electronic Clearing Service (ECS) – National Electronic Funds Transfer (NEFT) – Real Time Gross Settlement (RTGS) - Risks involved in E-Payments – Security tips to overcome Risks in E-Payments

TEXT BOOK

Study Material prepared by the faculty in Department of Commerce and Economics.

REFERENCE BOOKS

1. Sankaran .S, (2012). *Micro Economics*, Chennai: Margham Publications.
2. Sankaran. S, (2012). *Monetary Economics*, Chennai: Margham Publications.
3. Ruddar Dutt and Sundharam. K.P.M., (2017). *Indian Economy*, New Delhi: S. Chand & Company Ltd.
4. Mithani.D.M., (2010). *Money, Banking, Trade and Public Finance*, Mumbai: Himalaya Publishing House.
5. Rama. A and Aruna Devi. A. (2019). *Banking Technology*, Chennai: New Century Book House (P) Ltd.



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VIRUDHUNAGAR - 626 001

Semester: III & IV	ADOLESCENT PSYCHOLOGY (2018 -19 onwards)	Hours/Week: 1+ 1	
Generic Elective- 2		Credits: 1	
Course Code 18UGEA43		Internal 100	External -

COURSE OUTCOMES

On completion of the course, students will be able to

- gain knowledge regarding the changes in different domains of development during adolescence.
- develop and maintain good relationship with parents and peers.
- aware of the issues challenging adolescents and measures to be taken to prevent those issues.
- face the challenges they face across the life span
- adopt a few counseling techniques.

UNIT I

Adolescence- Age of adolescence, characteristics, problems of adolescence. Biological transitions, Emotional transitions, Social transitions, Cognitive transitions, Changes in moral behavior, Developmental tasks.

UNIT II

Challenges of Adolescents-Health issues, Sexually transmitted diseases, Mental health issues, Social issues- Sexual abuse, Substance abuse, Influence of electronic media.

UNIT III

Development of Self- Identity development and autonomy, self - esteem, Gender and self- regulation. Self-reliance and personal decision making process. Peer Pressure and Family conflicts.

UNIT IV

Counselling – Styles of Counselling – An effective Counseling relationship-
Managing crises – Effective Counselor - Maintain boundaries – Taking care of
ourselves.

UNIT V

Qualities of a good Counsellors

Empathy – open mindedness – Genuine and Trust Winning – Maintaining
confidentiality – certain Do's and Dont's.

Related Experience

Discussion about the problems confronting adolescents today.

Group discussion on the use and misuse of electronic media by adolescents.

Discussion on issues relating to parent, adolescents relationship.

To study about the health problems of adolescents.

To make a study on the stress experience by adolescents.

Critical Analyses issues and debates in Counseling psychology.

Reflect on the their role in different fields of Counseling.

TEXT BOOK

Study Material prepared by the faculty in Department of Home Science.

REFERENCE BOOKS

1. Chauhan S. (1983), *Psychology of Adolescence*, New Delhi: Allied Publishers Private Limited.
2. Elizabeth B Hurlock (1985). *Developmental Psychology A Life - Span Approach*, New York: TMH Edition.
3. Aron, A., & Aron, E.N. (1994). *Statistics for Psychology*. New Jersey: Prentice Hall.
4. Miles, J. (2001). *Research Methods and Statics*, Exeter: Crucial.



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VIRUDHUNAGAR - 626 001

Semester: III & IV	DISASTER MANAGEMENT (2018 -19 onwards)	Hours/Week: 1+ 1	
Generic Elective- 2		Credits: 1	
Course Code 18UGED44		Internal 100	External -

COURSE OUTCOMES

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

- get a general insight in the dimensions of disasters caused by nature as well as the disasters and environmental hazards induced by human developmental activities
- become aware of the fundamentals of disaster assessment and environmental impact assessment
- become sensitized to the various institutional agencies for disaster management
- be aware of disaster recovery plan
- understand the association at National, State and District level of cope up with disaster

UNIT I

Disaster – Features and Effects of Disaster – Process of Disaster – Hazards and its Classification – Vulnerability and its Categories - Stages in Disaster – Disaster Management and its Activities – Disaster Management Cycle.

UNIT II

Earthquake - Factors Determining Earthquakes –Seismic Waves in Earthquake Processes - Magnitude and Intensity - Earthquake Damages - Disaster Management and Earthquake.

Volcanoes - Active and Non-Active Volcanoes - Types of Volcanoes – Landslides - Basic Causes of Landslides – Tsunami - Causes of Tsunami - Tsunami Warning System - Disaster Management Team and Tsunami – Flood - Types of Flood - Damages due to Floods.

UNIT III

Damage Assessments for Different Disaster – Objectives, Features, Levels, Types: Damage to Buildings, House Property, Land, Crops and Live Stock – Impact of Human Lives – Assessment Damages - Damage Reports: Flash Report, Initial Report, Interim Report, Specialist Report and Final Report – Points to be Considered while Preparing Reports - Reporting Format and Quantification of Needs– Disaster Assistance: Individual Assistance and Public Assistance.

UNIT IV

National Crisis Management Committee (NCCM), State Crisis Management Group (SCMG): Task, District Disaster Management Committee, Disaster-Related Roles and Resources, Disaster Agencies, Site Operations Centre and Rescue Camps.

UNIT V

Disaster Mitigation Strategies in Floods and Water Hazards, Earthquakes, Volcanic Eruptions, Landslides, Drought and Desertification – Main Mitigation Strategies - - The Disaster Recovery Planning: Objectives and Phases - Reconstruction and Rehabilitation: Physical, Social, Psychological and Economic rehabilitation.

TEXT BOOK

Study material prepared by the faculty in Department of Commerce.

REFERENCE BOOKS

1. Rajdeep Dasgupta. (2011). *Disaster Management and Rehabilitation*, New Delhi: Mittal Publications.
2. Sunder.I. & Sezhiyan.T. (2012). *Disaster Management*, New Delhi : Sarup and Sons.
3. Ramana Murthy.K. (2004). *Disaster Management*, New Delhi: Dominant.



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B.Sc. Home Science - Nutrition and Dietetics (Semester) (2018 -19 onwards)

Semester IV	DIETETICS II	Hours/Week: 5	
Core Course-6		Credits: 5	
Course Code 18UHSC41		Internal 25	External 75

COURSE OUTCOMES

On completion of the course, students will be able to

- acquire knowledge on etiology, clinical manifestation, metabolic aberrations and complications linked with adverse food reactions.
- identify the symptoms associated with some common acute and chronic diseases and their physiological significance.
- understand the principles involved in the nutritional and dietary management of diseases.
- gain knowledge on foods that can be given and avoided in the diseased condition.
- develop the skills in modification of the regular or normal diet to suit the diseased condition.
- acquire ability to plan and prepare diets for various diseases.

UNIT I

Therapeutic Diets

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

Dietitian

Dietitian – classification, qualities and role of dietitian in managing hospital diet, diet counselling, 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. (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 - cholelithiasis – causes, symptoms and dietary management. (16 Hours)

UNIT IV

Cardiovascular Diseases

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

Disease in Kidney and AIDS

Nephritis, nephrotic syndrome, acute and chronic renal failure, urolithiasis - causes, symptoms and dietary management.

AIDS – causes, complications 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.

(14 Hours)

Nutrition for critically ill patients.

TEXT BOOK

Srilakshmi, B. (2014). *Dietetics*, 7th Edition, New Age International Pvt., Ltd Publications, New Delhi.

REFERENCE BOOKS

1. Antia, F.P & Abraham, P. (2002). *Clinical Dietetics and Nutrition*, Delhi: Oxford University Press, 4th Edition.
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*. India: CBS Publications, 1st Edition.
4. Robinson.C.H. (1986). *Normal and Therapeutic Nutrition*, U.S.A: Macmillan Publishing Co.,17th Edition.



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VIRUDHUNAGAR - 626 001

B.Sc. Home Science - Nutrition and Dietetics (Semester) (2018 -19 onwards)

Semester IV	DIETETICS LAB	Hours/Week: 2	
Core Practical -2		Credits: 2	
Course Code 18UHSC41P		Internal 40	External 60

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



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VIRUDHUNAGAR - 626 001

B.Sc. Home Science - Nutrition and Dietetics (Semester) (2018 -19 onwards)

Semester IV	ALLIED BIOLOGY - FUNCTIONAL FOODS AND NUTRACEUTICALS	Hours/Week: 4	
Allied - II		Credits: 4	
Course Code 18UBHA41		Internal 25	External 75

COURSE OUTCOMES

On completion of the course, students will be able to

- gain knowledge regarding the physical and chemical properties of the food constituents.
- acquire knowledge on sources of functional foods and nutraceuticals.
- understand the role of functional foods, nutraceuticals and dietary supplements in health and disease.
- become familiar with the recent advances and research in the field.

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



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B.Sc. Home Science - Nutrition and Dietetics (Semester) (2018 -19 onwards)

Semester IV	BIOCHEMICAL ANALYSIS LAB	Hours/Week: 2	
Allied		Credits: 2	
Course Code 18UBHA41P		Internal 40	External 60

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 - 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 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.



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B.Sc. Home Science - Nutrition and Dietetics (Semester) (2018 -19 onwards)

Semester IV	INTERIOR DESIGN	Hours/Week: 2	
Skill Enhancement Course - 3		Credits: 2	
Course Code 18UHSS41		Internal 40	External 60

COURSE OUTCOMES

On completion of the course, students will be able to

- gain a good understanding of the elements and principles of interior design.
- apply the elements and principles of design in interior design.
- acquire knowledge on accessories used for the interior decoration.
- understand the principles followed in arranging furniture and flower arrangement.

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, general rules and types. (6 Hours)

TEXT BOOK

Varghese, M.A , Ogale, N. N & 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, and 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.



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B.Sc. Home Science - Nutrition and Dietetics (Semester) (2018 -19 onwards)

Semester IV	BASIC NUTRITION AND DIETETICS	Hours/Week: 2	
NMEC-2		Credits: 2	
Course Code 18UHSN41		Internal 40	External 60

COURSE OUTCOMES

On completion of the course, students will be able to

- acquire the basic knowledge on macro and micronutrients present in the foods.
- understand the principles of meal planning.
- familiar with the nutritional needs of the different age groups.
- attain the skills in the planning of menu for the vulnerable groups and diseased persons.

UNIT I

Carbohydrates, Protein, Fats - functions and food sources, Protein Energy Malnutrition (marasmus, kwashiorkor) - causes, symptoms and treatment.

Role of dietary fiber in human health. (6 Hours)

UNIT II

Vitamins – definition, classifications, functions, food sources and deficiency diseases of the following Vitamins

Water soluble Vitamins – Thiamine, Riboflavin, Niacin, Folic acid and Vitamin C and

Fat soluble Vitamins – A, D, E and K

Minerals – calcium, phosphorous, iron and iodine - functions, food sources and deficiency diseases. (6 Hours)

UNIT III

Balanced diet – definition, meal planning – definition, principles, factors influencing meal planning and its modification to suit different income levels, age and physiological states. (6 Hours)

UNIT IV

Recommended Dietary Allowances (2010) for different age groups of both sex. (5Hours)

UNIT V

Diet for vulnerable groups - diet for pregnant woman, lactating woman and for elderly. Special diet – slimming.

Diet for diseased conditions - fever, diarrhoea, hypertension and diabetes. (7 Hours)

TEXT BOOK

1. Srilakshmi.B, (2015). *Dietetics*, Delhi: New Age International (P) Ltd. Publishers.
2. Gajalakshmi.R, (2015). *Nutrition Science*, Delhi: CBS Publishers and Distributors Pvt.Ltd.,

REFERENCE BOOKS

1. Khanna, K. (1997). *Nutrition and Dietetics*, New Delhi: Phoenix Publishing House Pvt Ltd.
2. Srilakshmi.B, (2015). *Dietetics*, New Delhi: New Age International (P) Ltd. Publishers.
3. Srilakshmi.B, (2008). *Nutrition Science*, New Delhi: New Age International (P) Ltd. Publishers.
4. Swaminathan. M, (2004). *Food and Nutrition* - volume 1, Bangalore: Bangalore Printing and Publishers Co Ltd.