

# **PONDICHERRY UNIVERSITY**

## **(A CENTRAL UNIVERSITY)**



### **B.Sc. HOME SCIENCE**

(Choice Based Credit System)

Regulations & Syllabus

2017-18 onwards

## **REGULATIONS**

### **B.Sc. HOME SCIENCE**

#### **(Choice Based Credit System)**

#### **1. AIM OF THE COURSE**

The degree of **Bachelor of Science in Home Science (Choice Based Credit System)** nurtures the students from a multi-discipline perspective. All the five major areas of Home Science viz. Food Science & Nutrition, Textiles & Clothing Construction, Family Resource Management, Human Development & Family Dynamics and Extension Education make part of the course with meaningful value addition of skill enhancement in the respective area for the development of the home and community. At the end of the course, the students are expected to be confident enough to face the challenges of life at home, work space and community at large.

#### **2. ELIGIBILITY FOR ADMISSION**

Candidate for admission to B.Sc. Home Science shall be required to have passed Higher Secondary or 10+2 or equivalent course conducted by the Government of Tamil Nadu/ Andhra Pradesh/Kerala/ CBSE with Botany or Biology or Home Science as one of the subjects of study or an examination accepted as equivalent thereto and 35 percentage of marks in Part III (aggregate/ Part- III), subject to such conditions as may be prescribed therefore.

#### **3. DURATION OF THE COURSE**

The course shall be of **Three years** duration spread over **Six semesters**. The maximum duration to complete the course shall be Six years (including completion of arrears, if any).

#### **4. ELIGIBILITY FOR ADMISSION TO EXAMINATION**

Seventy five percentage (75%) of attendance for theory & practical.

#### **5. MEDIUM**

The medium of instruction shall be English.

#### **6. CHOICE BASED CREDIT SYSTEM (CBCS)**

The Choice Based Credit System (CBCS) is being introduced in affiliated colleges of Pondicherry University for select UG courses, including B.Sc. Home Science, from the academic year 2017-,,18 onwards in accordance with the directives of University Grants Commission(UGC). The system provides an

opportunity to students to design curriculum to suit individual needs, mobility across related disciplines and institutions in both horizontal and vertical manner.

This System enables a student to obtain a degree in a subject by earning required number of credits prescribed for that degree. Number of credits earned by the student reflects knowledge or skill acquired and performance in each course is reflected in grades. The grade points earned for each course reflect the student" s performance in that course.

The students should study prescribed courses like Discipline Specific Core Courses (DSC), Ability Enhancement Compulsory Courses (AECC) with Public Administration, and Environment Studies during the 1<sup>st</sup> & 2<sup>nd</sup> semester respectively. They are allowed to exercise choices in selection of courses that are Discipline Specific Elective Courses (DSE), General Electives, and Modern Indian Language etc., out of those offered by departments within college or any other college/institution affiliated to Pondicherry University (PU) or any other PU recognized institutions. While allowing students to exercise choices, Pondicherry University notifies regulations by taking into account the practicality. Overall, CBCS is meant to promote student centric education instead of system centric education that is in vogue at present.

## **7. DEFINITIONS OF KEYWORDS**

**7.1 Programme:** An educational program leading to award of a Degree/ Diploma/Certificate.

**7.2 Programme Committee:** Each Program of Study shall have a Programme Committee to oversee implementation of the program.

**7.3.1 Course:** Usually a course referred to as „subject' is a component of the Programme of Study. All courses do not carry the same weight. This course is designed to comprise lectures/ tutorials/laboratory work/ field work/ outreach activities/ project work/ vocational training/viva/seminars/term papers/assignments/ presentations/ self-study etc., or a combination of some of these.

**7.3.2 Core Course:** There are Core Courses in the first four semesters. These Courses shall be compulsorily studied by a student.

**7.3.3 Elective Course:** Elective Course is a course which can be chosen from a pool of papers. It may be:

- Supportive to the discipline of study
- Providing an expanded scope

- Enabling an exposure to some other discipline/domain
- Nurturing student" s proficiency/skill.

An elective may be "Generic Elective" focusing on those courses which add generic proficiency to the students. An elective may be "Discipline Centric" or may be chosen from an unrelated discipline. It may be called an "Open Elective."

7.3.4 **Foundation Course:** The Foundation Courses may be of two kinds: **Compulsory Foundation** and **Elective Foundation**. "Compulsory Foundation" courses are the courses based on the content that leads to Knowledge enhancement. They are mandatory for all disciplines. Elective Foundation courses are value-based and are aimed at providing ethical and humanistic education.

7.3.5 **Repeat Course:** If a student gets (i) less than 40% in the internal assessment and fails in the course or (ii) fails to get the required attendance, the student shall repeat the course when offered.

7.4 **Choice Based Credit System (CBCS):** The CBCS provides choice for students to select from the prescribed courses (core, elective or minor or soft skill courses etc.)Under the CBCS, the requirement for awarding a degree / diploma / certificate is prescribed in terms of number of credits to be completed by the students.

7.5 **Credit:** It is a unit by which the course work is measured. It determines the number of hours of instructions required per week:

Course Name	Credit	Hours of instruction	Weightage (credit/ hours)
MIL	1	2	0.5
ENGLISH	1	2	0.5
DSC (Theory)	1	1.5	0.7
DSC (Practical)	1	1.5	0.7
SEC	1	1.5	0.7
DSE (Theory)	1	1.5	0.7
DSE (Practical)	1	1.5	0.7
GE	1	1.5	0.7
AECC	1	1.5	0.7

**MIL-** Modern Indian Languages; **DSC-** Discipline Specific Core  
**SEC-**Skill Enhancement Course; **DSE-**Discipline Specific Elective  
**GE-** Generic Elective; **AECC-** Ability Enhancement Compulsory Course.

- 7.6 **Letter Grade:** It is an index of the performance of students in a said course. Grades are denoted by letters O, A+, A, B+, B, C, P and F.
- 7.7 **Grade Point:** It is a numerical weight allotted to each letter grade on a 10-point scale.
- 7.8 **Credit Point:** It is the product of grade point and number of credits for a course.
- 7.9 **Semester Grade Point Average (SGPA):** It is a measure of performance of work done in a semester. SGPA is the ratio of total credit points secured by a student in various courses registered in a semester and the total course credits taken during that semester. It shall be expressed up to two decimal places.
- 7.10 **Cumulative Grade Point Average (CGPA):** It is a measure of overall cumulative performance of a student over all semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all semesters and the sum of the total credits of all courses in all the semesters. It is expressed up to two decimal places.
- 7.11 **Transcript or Grade Card or Certificate:** Based on the grades earned, a Grade certificate shall be issued to all the registered students after every semester. The grade certificate will display the course details (code, title, number of credits, grade secured) along with SGPA of that semester and CGPA earned till that semester.
- 7.12 **Academic Year:** Two consecutive (one odd +one even) semesters constitute one Academic year.
- 7.13 **Semester:** Each semester will consist of 15-18 weeks of academic work equivalent to 90 actual teaching days. The odd semester may be scheduled from July to December and even semester from January to June.

## 8. SCOPE AND COVERAGE

8.1 The CBCS is applicable to all full-time UG Home Science approved by the Academic Council.

8.2 Teaching, learning and evaluation shall follow Semester pattern.

8.3 Students who have passed their Higher Secondary Examination under 10+2 System conducted by the Government of Tamil Nadu or any other equivalent system recognized by the Government of Puducherry based on the admission criteria laid down by Pondicherry University are eligible to apply to B.Sc. Home Science. The exact eligibility criteria will be as prescribed in the regulations approved by the Academic Council of Pondicherry University on the recommendation of the BOS of the respective Departments from time to time.

8.4 Prescribed B.Sc. Home Science consists of six consecutive semesters (three years). The maximum duration allowed for each student to acquire prescribed number of credits in order to complete the Programme of Study shall be twelve consecutive semesters (six years).

8.5 The academic year consists of two consecutive (1 odd and 1even) semesters.

8.6 The medium of instruction for all the courses, excepting Arabic, Bengali, French, Hindi, Malayalam, Sanskrit, Tamil, and Telugu, shall be English.

## **9. COURSE STRUCTURE**

At least 60% (72 Credits) of the total minimum credit requirement must be earned by the student in DSC and DSE courses put together in order to obtain a degree in a specific discipline.

## **10. CREDITS**

10.1 One teaching period shall be for 60 minutes duration.

10.2 Number of credits can be earned by a student for the award of B.Sc. Home Science is 120. Out of these, minimum 72credits are mandatory from Discipline Specific Core Courses(DSC) and Discipline Specific Elective Courses (DSE) put together for obtaining a degree in a particular discipline. The total number of credits in each semester is 20.

## **11. REGISTRATION**

11.1 Every student will be assigned a Faculty Advisor after his/her completion of admission procedure.

11.2 Based on the advice and consent of the Faculty Advisor the student shall register for a set of courses that he/she plans to take up in each semester from among those denoted by the Principal/ HOD.

11.3 The student must take the consent of the course teacher offering course(s) for registration.

11.4 The student is permitted to register for courses not exceeding 30 credits per semester. However, registration for Repeat Courses is allowed in excess of this limit.

11.5 A student, in order to retain his/her status, should register for at least a minimum of 12 credits in a semester.

11.6 Students shall have to register for the courses within the first week of a semester.

11.7 The maximum number of students to be registered in each course shall depend upon the physical/ laboratory facilities available.

11.8 The information concerning the courses to be offered in every department in a semester with credits and pre-requisites, if any, along with the time-slot shall be made available by the Home Science Department of the Institution.

11.9 A student shall not be denied registration for which the courses are Discipline Specific Core Course (DSC) or Discipline Specific Elective (DSE).

11.10 The registration for all other courses shall be done in the spirit of accommodating as many students as possible in the interest of the students.

11.11 Dropping of courses may be allowed to enable students to opt for the courses of their choice within three weeks from the date of registration.

## **12. INTRODUCTION OF COURSES**

12.1 The course code consists of four alphabets representing the discipline of study followed by three numerals. The first numeral „1' stands for level/ year of the course (year of collegiate education), 2 for second year course and 3 for third year course. The second numeral stands for semester (odd or even) and the third numeral is for the serial number of the course.

12.2 The Course Structure and Syllabus for each UG programme shall be finalized and recommended by the Board of Studies (BOS) to be placed in the School Board, and then, in the Academic Council, for consideration and approval.

12.3 The syllabi of B.Sc. Home Science course shall be revised at least once in three years, to keep in tune with recent developments in knowledge and

innovations. Minor revisions in the already approved syllabus of a particular course may be approved by the Chairman of the Academic Council provided there is proper justification and recommendations by the Chairpersons of the BOS and School Board.

### **13. WORKLOAD OF TEACHERS**

13.1 Every faculty member shall be assigned workload as per the UGC norms.

13.2 In addition to regular handling of classes, teachers are required to participate in preparation of detailed syllabus, designing of the teaching plan, invigilation, paper setting, evaluation of answer scripts during continuous assessment and any other duties as and when assigned by the Principal or University authorities.

13.3 Teachers shall associate with organizing practical lab sessions, field visits, industrial tours, and guided project work etc., as per directives of the Principal/ Head of the institution.

### **14. PATTERN OF EXAMINATION**

**14.1** The End-Semester examination (**ESE**) for each course in B.Sc. Home Science shall be conducted by the Pondicherry University for a maximum of **75 marks** and Internal Continuous Assessment (**ICA**) for **25 marks**.

14.2 Internal assessment for all theory courses shall be done on the basis of at least two Internal Assessment tests (15 marks); term papers/assignments/seminars/case demonstrations/presentations/ write-ups/viva etc. (5 marks); and attendance (5 marks). The following weightage shall be given to attendance:

95% - 100% (5 marks)

90% - 94% (4 marks)

85% - 89% (3 marks)

80% - 84% (2 marks)

75% - 79% (1 mark)

14.3 Internal Assessment for practical courses involving Laboratory/Field work/Project work is 15, marks for Practical Record is 10, 25 marks for Practical end-semester exam.

14.4 A schedule of Internal Assessment tests shall be prepared by each College commonly to all departments in the beginning of each semester. Internal Assessment marks shall be displayed a week before the commencement of end-semester examinations.



14.5 End-semester examination shall be conducted for all courses offered. The duration of the end-semester examination shall be 3 hours.

14.6 Every student has to pay examination fee per Credit basis as fixed by the University.

14.7 A schedule of end-semester examinations will be prepared and displayed by the University much in advance.

14.8 No student with less than 75% in any particular course shall be permitted to attend the end-semester examination and shall be given grade FA-failure due to lack of attendance. However, an overall condonation of 10% is permitted for valid reasons (NCC, NSS, Swachh Bharat) or medical reasons. A student who has been awarded FA (Failure due to lack of Attendance) shall repeat the course when offered. The Principal/Head of the Department shall ensure that the candidate is informed about the lack of attendance before the commencement of end-semester examination and confirm that such candidates are not permitted to write the examination.

14.9 To pass a course the student must secure minimum of 40 out of 100 marks (40%) in the internal and the end-semester examination put together.

14.10 A student who has earned the required number of 120 credits by clearing all the required courses shall be declared as pass even if he/she could not clear optional courses which were taken in excess of the required number of courses.

14.11 Result Passing Board for each Programme of Study shall be constituted by the Pondicherry University from time to time.

14.12 Revaluation and re totalling of the answer scripts shall be allowed within the stipulated period of time as decided by the Controller of Examinations (COE) after paying the required amount of fee.

## **15. SUPPLEMENTARY EXAMINATION**

15.1 A failed student who meets the attendance requirement may be permitted to register for the next end-semester examination in the following semester itself for theory paper.(eg.for practical papers, those who failed in odd semester practical paper may be permitted to register for next odd end-semester examination).

15.2 Students who have failed due to insufficient attendance and /or less than 40%Internal Assessment marks should repeat the course as and when offered.

## 16. PROGRAMME COMMITTEE

16.1 The Programme Committee (PC) of each department shall be chaired by the Principal / Head of the institution. The HOD, all the faculty members offering DSC and DSE course and two students (one male and one female, where possible) from each class shall be Members of PC.

16.2 The PC shall meet at least once in a semester to discuss implementation of the program. The discussions and resolutions should be on adherence to time-table, proper syllabus coverage, introduction of new courses and all other issues concerning academic matters.

16.3 The minutes of the PCM must be communicated to the Chairman of BOS, Controller of Examinations and Dean, College Development Council of Pondicherry University.

## 17. GRADING AND GRADE CARD

17.1 Letter grades shall be used to assess the performance of students in each course by converting final marks (out of 100) into grades. In case of fractions the marks shall be rounded off to next integer. The following shall be used to convert marks into awarding grades:

Range of Marks	Letter Grade	Grade Point
96-100	O	10
86-95	A+	09
76-85	A	08
66-75	B+	07
56-65	B	06
46-55	C	05
40-45	P	04
Below 40	F	00
Lack of attendance	FA	00

17.2 The SGPA shall also be calculated by taking all courses taken by the student in the semester and CGPA shall also be calculated by taking all the courses taken by the student in all the semesters.

17.3 The University shall award 'class' to students who acquired 120 (see 10.2) according to the following:

<b>CGPA</b>	<b>Class</b>
9.00 – 10.00	First Class with Distinction (should not have failed in any course)
7.00 – 8.99	First Class
5.50 – 6.99	Second Class
4.00 – 5.49	Pass

17.4 The Grade card shall be issued to the students containing grades obtained by the student in the previous semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA).

The Grade card shall list the following:

- a. Title of the course taken by the student
- b. Number of credits allotted to the course
- c. The grades secured by the student in each course
- d. Total number of credits earned by the student in that semester
- e. SGPA of the student
- f. Total number of credits earned by the student till that semester
- g. CGPA of the student

## **18. FAIRNESS IN ASSESSMENT**

To ensure fairness of examination and evaluation following shall be followed:

18.1 In case of at least 50% of core courses offered in different programmes across the disciplines, the assessment of the theoretical component towards the end of the semester should be undertaken by external examiners from outside the university conducting examination, who may be appointed by the Controller of Examinations. In such courses, the question papers will be set as well as assessed by external examiners.

18.2 In case of the assessment of core practical courses, the team of examiners should be constituted on 50 – 50 % basis. i.e., half of the examiners in the team should be invited from outside the University for conducting examination.

18.3 In case of the assessment of project reports / thesis / dissertation etc. the work should be undertaken by internal as well as external examiners.

## 19. COMPUTATION OF SGPA AND CGPA

Following procedure to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) shall be followed:

19.1 The illustration is for a student who has taken 6 courses of given credits in a semester and performance is given in grade letter which carry certain grade point.

Course	Credit	Grade letter	Grade Point	Credit Point Credit x Grade
Course 1	3	A	08	3x08 = 24
Course 2	4	B+	07	4x07 = 28
Course 3	3	B	06	3x06 = 18
Course 4	3	O	10	3x10 = 30
Course 5	3	C	05	3x05 = 15
Course 6	4	B	06	4x06 = 24
	20			139

$$\text{SGPA} = 139/20 = 6.95$$

### 19.2 Illustration 2 for calculation of SGPA

A student registered for 6 (six) courses in a semester. At the end of the semester the student got A grade in a 4 credit course, A grade in 2 credit course B+ in a 3 credit course another B+ in a 3 credit course, B in a 3 credit course and F grade in a 3 credit course.

Calculation of SGPA of this student is:

$$\text{SGPA} = (8 \times 4 + 8 \times 2 + 7 \times 3 + 7 \times 3 + 6 \times 3 + 0 \times 3) / (4 + 2 + 3 + 3 + 3 + 3) = (32 + 16 + 21 + 21 + 18 + 00) / 18 = 108 / 18 = 6.00 \text{ Out of } 10.00.$$

SGPA of the student is 6.00.

### 19.3 Illustration for calculation of CGPA (Example)

The illustration is for calculation of CGPA of a student who studied six semesters in a UG program.

Semester	Credits	SGPA
Semester 1	20	6.95
Semester 2	22	7.80
Semester 3	18	5.65
Semester 4	21	6.04
Semester 5	19	7.21
Semester 6	20	7.85
Total	120	

CGPA =

$(20 \times 6.95 + 22 \times 7.80 + 18 \times 5.65 + 21 \times 6.04 + 19 \times 7.21 + 20 \times 7.85)$ divided by 120	$= 139.00 + 171.60 + 101.70 + 126.84 + 136.99 + 157.00 = 833.13 / 120 = 6.94275$ Rounded off to 6.94
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CGPA = 6.94. The student has passed in the program and is placed in 2nd Class.

**19.4 Transcript:** the University shall issue a transcript for each semester as given in 14.7 and a consolidated transcript indicating the performance in all semesters.

**PONDICHERY UNIVERSITY**

**COURSE STRUCTURE FOR B.Sc. HOME SCIENCE**

**(Choice Based Credit System- With effect from 2017-'18)**

COURSE	COURSE CODE	TITLE OF THE COURSE/ PAPER	CREDITS/HOURS ALLOTTED	
			Theory	Practicals
<b>SEMESTER- I 20 Credits</b>				
MIL-1	LTAM/LHIN/LMAL/ LTEL/LFRE/LBEN/ LSAN 111	Tamil/ Hindi/ Malayalam/Telugu/ Bengali/ Sanskrit	03	--
ENGLISH-1	ENGL 112	English-1	03	--
DSC-IA	UHSC 111	Food Science- Non perishable Ingredients	04	02
DSC-2A	UHSC 112	Human Physiology	04	02
AECC-1	PADM 113	Public Administration	02	--
Practical	UHSC 112(PI)	Human Physiology		
<b>SEMESTER- II 20 Credits</b>				
MIL-2	LTAM/ LHIN/LMAL/LTEL/ LFRE/LBEN/LSAN 121	Tamil/ Hindi/ Malayalam/Telugu/ Bengali/ Sanskrit	03	--
ENGLISH-2	ENGL 122	English-2	03	--
DSC-IB	UHSC 121	Food Science- Perishable Ingredients	04	02
DSC-2B	UHSC 122	Food Microbiology	04	02
AECC-2	ENVS 123	Environmental Studies	02	--
Practical	UHSC 111&121(PE)	Food Science		
	UHSC 122(PI)	Food Microbiology		
<b>SEMESTER- III 20 Credits</b>				
MIL-3	LTAM/LHIN/LMAL/L TEL/LFRE/LBEN/ LSAN 231	Tamil/ Hindi/ Malayalam/Telugu/ Bengali/ Sanskrit	03	--
ENGLISH-3	ENGL 232	English-3	03	--
DSC-IC	UHSC 231	Fundamentals of Human Nutrition	04	02
DSC-2C	UHSC 232	Dietetics for Normal Conditions	04	02
SEC- 1	UHSC 233	Fundamentals of Tourism& Hospitality Management	02	--
Practical	UHSC 231(PI)	Fundamentals of Human Nutrition		

<b>SEMESTER- IV 20 Credits</b>				
MIL-4	LTAM/ LHIN/LMAL/LTEL/ LFRE/LBEN/LSAN 241	Tamil/ Hindi/ Malayalam/Telugu/ Bengali/ Sanskrit	03	--
ENGLISH-4	ENGL 242	English-3	03	--
DSC-ID	UHSC 241	Dietetics for Therapeutic Conditions	04	02
DSC-2D	UHSC 242	Human Development	04	02
SEC- 2	UHSC 243	Computer Applications	--	02
Practical*	UHSC 232&241(PE)	Dietetics		
	UHSC 242(PI)	Human Development		
	UHSC 243(PE)	Computer Applications		
<b>SEMESTER- V 20 Credits</b>				
SEC-3	UHSC 351	NGOs & Corporate Social Responsibility	02	--
DSE-1A**	UHSC 352	Fundamentals of Textiles	03	02
DSE- 2A**	UHSC 353	Family Resource Management	05	--
DSE-3A**	UHSC 354	Family Dynamics	05	--
(Choose any 3 out of 5) 352&353 is compulsory for Home Science.	UHSC 355	Nutritional Assessment & Surveillance	05	--
	UHSC 356	Extension Education	05	--
GE-1	UHSC 357	Fundamentals of Adolescent Health	03	
<b>SEMESTER- VI 20 Credits</b>				
SEC-4	UHSC 361	Entrepreneurship Development	02	
DSE-1B**	UHSC 362	Clothing Care &Construction	03	02
DSE-2B**	UHSC 363	Housing &Interior Decoration	03	02
DSE-3B**	UHSC 364	Personal Finance & Consumer Studies	05	--
(Choose any 3 out of 5)362 &363 is compulsory for Home Science.	UHSC 365	Food Safety and Quality Control	05	--
	UHSC 367	Gender and Development	05	--
GE-2	UHSC 368	Alternate Healing Traditions in India	03	--
Practical*	UHSC 352&362(PE)	Textiles &Clothing Construction		
	UHSC363(PE)	Housing &Interior Decoration		

\*Course code ending with (PE) denotes Practical External, (PI) denote Practical Internal and (T) denotes Theory, \*\* Electives

**Number of Courses:**

B.Sc. Home Science (CBCS)	Course with Credit						
	Semester	MIL	ENG	DSC	DSE	SEC	AECC
<b>I</b>	01	01	02	--	--	01	--
<b>II</b>	01	01	02	--	--	01	--
<b>III</b>	01	01	02	--	01	--	--
<b>IV</b>	01	01	02	--	01	--	--
<b>V</b>	--	--	--	03	01	--	01
<b>VI</b>	--	--	--	03	01	--	01
<b>Total</b>	<b>04</b>	<b>04</b>	<b>08</b>	<b>06</b>	<b>04</b>	<b>02</b>	<b>02</b>
<b>Total No. of Papers = 30</b>							

**Details of Courses for B.Sc. Home Science**

**I. DSC 1 - DISCIPLINE SPECIFIC CORE** –for Home Science main- Compulsory

(Eight papers)**T- Theory, P- Practical**

1. Food Science: Non-Perishable Ingredients (T+P)
2. Human Physiology (T+P)
3. Food Science- Perishable Ingredients (T+P)
4. Food Microbiology (T+P)
5. Fundamentals of Human Nutrition (T+P)
6. Dietetics for Normal Conditions (T+P)
7. Dietetics for Therapeutic Conditions (T+P)
8. Human Development (T+P)

**II. SEC- SKILL ENHANCEMENT COURSES-** (for Home Science main)

(Four papers)

1. Fundamentals of Travel & Tourism
2. Computer Applications (Only P)
3. NGOs & Corporate Social Responsibility
4. Entrepreneurship Development

**III. DSE- DISCIPLINE SPECIFIC ELECTIVES** (for Home Science main)

**DSE-1A (Choose any 3)**

1. Fundamentals of Textiles– Compulsory (T+P)
2. Family Resource Management– Compulsory
3. Family Dynamics
4. Nutritional Assessment & Surveillance
5. Extension Education



**DSE-1B (Choose any 3)-** (for Home Science main)

1. Clothing Construction - Compulsory (T+P)
2. Housing & Interior Decoration -Compulsory (T+P)
3. Personal Finance & Consumer Studies
4. Food Safety and Hygiene
5. Gender and Development

**DSE-2A&DSE- 3A** (for Non-Home Science main)

(Any two papers)

1. Family Dynamics
2. Nutritional Assessment & Surveillance
3. Extension Education

**DSE-2B&DSE- 3B** (for Home Science & Non-Home Science main)

(Any two papers)

1. Personal Finance & Consumer Studies
2. Food Safety and Hygiene
3. Gender and Development

**IV. GE- GENERIC ELECTIVE**– Open for Home Science & Non- Home Science

GE- 1 Fundamentals of Adolescent Health

GE- 2 Alternate Healing Traditions in India

**V. AECC- ABILITY ENHANCEMENT COURSES-** (Compulsory)

1. Public Administration
2. Environmental Studies

**VI. MIL- MODERN INDIAN LANGUAGES**

Bengali/ Hindi/ Malayalam/ Sanskrit/ Tamil/ Telugu/

**VII. ENGLISH**

**PONDICHERRY UNIVERSITY**

**COURSE STRUCTURE FOR B.Sc. HOME SCIENCE**

**(Choice Based Credit System- With effect from 2017-'18)**

COURSE	COURSE CODE	TITLE OF THE COURSE/ PAPER	CREDITS/HOURS ALLOTTED	
			Theory	Practicals
<b>SEMESTER- I 20 Credits</b>				
MIL-1	LTAM/LHIN/LMAL/ LTEL/LFRE/LBEN/ LSAN 111	Tamil/ Hindi/ Malayalam/Telugu/Bengali / Sanskrit	03	--
ENGLISH-1	ENGL 112	English-1	03	--
DSC-IA	UHSC 111	Food Science: Non-Perishable Ingredients	04	02
DSC-2A	UHSC 112	Human Physiology	04	02
AECC-1	PADM 113	Public Administration	02	--
Practical	UHSC 112(PI)	Human Physiology		
<b>SEMESTER- II 20 Credits</b>				
MIL-2	LTAM/LHIN/LMAL/ LTEL/LFRE/LBEN/ LSAN 121	Tamil/ Hindi/ Malayalam/Telugu/ Bengali/ Sanskrit	03	--
ENGLISH-2	ENGL 122	English-2	03	--
DSC-IB	UHSC 121	Food Science: Perishable Ingredients	04	02
DSC-2B	UHSC 122	Food Microbiology	04	02
AECC-2	ENVS 123	Environmental Studies	02	--
Practical	UHSC 111&121(PE)	Food Science		
	UHSC 122(PI)	Food Microbiology		
<b>SEMESTER- III 20 Credits</b>				
MIL-3	LTAM/LHIN/LMAL/ LTEL/LFRE/LBEN/ LSAN 231	Tamil/ Hindi/ Malayalam/Telugu/Bengali / Sanskrit	03	--
ENGLISH-3	ENGL 232	English-3	03	--
DSC-IC	UHSC 231	Fundamentals of Human Nutrition	04	02
DSC-2C	UHSC 232	Dietetics for Normal Conditions	04	02
SEC- 1	UHSC 233	Fundamentals of Tourism & Hospitality Industry	02	--
Practical	UHSC 231(PI)	Fundamentals of Human Nutrition		
<b>SEMESTER- IV 20 Credits</b>				

MIL-4	LTAM/ LHIN/LMAL/LTEL/ LFRE/LBEN/LSAN 241	Tamil/ Hindi/ Malayalam/Telugu/ Bengali/ Sanskrit	03	--
ENGLISH-4	ENGL 242	English-3	03	--
DSC-ID	UHSC 241	Dietetics for Therapeutic Condition	04	02
DSC-2D	UHSC 242	Human Development	04	02
SEC- 2	UHSC 243	Computer Applications	--	02
Practical*	UHSC 232&241(PE)	Dietetics		
	UHSC 242(PI)	Human Development		
	UHSC 243 (PE)	Computer Applications		
<b>SEMESTER- V 20 Credits</b>				
SEC-3	UHSC 351	NGOs & Corporate Social Responsibility	02	--
DSE-1A** DSE- 2A** DSE-3A** (Choose any 3 out of 5) 352&353 is compulsory for Home Science.	UHSC 352	Fundamentals of Textiles	03	02
	UHSC 353	Family Resource Management	05	--
	UHSC 354	Family Dynamics	05	--
	UHSC 355	Nutritional Assessment & Surveillance	05	--
	UHSC 356	Extension Education	05	--
GE-1	UHSC 357	Fundamentals of Adolescent Health	03	
<b>SEMESTER- VI 20 Credits</b>				
SEC-4	UHSC 361	Entrepreneurship Development	02	
DSE-1B** DSE-2B** DSE-3B** (Choose any 3 out of 5)362 &363 is compulsory for Home Science.	UHSC 362	Clothing Care &Construction	03	02
	UHSC 363	Housing &Interior Decoration	03	02
	UHSC 364	Personal Finance & Consumer Studies	05	--
	UHSC 365	Food Safety and Quality Control	05	--
	UHSC 367	Gender and Development	05	--
GE-2	UHSC 368	Alternate Healing Traditions in India	03	--
Practical*	UHSC352&362(PE)	Textiles & Clothing Construction		
	UHSC363(PE)	Housing &Interior Decoration		

\*Course code ending with (PE) denotes Practical External, (PI) denote Practical Internal and (T) denotes Theory, \*\* Electives

**SEMESTER I**

**20 Credits**

COURSE	COURSE CODE	TITLE OF THE COURSE/ PAPER	CREDITS/HOURS ALLOTTED	
			Theory	Practical
MIL-1	LTAM/LHIN/LMAL/ LTEL/LFRE/LBEN/ LSAN 111	Tamil/ Hindi/ Malayalam/Telugu / Bengali/ Sanskrit	03	--
ENGLISH-1	ENGL 112	English-1	03	--
DSC-IA	UHSC 111	Food Science: Non-Perishable Ingredients	04	02
DSC-2A	UHSC 112	Human Physiology	04	02
AECC-1	PADM 113	Public Administration	02	--
Practical	UHSC112(PI)	Human Physiology		

**Discipline Specific Core- Home Science**

**SEMESTER :1**

**FOOD SCIENCE: NON-PERISHABLE INGREDIENTS**

**(Credits: Theory-4, Practical-2)**

**Course Code: UHSC 111**

**Max. Marks :100 (ICA = 25 + ESE = 75)**

**THEORY**

**Objective:**

To enable the students to obtain knowledge of different food groups, their composition, nutrients present, appropriate cooking methods for nutrient conservation and their role in diet with respect to ingredients with longer shelf life.

**UNIT I**

Meaning, definition & functions of food. Food groups – Basic Five, classification of foods. Asian food pyramid.

Objectives of cooking, preliminary preparations, advantages and disadvantages of cooking, cooking methods--moist and dry heat method, combination method, their advantages and disadvantages. Microwave & solar cooking.

**UNIT II**

Cereals: Structure, composition, nutritive value, processing and effects of processing of rice, wheat & ragi. Gluten formation, gelatinization, dextrinisation and factors affecting it.

Cereal cookery- fermented and unfermented products of cereals, millets, breakfast cereals.

**UNIT III**

Pulses: Nutritive value, processing and effects of processing, toxic constituents of pulses. Highlighting soyabeans. Nutritional implication of germination.

Nuts and oilseeds – nutritive value of commonly used nuts (Groundnut, cashew nut, almond) processing of oilseeds (groundnut, sesame).

**UNIT IV**

Fats and oils: Types and nutritive value, processing, changes during storage. Meaning of hydrogenation, rancidity, smoking point, emulsification. Role of fat/oil in cookery.

## **UNIT V**

Spices and Condiments: Types, uses in Indian cookery.

Sugar: Properties, types, sugar related products, artificial sweeteners. Sugar cookery.

### **PRACTICAL**

1. Familiarization with different kitchen gadgets.

2. Methods of measuring dry ingredients and liquids.

#### **3. Cereal cookery**

- a. Methods of combining flour with liquid eg. Powdered cereal coarse (eg. Phirnee, broken wheat uppuma) and fine (eg. Ragi porridge, wheat halwa).
- b. Cereal Grains: different methods of cooking rice – straining, absorption – cooking over slow heat, pressure cooking, addition of fat, microwave and electric rice cooker.
- c. Recipes with rice.

#### **4. Pulse Cookery**

- a. Different methods of cooking pulses – hard water, soft water, soaking, addition of soda bicarbonate, addition of raw papaya, pressure cooking eg. Any whole gram and dhal.
- b. Recipes with pulses.

5. **Sugar cookery:** Stages of sugar cookery – Caramelisation, Crystallisation. Preparation of selected common recipes.

### **TEXTBOOKS**

1. Manay N.S., and Shadaksharaswamy, M (2001): Foods, facts and principles, New Age International Pvt. Ltd., publishers, New Delhi.
2. Mudambi S.R and Rajagopal V.M: Fundamentals of Foods and Nutrition, Wiley Eastern Ltd., New Delhi.
3. Srilakshmi B, (2005): Food Science, New Age International Publishers, New Delhi.
4. Usha Chandrasekhar, Food Science and Application in Indian Cookery, Phoenix Publishing House P. Ltd., New Delhi, 2002.

### **REFERENCES**

1. Belitz H.D (2005): Food Chemistry, Springer Verlag.
2. Potter, N. and Hotchkiss, J.H. (1996): Food Science, Fifth edition, CBS.
3. Van Garde. J & Woodbush M. (1999): Food Preservation-Safety, Principles and Practice, Surabhi Publications, Jaipur.
4. Sood S and Khetar Paul N. (2002), Food Preservation, Agrotech Pub. Co., Udaipur.

**Discipline Specific Core- Home Science**

**SEMESTER : I**

**HUMAN PHYSIOLOGY**

**(Credits: Theory-4, Practical-2)**

**Course Code: UHSC 112**

**Max. Marks :100 (ICA = 25 + ESE = 75)**

**THEORY**

**Objectives**

To enable the students to:

- Understand the structure and functions of various organs of the body
- Obtain a better understanding of the principles of nutrition through the study of physiology
- Highlight the influence of improper functioning of the organ system and disease

**UNIT I**

Cell: Structure, Functions. Tissues – Structure and functions of epithelial, connective, muscular and nervous tissue. Water and electrolyte balance.

Digestive System: Structure of digestive tract and Process of digestion and absorption. Role of hormones in digestion, movements of small intestine. Liver and its functions.

**UNIT II**

Circulatory System: Blood-Composition and functions – RBC, WBC and Platelets. Blood groups, coagulation, blood volume. Structure and functions of heart and blood vessels, ECG, cardiac cycle. Blood pressure-factors influencing blood pressure.

**UNIT III**

Respiratory and Excretory System: Respiratory System: Structure of the respiratory system, mechanism of respiration. Exchange of Gases- Chloride Shift, respiratory volume.

Excretory system: Kidney and Nephron – structure and functions, formation and composition of urine. Micturition (in brief).

Skin – structure and functions – regulation of body temperature.

**UNIT IV**

Endocrine and Reproductive System: Endocrine system: Structure and functions of pituitary, thyroid, para thyroid, adrenals, Islets of langerhans and sex glands.

Reproductive System: General anatomy of female and male reproductive organs. Physiology of menstruation and fertilization. Physiology of lactation.



## **UNIT V**

Nervous System and Special Senses: Nervous systems - Structure and functions of brain and spinal cord.

Special Senses: Structure of eye and ear. Organs of taste and smell.

### **PRACTICAL- Code No. UHSC 112(PI)- INTERNAL**

1. Identification of blood cells- estimation of Hb (Sahles method & Cyanmethglobin method).
2. Blood grouping and Estimation of coagulation time.
3. Recording of BP.
4. Recording of pulse rate.

### **TEXTBOOKS**

1. Meyer B J, Meij H S and Meyer A C., (2003): Human Physiology, AITBS Publishers and Distributors.
2. Wilson, K.J.W and Waugh, A. (1996): Ross and Wilson, Anatomy and Physiology in Health and Illness, 8<sup>th</sup> Edition, Churchill Livingstone.

### **REFERENCES**

1. Ranganathan, T.S. (2004): A Textbook of Human Anatomy, Chand & Co. N. Delhi.
2. Jain, A.k. Textbook of Physiology, Vol. I & II, Avichal Publishing Co., New Delhi.
3. Chatterjee C.C. (1998): Human Physiology, Vol. I & II, Medical Allied Agency, Calcutta.
4. Guyton, A.G. and Hall, J.B. (1996): Text Book of Medical Physiology, (9<sup>th</sup> Edition, W.B.Sanders Company, Prism Books (Pvt.) Ltd., Bangalore.
5. Subramaniam and Kutty.S.M. (2001). Text Book of Human Physiology. New Delhi:S.Chand & Company Ltd.

**SEMESTER II**

**20 Credits**

COURSE	COURSE CODE	TITLE OF THE COURSE/ PAPER	CREDITS/HOURS ALLOTTED	
			Theory	Practicals
MIL-2	LTAM/ LHIN/LMAL/LTEL/ LFRE/LBEN/LSAN 121	Tamil/ Hindi/ Malayalam/Telugu / Bengali/ Sanskrit	03	--
ENGLISH-2	ENGL 122	English-2	03	--
DSC-IB	UHSC 121	Food Science: Perishable Ingredients	04	02
DSC-2B	UHSC 122	Food Microbiology	04	02
AECC-2	ENVS 123	Environmental Studies	02	--
Practical	UHSC 111&121(PE)	Food Science		
	UHSC 122(PI)	Food Microbiology		

**Discipline Specific Core- Home Science**

**SEMESTER :II**

**FOOD SCIENCE :PERISHABLE INGREDIENTS**

**(Credits: Theory-4, Practical-2)**

**Course Code: UHSC 121**

**Max. Marks :100 (ICA = 25 + ESE = 75)**

**THEORY**

**Objective:**

To enable the students to obtain knowledge of different food groups, their composition, nutrients present, appropriate cooking methods for nutrient conservation and their role in diet with respect to food ingredients with lesser shelf life and are perishable.

**UNIT I**

Milk: Composition, properties, nutritive value and processing of milk. Effect of heat, acid, enzymes and salt on milk. Milk Products – Fermented and unfermented. Milk cookery.

**UNIT II**

Meat: Structure, composition and nutritive value. Post – mortem changes, ageing, tenderising and curing of meat. Meat cookery – changes during cooking.

Poultry: Classification, composition and nutritive value. Eggs – structure, composition, nutritive value. Evaluation of quality. Egg cookery.

Fish: Classification, composition, nutritive value. Selection, factors affecting spoilage. Fish cookery.

**UNIT III**

Vegetables& Fruits: Classification, selection, composition, pigments, enzymes, flavor compounds, nutritive value.

Effect of cooking on colour, texture, flavor, appearance and nutritive value. Storage of vegetables. Role of mushroom, spirulina in diet as alternate source with algae and fungi base.

Fruits: Classification, selection, pigments, enzymes and nutritive value, post harvest changes and storage. Browning reactions – enzymatic and non-enzymatic.

**UNIT IV**

Preservation: Principles and methods (in brief)

Food Additives: Types and uses.

Food Adulteration: Definition, types, intentional and incidental adulterants. Food laws and Standards (in brief)

## **UNIT V**

Organic foods: Organic farming, its advantages and limitations, certification.

Genetically modified foods: Meaning and process of GM foods (in brief), its advantages and limitations.

Food technology: Principles and importance of Fortification and enrichment, HACCP, nutraceuticals, and space foods

### **PRACTICAL : Code: UHSC111&122(PE)**

1. **Milk cookery:** Experimental milk cookery. Preparation of selected common recipes.
2. **Egg cookery:** Experimental cookery on eggs-boiled eggs, poached eggs, Omelettes and custards. Preparation of selected common recipes.
3. **Vegetables Cookery**
  - a. Different methods of cooking vegetables – effect of shredding, dicing, acid and alkali, pressure cooking, steaming with and without lid. Eg. Potato, beetroot, carrot and greens. Recipes with Vegetables
4. **Fruits:** Prevention of browning on fruits. Preparation of selected common recipes.

**RELATED EXPERIENCE :** Visit to any regional food processing industry

### **TEXTBOOKS**

1. Manay N.S., and Shadaksharaswamy, M (2001): Foods, facts and principles, New Age International Pvt. Ltd., publishers, New Delhi.
2. Mudambi S.R and Rajagopal V.M: Fundamentals of Foods and Nutrition, Wiley Eastern Ltd., New Delhi.
3. Srilakshmi B, (2005): Food Science, New Age International Publishers, New Delhi.
4. Usha Chandrasekhar, Food Science and Application in Indian Cookery, Phoenix Publishing House P. Ltd., New Delhi, 2002.

### **REFERENCES**

1. Belitz H.D (2005): Food Chemistry, Springer Verlag.
2. Potter, N. and Hotchkiss, J.H. (1996): Food Science, Fifth edition, CBS.
3. Van Garde. J & Woodbush M. (1999): Food Preservation-Safety, Principles and Practice, Surabhi Publications, Jaipur.
4. Sood S and Khetar Paul N. (2002), Food Preservation, Agrotech Pub. Co., Udaipur.

**Discipline Specific Core- Home Science**

**SEMESTER :II**

**FOOD MICROBIOLOGY**

**(Credits: Theory-4, Practical-2)**

**Course Code: UHSC 122**

**Max. Marks :100 (ICA = 25 + ESE = 75)**

**THEORY**

**Objectives**

To enable students to:

- Understand the role of microbes in health and diseases
- Study the microbes in relation to food spoilage, food-borne diseases and food preservation

**UNIT I**

Bacteria: Bacterial Morphology, characteristics, reproduction

Moulds: General characteristics and importance of moulds.

Yeast: General characteristics and importance of Yeasts.

**UNIT II**

Virus: General characteristics of viruses.

Protozoa: General characteristics of protozoa.

Soil microbiology: Role of microbes in Nitrogen cycle-with special emphasis on pseudomonas and clostridium (in brief).

**UNIT III**

Microbes in water- Bacteriological examination of water, Test for E.Coli. (in brief)

Microbes in air- Droplet infection and air- borne diseases and their control. (in brief)

Meaning of food poisoning, food infection and their control. Meaning, importance and process of food preservation (in brief).

Sterilization and Disinfection - Principles and methods of sterilization, physical and chemical disinfectants-advantages (in brief).

#### **UNIT IV**

Spoilage, contamination and preservation of fruits

Spoilage, contamination and preservation of vegetables

Spoilage, contamination and preservation of dairy products

#### **UNIT V**

Spoilage, contamination and preservation of meat

Spoilage, contamination and preservation of fish

Spoilage, contamination and preservation of poultry

#### **PRACTICAL- Code No.: UHSC122(PI)- INTERNAL**

1. Microscopic identification of microorganisms (prepared slides).
2. Hanging drop preparation for motility of bacteria.
3. Staining of Bacteria – gram staining.
4. Testing the quality of milk – Detection of Acidity (Clot on Boiling test, Alcohol test), Direct microscopic count, Standard plate count, Methylene Blue Reductase test, Phosphatase test, Turbidity test.

#### **TEXT BOOKS**

1. Anna. K. Joshua, Microbiology, Popular book depot, Chennai, 2002.
2. Michael. J. Pelezar, J.R.Chan, E.Cs.Noel, Microbiology, Tata McGraw – Hill publications co ltd., New Delhi 1998.
3. Power and Daginawala, General Microbiology, Himalaya publishing house, Bombay, 1996.

#### **REFERENCES**

1. Frazier W.C. and west Hoff D.C. 4th edition, Food microbiology, McGraw Hill publishing limited, New Delhi.1998.

**Discipline Specific Core- Home Science**

**SEMESTER :III**

**FUNDAMENTALS OF HUMAN NUTRITION**

**(Credits: Theory-4, Practical-2)**

**Course Code: UHSC231**

**Max. Marks :100 (ICA = 25 + ESE = 75)**

**THEORY**

**Objectives**

To enable the students to:

- Gain basic knowledge of the different nutrients and their role in human health
- Gain insight into health problems associated with imbalance of nutrient intake
- Understand the signs, symptoms, toxicity of various nutrients

**UNIT I**

Recommended dietary allowances: Definition, General principles of deriving RDA, Factors affecting RDA, uses of RDA. Indian Reference Woman and Indian Reference Man.

Carbohydrates: Definition, Nutritional classification, Functions, Requirements and Sources, Regulation of Blood Sugar level.

Dietary Fibre: Definition, Classification, sources, Role of fibre in preventing disease.

**UNIT II**

Proteins: Definition, Composition, Nutritional classification of protein and amino acids, Functions of Proteins and amino acids, Sources and Requirements, Deficiency; Evaluation of Protein quality – PER, BV, NPU and chemical score.

Lipids: Definition, Composition, Nutritional classification, Functions, Sources and requirements; Essential fatty acids – Definition, Functions, Sources and effects of deficiency.

**UNIT III**

Energy: Definitions, Energy units, Determination of energy value of foods by direct and indirect calorimetry and physiological Energy Value of foods.

BMR: Definitions, Determinations, Factors affecting the BMR; Energy requirements for physical activity – Factorial method, Energy requirement and sources.

#### **UNIT IV**

Minerals: Classification and General Functions.

Macro minerals: Calcium, Phosphorus, Magnesium, Sodium and Potassium – Functions, Requirements, Sources, Effects of Deficiency, Effect of imbalance of Sodium and Potassium.

Micro Minerals: Iron, Iodine, Copper, Fluorine and Zinc – Functions, Requirements, Sources and Effect of Deficiency.

#### **UNIT V**

Vitamins – Deficiency, Classification and General Functions.

Fat Soluble Vitamins – Vitamin A, D, E and K – Functions, Requirements, Sources and Effect of deficiency.

Water soluble vitamins: Thiamine, Riboflavin, Niacin, Ascorbic acid, Folic acid, Vitamin B6 and B12 – Functions, Requirements, Sources and Effects of deficiency.

### **PRACTICAL- CODE NO. UHSC231(PI)- INTERNAL**

#### **Qualitative Analysis**

1. Qualitative identification of carbohydrates – glucose, fructose, galactose, sucrose, maltose, lactose.
2. Preparation of Osazones and their identification.
3. Qualitative identification of amino acids – histidine, tyrosine, tryptophan, cysteine, arginine.
4. Qualitative tests for minerals.

#### **Quantitative Analysis**

1. Quantitative estimation of glucose.
2. Estimation of ascorbic acid in citrus fruits.
3. Estimation of milk calcium- processed and unprocessed.
4. Estimation of Phosphorous.
5. Estimation of Iron.

#### **TEXT BOOKS**

1. Swaminathan, M., Essentials of food and Nutrition, Vol I & II, Bappco Publishers, Madras 2000.
2. Srilakshmi. B., Nutrition Science, New age International (p) ltd, publishers, 2004.



**REFERENCE**

1. Frances sizer and Ellie whitney, Nutrition Concepts andControversies, Thomson wadsworth Publisher, New York, 2006.
2. MangaleKango, Normal Nutrition, Curing Diseases through Diet, CBS publication, First edition, 2005.
3. Bonnie, Worthington – Roberts and Sue Rodwell Williams, Nutrition throughout the lifecycle, 3rd edition, WCB/MC Graw Hill Publisher, New York, 1996.
4. Paul. S., Text of Bio Nutrition Fundamental and Management, RBSA Publishers, 2003

**Discipline Specific Core- Home Science**

**SEMESTER:III**

**DIETETICS FOR NORMAL CONDITION**

**(Credits: Theory-4, Practical-2)**

**Course Code: UHSC232**

**Max. Marks :100 (ICA = 25 + ESE = 75)**

**THEORY**

**Objectives**

To enable the students to:

- Understand the Physiological basis for Nutrition
- Get familiarised with the basic concepts and gain experience in Planning and Preparation of meals for various age group at different income level and conditions based on their nutritional needs.
- Get exposed to responsibilities of a dietician

**UNIT I**

Dietician: Classification, responsibilities, code of ethics. Nutritional care process, medical history assessment, assessment of patient needs.

Dietary counselling :Different methods, handling the patient and the patient" s family during counselling, principles of family counselling, evaluation of the effectiveness of counselling, education of the patient and follow up. Indian Dietetic Association: Evolution in India, and its functions

**UNIT II**

Basic principles of menu and meal planning. Factors to be considered in menu planning.

Pregnancy: Physiological stages of pregnancy, food and nutritional requirements (ICMR), dietary guidelines, diet plan, complications of pregnancy (in brief)- gestational diabetes, hyperemesis gravidarum, pregnancy induced Hypertension (PIH), toxemia. Physiological cost of pregnancy.

Lactation: Physiology of lactation, food and nutritional requirements (ICMR), dietary guidelines, significance of lactogogues, diet plan, problems during lactation.

### **UNIT III**

Infancy: Growth and development, food and nutritional requirements (ICMR). Breast feeding, artificial feeding, infant formula, supplementary foods, weaning. Feeding problems. Nutritional requirements for preterm.

Pre-schoolers – Growth and development, food and nutritional requirements (ICMR), dietary guidelines, diet plan. Nutrition related problems – Protein Energy Malnutrition, Vitamin A deficiency. School children – Growth and development, food and nutritional requirements, dietary guidelines, diet plan, importance of snacks, packed lunch. Nutrition related problems – underweight, overweight, obesity.

### **UNIT IV**

Adolescence: Growth and development, food and nutritional requirements (ICMR), dietary guidelines, diet plan. Food choices – Eating habits and the influencing factors. Eating disorders of adolescents-Anorexia, Bulimia

Adulthood – Classification of activities, food and nutritional requirements (ICMR), dietary guidelines, diet plan. Nutrition related problems – Anaemia, obesity.

### **UNIT V**

Geriatric nutrition: Food and nutritional requirements (ICMR), dietary guidelines, diet plan, nutritional related problems-osteoporosis, osteomalacia, constipation. Factors affecting food intake, nutritional supplementation.

### **PRACTICAL**

1. Planning and preparation of diet of adult men and women for different activities sedentary, moderate, heavy worker and income groups.
2. Planning and preparation of diet for a pregnant and a nursing mother for different income groups.
3. Planning and preparation of diet for a pre school child, packed lunch for different income groups.
4. Planning and preparation of diet for an adolescent for different income groups.
5. Planning and preparation of diet for an obese adult for different income groups.
6. Planning and preparation of diet for the aged from different income groups.

**TEXTBOOKS**

1. Corinne, H. Robinson (2010), "Normal and Therapeutic nutrition", Oxford and IBHpublishing company, Bombay.
2. B. Srilakshmi (2012), "Dietetics",4th edition, New age international Publisher, Chennai.

**REFERENCES**

1. Gopalan, C., Balasubramanian, (2012) , "Nutritive value of Indian foods", NIN,ICMR, Delhi

**Skill Enhancement Course- SEC-1**

**SEMESTER:III**

**FUNDAMENTALS OF TOURISM & HOSPITALITY MANAGEMENT**

**(Credits: 2)**

**Course Code: UHSC232**

**Max. Marks :100 (ICA = 25 + ESE = 75)**

**THEORY**

**Objective:**

To enable the students to be familiarised with the nuances of Tourism & Hospitality industry

**UNIT I**

Meaning, Significance and History of Tourism in India

Tourism industry: Systems, components, infrastructure

Types of Tourism: Ecotourism, Heritage tourism, Medical tourism, Educational tourism etc.

**UNIT II**

Travel Agent: Types of travel agencies, Functions of travel agency, How to setup travel agency, sources of income for a Travel Agency

The tour operator: Types of tour operators, packages tour, guides and escorts.

Formalities and regulations for tourism (in brief): Passport, Visa, Health Regulations for International Travel, Customs Regulations, Emigration and Immigration, Taxes Paid by Travellers & Travel Insurance

Itinerary Planning: Meaning, components, resources for planning, calculation of tour cost

**UNIT III**

Hospitality Management: Meaning, Principles, Scope, Accountancy and Book Keeping

**UNIT IV**

Hospitality Institutions: Meaning & types, understanding the basic culinary and catering terminologies, Classification of Hotels, Hotel divisions & departments, Functions & personnel in Front Office Management & House Keeping,

**UNIT V**

Types of services offered in the hotel, Types of menu, Room setting, Table setting & different types of napkin folds.

**RELATED EXPERIENCE (Any three)**

1. Learn to read railway Time Table.
2. Learn to see railway time table, flight" s time table etc on internet and how to do booking, ticketing.
3. Prepare a list for places of interest in India and abroad under each type of tourism.
4. Prepare a list of tour operators working at local, National and International level.
5. Visit various tour organizers and study their set up, management and functioning.
6. Prepare brochure for places of tourist interest at local and National level.
7. Visit airports to understand the functioning of local and International air travel. Prepare itinerary for tour organization.
8. Visit Hotels to see various types of accommodation facilities.
9. Prepare a brochure to express Do" s and Don" ts for a tourist.
10. Visit places of tourist interest; assess the present status for their maintenance, aesthetics, services, security and expectations from the visitors and other such factors.

**RECOMMENDED READINGS**

1. Kamra, K.K and M.Chand, Basics of Tourism-Theory, Operation and Practice, Kanishka Publishers, New Delhi. First Edition. 2006.
2. Puri M. and G.Chand, Tourism Management, Pragun Publications, New Delhi. First Edition.2006.
3. Roday .S, Biwal .A. and Joshi. V., TOURISM Operations and Management, Oxford University press publication , New Delhi, First addition 2009
4. Metti, M.C, Hotel Management and Catering, Anmol Publisher, New Delhi, 2008
5. June Payne-Palacio and Monica Theis, Foodservice Management: Principles and Practices, Pearson Publisher, 13<sup>th</sup> Global edition, 2012
6. Mohini Sethi, Institutional Food Management, New Age International Publishers, (2<sup>nd</sup> Edn), 2016.

<b>SEMESTER- IV 20 Credits</b>				
MIL-4	LTAM/ LHIN/LMAL/LTEL/ LFRE/LBEN/LSAN 241	Tamil/ Hindi/ Malayalam/Telugu/ / Bengali/ Sanskrit	03	--
ENGLISH-4	ENGL 242	English-3	03	--
DSC-ID	UHSC 241	Dietetics for Therapeutic Condition	04	02
DSC-2D	UHSC 242	Human Development	04	02
SEC- 2	UHSC 243	Computer Applications	--	02
Practical*	UHSC 232 & 241(PE)	Dietetics		
	UHSC 243 (PE)	Computer Applications		

**Discipline Specific Core: Home Science**

**SEMESTER :IV**

**DIETETICS FOR THERAPEUTIC CONDITIONS**

**(Credits: Theory-4, Practical-2)**

**Course Code: UHSC241**

**Max. Marks: 100 (ICA = 25 + ESE = 75)**

**THEORY**

**Objectives**

To enable the students to:

- Acquire knowledge on the clinical, biochemical changes and dietary management of various diseases
- Gain knowledge in planning and preparation of Therapeutic diets.
- Manage to make appropriate dietary modification for various disease conditions, skills and attributes required to meet entry level competency required for a dietician

**UNIT I**

Therapeutic adaptation of normal diets, principles and classification of therapeutic diets. Meaning and importance of functional foods and food exchange list

Routine hospital diets: Regular diet, light diet, soft diet, fluid diet. Enteral feeding – naso-gastric, naso-jejunal, parenteral feeding-central and peripheral; elemental diet.

Modification of diet and during surgical conditions – pre-operative and post-operative conditions.

**UNIT II**

Cardiovascular diseases: Atherosclerosis, hypertension, hypercholesterolemia, hypertriglyceridemia – Prevalence, pathology, risk factors.

Nutrient requirements, modifications of diet and planning menus – high fiber, low fat, sodium restricted diet.



### **UNIT III**

Gastro-Intestinal tract diseases: Etiology, symptoms and diet treatment for diarrhoea and constipation gastritis, peptic ulcer and ulcerative colitis

Malabsorption Syndrome: Meaning, types, symptoms and diet treatment for celiac sprue and steatorrhea

Liver and gall bladder disease: Etiology, symptoms and diet treatment for jaundice, cirrhosis and hepatitis,

Classification, etiology, symptoms, metabolic changes and diet treatment for diabetes mellitus. Use of Glycemic Index.

### **UNIT IV**

Diseases of the kidney: Etiology, symptoms and diet treatment for acute and chronic glomerulonephritis.

Nephrotic Syndrome: Etiology, symptoms and diet treatment for uremia. Nephrolithiasis and urolithiasis.

### **UNIT V**

Etiology, symptoms and diet treatment for febrile condition- typhoid and tuberculosis

Burns and Trauma: Complications and dietary treatment.

Risk factors, nutrient requirements, modifications of diet and planning menus in Cancer and AIDS.

## **PRACTICAL : DIETETICS**

### **Code No. : UHSC 232 & 241(P)**

1. Planning and preparation diets for cardiovascular diseases – Atherosclerosis and hypertension
2. Planning and preparation diets for Gastro-intestinal diseases – Peptic ulcer and constipation
3. Planning and preparation diets for Liver diseases – jaundice and cirrhosis
4. Planning and preparation diets for Diabetes mellitus.
5. Planning and preparing diets for Kidney diseases – nephritis and nephrosis.
6. Planning and preparing diets for Typhoid Fever.

**RELATED EXPERIENCE**

1. Visit to a dietary department of a secondary or tertiary care hospital.

**TEXTBOOKS**

1. Shubangini A Joshi, (1998): Nutrition and Dietetics, Tata Mc Graw Hill Pub. Co. Ltd., New Delhi.
2. Srilakshmi. B, (2005): Dietetics, V Edition, New Age International (P) Ltd, Publishers, Chennai.
3. National Institute of Nutrition, (2011): Dietary Guidelines for Indians – A Manual, Hyderabad.
4. Antia F.P, Clinical Dietetics and Nutrition, Oxford University Press.

**REFERENCES**

1. Mahan, L.K. and Escott-Stump, S. (2000) Krause" s Food, Nutrition and Diet Therapy, 10<sup>th</sup> Ed. W.B. Saunders Company, London.
2. Williams S.R. (1993): Nutrition and Diet Therapy, 7<sup>th</sup> Ed. Times Mirror / Mosby College Publishing, St. Louis.
3. Shills, M.E, Oslon, J.A, Shike, M and Ross, A.C. (1999): Modern Nutrition in Health and Diseases, 9<sup>th</sup> Edition.

**Discipline Specific Core: Home Science**

**SEMESTER :IV**

**HUMAN DEVELOPMENT**  
**(Credits: Theory-4, Practical-2)**

**Course Code: UHSC242**

**Max. Marks: 100 (ICA = 25 + ESE = 75)**

**THEORY**

**Objectives**

To enable the students to:

- Familiarize with the growth process from conception to confinement
- Understand the physical, psychological and social development of the individual from infancy to adulthood
- To recognize the skills in child rearing.

**UNIT I**

Introduction to Human Development: Definition, History, Multidisciplinary and Scientific nature. Scope of Human Development in contemporary society. Domains and Stages of Human Development. Principles of growth and development.

**UNIT II**

Prenatal Development, Birth and the Neonate (newborn)- Reproductive health, planning and preparing for parenthood. Conception – test tube baby, signs and symptoms of pregnancy, prenatal development – stages of development, factors affecting development, birth process – signs of labour, stages, birth injuries, post natal care – adjustment of the newborn.

**UNIT III**

Infancy: Development during infancy – Physical, social, emotional, cognitive and language. Infant care and hygiene – feeding, weaning, complementary feeding, immunization, habit formation. Minor ailments and prevention. Needs for children – Physiological and psychological. Role of child care centres.

**UNIT IV**

Early childhood/preschool (1-5 years): Physical, motor, emotional, social and intellectual development. Child and family member relationship. Habit formation. Behavior problems – causes, prevention and treatment.

Preschool education – importance, objectives, programmes. Personal and professional requirement of a nursery school teacher. Play – definition, types, theories, values, characteristics and play hazards.

..contd/-

Learning – definition, types – trial and error, insight, conditioning – classical and operant, implications and limitations.

Creativity – meaning, values, development of creativity, expression of creativity

Middle childhood years childhood/ school going (6-12 years) – Physical, social, emotional, intellectual, language and moral development. Habit formation. Behavioural problems and prevention.

Special children – definition, classification, causes, consequences and rehabilitation measures.

## **UNIT V**

Adolescence - Physical and psychological changes, emotional, moral and social development, sex education. Problems of adolescence, delinquency – causes, prevention and rehabilitation, role of parents, peers and society. Factors influencing personality development.

### **PRACTICALS/ RELATED EXPERIENCE (Internal)**

#### **Code No.: UHSC242P**

1. Child" s first reaction to nursery school.
2. Observations in the following areas of development – physical, social, emotional and language development of preschool children.
3. Study on play interest of children and types of play materials available in a preschool.
4. Study on behaviour problems of children
5. Participation in nursery school, planning, carrying out and evaluation the programme.
6. Sociometric study of adolescents.

**TEXTBOOKS**

1. Rajammal P. Devadas and Jaya N. Muthu (2002): A text book of Child Development, Macmillan, N.Delhi.
2. Hurlock E.B., (1972): Child development, McGraw Hill Book company.
3. Suriakanthi A., (1997): Child Development – An introduction, Kavitha Publishers.
4. Swaminathan, M (1998) The first five years : A critical perspective on earlychildhood care and educationin India. New Delhi : Sage.
5. Singh, A. (Ed.) 2015. Foundations of Human Development: A life span approach. New Delhi: Orient Black Swan.

**REFERENCES**

1. Hurlock, E.B., (1995): Developmental Psychology-A life span approach, 5<sup>th</sup> McGraw Hill Book Co., New York.
2. Nanda V.K., (1998): Principles of Child Development, Anmol Publications Pvt. Ltd., New Delhi.
3. Berk L.E. (2004): Child Development, Pearson Longman New Delhi.
4. Santrock, J.W. (2006): Child Development, New York : Mc Graw Hill.
4. Sapra, R. (2007): Integrated Approach to Human Development. Vishwabharathi. New Delhi.

**Skill Enhancement Course- SEC-2**

**SEMESTER :IV**

**COMPUTER APPLICATIONS**

**(Credits: 2)**

**Course Code: UHSC243(P)**

**Max. Marks: 100 (ICA = 25 + ESE = 75)**

**PRACTICAL(Internal)**

**Objective:**

To enable the students to operate a computer and put to use for education, information and research purpose.

**Practical Classes:**

1. Components of a computer, input/output devices, secondary storage devices.
2. Introduction to operating systems, introduction to MS-Windows.
3. Starting MS Word, creating and formatting a document, changing fonts and font size. Table creation and operations, auto correct, auto text, spell check, thesaurus,
4. Word art, inserting objects, mail merge, letter, label, envelope, page set -up, page preview, printing a document. Creating hyperlink to a word document, page set-up, print preview,
5. Starting excel, work sheet, cell, inserting data into rows/columns, alignment, text-wrapping, sorting data, autosum. Generating graphs, integrating worksheet data and charts with word. Printing worksheets.
6. Starting MS Powerpoint, autowizard, creating a presentation using auto content wizard. Blank presentation, creation, saving and printing a presentation, adding a slide to presentation, navigating through a presentation. Slide sorter, slide show and editing slides. Using clipart, word art gallery, adding transitions and animation effects, setting timings for slide-show. Preparing note pages, preparing audience hand-outs, printing presentation documents.
7. Use of internet, software and hardware requirement for internet. Accessing the internet, web page, using a search engine, accessing the internet from MS Office applications.
8. CAD and its applications

**TEXT BOOKS / REFERENCE BOOKS**

1. Jain, S, MS-Office 2007 Training Guide Paperback, BPB Publications, 2010  
Sampath K (1998), Introduction to Educational Technology, Sterling Publishers Pvt. Ltd
2. Kihrwadkar A, Pushpanadan, (2006), Information and Communication Technology in Education, Sarup and Sons, Delhi
3. Sagar Krshna (2007), ICTs and Teacher Training, Authors Press, Delhi
4. Valerie Q (1998), Internet in a nutshell, Shroff Publishers and Distributors Pvt. Ltd, Delhi

<b>SEMESTER- V 20 Credits</b>				
SEC-3	UHSC 351	NGOs & Corporate Social Responsibility	02	--
DSE-1A** DSE- 2A** DSE-3A** (Choose any 3 out of 5) 352&353 is compulsory for Home Science.	UHSC 352	Fundamentals of Textiles	03	02
	UHSC 353	Family Resource Management	05	--
	UHSC 354	Family Dynamics	05	--
	UHSC 355	Nutritional Assessment & Surveillance	05	--
	UHSC 356	Extension Education	05	--
GE-1	UHSC 357	Fundamentals of Adolescent Health	03	



**Skill Enhancement Course : SEC-3**

**SEMESTER :V**

**NGOS & CORPORATE SOCIAL RESPONSIBILITY**

**(Credits: 2)**

**Course Code: UHSC351**

**Max. Marks: 100 (ICA = 25 + ESE = 75)**

**THEORY**

**Objectives**

To enable the students to:

- Get familiarised with the details of establishing a NGO in India and its benefits
- Understand the role of CSR in improving the standard of living of the down trodden.

**UNIT 1**

Concept of NGO: Meaning of NGO and GO, Difference between Government Organizations and NGO, Characteristics of good NGO, Structure of NGO, Functions of NGO, Historical Perspective of NGO, Advantages of NGO, Present status of NGO, Contribution of NGO in the Development. Role of International NGO in development.

**UNIT 2**

Establishing a NGO: Steps for starting NGO, Registration of NGO, Selection of Personnel, Training of Personnel, Proposal writing under NGO, Identifying Funding agencies, Resource Mobilization, Planning, Implementation and Evaluation strategy under NGO. Accountability and impact assessment for NGOs

**UNIT 3**

NGO Management: Organizational types and structures, Managing people and teams in NGOs, NGO management competencies

**UNIT IV**

CSR: Meaning, CSR Process, Steps in developing a CSR strategy and policy evolution. Tools, technical guidance and standards to be used for assessment.

**UNIT V**

Indian Scenario: Overview of CSR in India, CSR initiatives government and corporate establishments.

**RELATED EXPERIENCE**

1. Studying the Annual report of NGOs
2. Visit to a NGO/ INGO & a Corporate house with CSR initiative

**REFERENCE**

1. S. Chandra, Guidelines for NGO Management in India (2003), Published by Kanishka Distributors, New Delhi
2. D. Lewis, Management of Non Governmental Development Organization (2001), Second Edition, Published by Routledge, Newyork.
3. A.Abraham, Formation and Management of NGOs (2003), Third Edition, Published by Universal Law Publishing Co. Pvt Ltd., New Delhi.
4. Sundar, P. 2013, Business and Community: The Story of Corporate Social Responsibility in India , New Delhi, Sage Publication.
5. Aggarwal, S.2008, Corporate Social Responsibility in India, Sage Publication Pvt. Ltd.

**Discipline Specific Elective :DSE (Home Science)**

**SEMESTER :V**

**FUNDAMENTALS OF TEXTILES  
(Credits: 5 : Theory-3, Practical-2)**

**Course Code: UHSC352**

**Max. Marks: 100 (ICA = 25 + ESE = 75)**

**THEORY**

**Objectives**

To enable the students to:

- Get familiarised with the details different types of textile fibres and fabric formation
- To gain knowledge about various finishing techniques
- To know about various traditional textiles and costumes.

**UNIT I**

Classification of fibres: Natural fibres – cotton, linen, silk, wool; manufacture & properties of manmade fibres- rayon, nylon, polyester

**UNIT II**

Yarn making: Mechanical spinning, chemical spinning, yarn numbering and yarn twist. Types of yarn – simple, complex, novelty and textured.

Weaving: Types – plain and novelty weaves. Emphasis on plain, basket, twill, satin, dobby and jacquard; Knitting, knotting and braiding. Felts and bonded fabrics.

Looms: Handloom- parts and their function. Types of power loom.

**UNIT III**

Basic finishes: bleaching, tentering, wringing, sizing mercerizing and calendaring

Special finishes: napping, flocking, shrinkage control, water repellency, wrinkle resistance, permanent press (in brief)

Classification of dyes: Natural and Chemical dyes. Methods of dyeing, emphasis on stock, yarn and piece dyeing.

Methods of printing: Block, roller, screen, resist, discharge printing,

**UNIT IV**

Traditional Indian textiles- Woven Textiles: Dacca Muslin, Chanderi, Kashmiri shawl.

Brocades – Paithani, Peethamber, Kanchipuram brocade.

Printing Textiles: Block Printing, Kalamkari and Roghan work.

Dyed textiles: Meaning and process of Ikat, Patola, Bandhani. Batik, Tie & Dye& its process.

## **UNIT V**

Traditional Embroideries and costumes of India:

Traditional Embroideries: Kantha of Bengal, Kasuti of Karnataka, Pulkari of Punjab, Chikankari of Lucknow, Kutch work of Gujarat (all in brief)

Costumes of India: Introduction to traditional Indian dresses. Costumes of Tamilnadu, Kerala, Andhra Pradesh, Assam, UP, Rajasthan, Gujarat, Maharashtra, Punjab& Kashmir (in brief).

### **PRACTICAL**

1. Identifying cotton, silk, wool, rayon, nylon and polyester by visual, burning, and microscopic tests.
2. Identifying cotton, silk, wool, rayon, nylon and polyester by chemical tests.
3. Identifying weaves.
4. Determining colour fastness to sunlight.
6. Determining shrinkage to laundering.

### **TEXTBOOKS/ REFERENCE**

1. Bernard .P. Crobmann (2005), Textiles – Fiber to Fabric, McGraw Hill book company, New Delhi.
2. Vidyasagar, P.V., (1998): Hand Book of Textiles, Mittal Publications, N. Delhi.
3. Agarwal.M., (2005): Home Science & Textiles, ABD Publieshers, Jaipur.
4. Dantyagi,S. (1996). Fundamentals of Textiles and Their Care. New Delhi. Orient Longman limited.
5. Dorris Flynn (2000), Costumes of India, Oxford and IBH Publishing co., Bombay
6. John Gillow and Nicholas Barnard. (2000). Traditional Indian textiles
7. Jamaica Brij Bhushan (2003), Indian Embroidery, Ministry of information and broadcasting, Govt. of India.
8. Yadav. S, (1997): Textbook of Textile & Laundry, Anmol Publications, Pvt Ltd, N. Delhi.

**Discipline Specific Elective :DSE (Home Science)**

**SEMESTER :V**

**FAMILY RESOURCE MANAGEMENT**

**(Credits: 5 : Theory-5)**

**Course Code: UHSC353**

**Max. Marks: 100 (ICA = 25 + ESE = 75)**

**THEORY**

**Objectives**

To enable the students to:

- Understand the importance of management in family and family resources
- Gain knowledge and apply the basic principles of art in Interior decoration.
- Understand the elementary principles of planning a house and its interior arrangement.

**UNIT I**

Micro and Macro Environment: Meaning and definition of home management. Management process – Planning, controlling and evaluation, factors influencing home management. Qualities of a good manager. Values, goals, standards in relation to the management process.

**UNIT II**

Planning: Types and importance of controlling the plan - Adjusting, supervising checking and types of evaluation..

**UNIT III**

Decision making: Process of decision making, types of decisions, methods of resolving conflicts, Resources – Definition, meaning, classification of resources.

**UNIT IV**

Time – Time plan, steps in making time plans, tools in time management, time norm, work unit/work load, peak load, work curves, rest periods, time schedules. Time management process – planning, controlling and evaluating.

Work simplification: Definition, importance, techniques – process chart, operation chart, Mundel" s classes of changes. Concept of fatigue, types of fatigue, avoidance of fatigue.

## **UNIT V**

Money: Definition of family income, types, family budget – definition, importance, types, steps in making budget, factors affecting the budget, advantages of budgeting. Account keeping: importance, types of account systems, methods of handling money, family financial records.

Energy: Energy requirements for household activities, planning, controlling and evaluating energy management

### **RELATED EXPERIENCE**

1. Preparation of personal expenditure record for one month using note book method.
2. Visit to a bank and a post office to study the types of saving schemes
3. Getting to know the opening and closing of accounts, crediting money and transaction techniques. Usage of ATM, Credit & Debit Cards

### **TEXTBOOKS/ REFERENCE**

1. Varghese, M.A., Ogale, N.N. and Srinivasan, K. (1996): Home Management, New Age International (P) Ltd., Publishing N. Delhi
2. Bharathi, V.V. and Jacintha, M. (1994): Family Resource Management, Discovering Publishing House, N. Delhi.
3. Nickell, P and Dorsey, J.M (1978). Management in Family Living. New Delhi: John Wiley and Sons.
4. Sharma, S.S. 1992. Consumer Behavior, Jaipur, Arihant publishing house.
5. Nair, S.R. (2002). Consumer Behavior in Indian perspective, Mumbai, Himalaya publishing house.
6. Deacon, E. and Firebaugh, F.M (1998). Family resource management, Principles and management publishing.
7. Sharma, S.R. and Kaushik, K.R. (1994). Home management and housekeeping. New Delhi. Anmol Publications.
8. Peet, I. and Pickett, M.S. (1975), Household equipment, New York, John Wiley and sons.
9. Education Planning group. (2001) Home Management. Newdelhi: Arya PublishingHouse.
10. Goldstein, H and Goldstein, V (1958). Art in Everyday Life. Macmillan company.
11. Varghesese, M.A.etal (1994). Home Management. New Delhi: Wiley Eastern. Ltd.

12. Deshpande, R.S. (1982) Modern Ideal Homes for India. Poona: United Book Corporation.
13. Kaur H and Macneil, C., (1994): Theory and Practice of Home Management, Surjeet Publications, Delhi.
14. Venkata Ratnam C.S and Srivatsava B, (1999): Personnel Management and Human Resources, New Delhi, Tata McGraw Hill Co.
15. Aswathappa K, (1997): Human Resource and Personnel Management, Tata McGraw Hill Publishing Co., New Delhi.

**Discipline Specific Elective :DSE (Home Science)**

**SEMESTER :V**

**FAMILY DYNAMICS**  
**(Credits: 5 : Theory-5)**

**Course Code: UHSC354**

**Max. Marks: 100 (ICA = 25 + ESE = 75)**

**THEORY**

**Objectives**

To enable the students to:

- To develop a scientific attitude towards behavioural patterns in individual, family and community life.
- To promote adjustment in marital life.

**UNIT I**

Introduction to family Dynamics :

Family Dynamics - Meaning

Significance of family dynamics in contemporary society

**UNIT II**

Marriage: Meaning, preparation, motives, functions and types of marriage. Personality development in relation to marriage. Physical, mental health, emotional maturity in relation to marriage. Factors affecting marriage relationship – religion, socio economic status, careers. Adjustment in marriage – physiological, domestic, social, in-laws relationship. Role of counselling- Pre marital & marital.

**UNIT III**

Family: Meaning, family as the basic social institution, significance of family, Types, characteristics of family. The place of the individual, man, woman and child in the family and their roles in society. Parenthood – duties, styles of parenting, child rearing techniques. Small family norm.

**UNIT IV**

Family crisis: Meaning, causes, types and consequences – Death, divorce, desertion, suicide, prolonged illness, imprisonment, unemployment, dowry, alcoholism, drug addiction, war separation, economic inflation, economic depression.

**UNIT V**

Old Age – Meaning, physical and physiological changes, needs and adjustment of the aged. Problems of the aged- physical, psychological and social. Institution for the elderly. Place of aged in Indian society.

Organisations dealing with issues related to Family Dynamics (in brief):

International organizations – UNICEF, UNESCO, CARE, CASA.

National organizations – NIPPCD, NCERT



### **RELATED EXPERIENCE**

1. Visit to voluntary organization home/school for special children.
2. Visit to voluntary organization – old Age home
3. Visit to voluntary organization – Orphanage
4. Study on problems of old age.
5. Interactive sessions relating to family and family crisis.
6. Visit to Social welfare Department

### **TEXTBOOKS**

1. Hurlock,E.B., (1995): Developmental Psychology-A life span approach, 5<sup>th</sup> Edition, McGraw Hill Book Co., New York.
2. Rajammal P.Devadas and Jaya N.Muthu,(1996): A text book of Child Development, Macmillan, N.Delhi.
3. Suriakanthi A., (1997): Child Development – An Introduction, KavithaPubslishers.
4. Madan, T.N. and Majumdas, D.N. (1986). An Introduction to Social Anthropology, National Publishing House.

### **REFERENCES**

1. Nanda V.K., (1998): Principles of Child Development, Anmol Publications Pvt. Ltd., New Delhi.
2. Berk L.E., (2004): Child Development, Pearson Longman New Delhi.
3. Kakar, Sudhir, (2012) The Inner world: A Psychoanalytical Study of Childhood and Society in India. Oxford University Press, Oxford.

**Discipline Specific Elective :DSE (Home Science)**

**SEMESTER :V**

**NUTRITIONAL ASSESSMENT & SURVEILLANCE**

**(Credits: 5 : Theory-5)**

**Course Code: UHSC355**

**Max. Marks: 100 (ICA = 25 + ESE = 75)**

**THEORY**

**Objectives**

To enable the students to:

- Gain insight into the national nutritional problems and their implications
- Learn the methods used for assessing the diet and nutritional status of a Community
- Know the on going intervention programmes for overcoming malnutrition in the community.
- Acquire skill in conducting nutrition education

**UNIT I**

Overview of Nutritional status in India. Ecology of malnutrition in India, Meaning of Over nutrition & Under nutrition, IMR, NMR,MMR. Symptoms and causes of common nutritional problems- PEM, Vitamin A Deficiency Diseases, Anaemia, Iodine Deficiency Disorders and Fluorosis

Strategies to overcome malnutrition: Measures to overcome malnutrition, increased agricultural production and animal husbandry with emphasis on nutritious foods and kitchen gardens, food fortification and enrichment, nutrition education, nutrition intervention programmes of GoI. Environmental sanitation and health.

Role of ICMR, NIN, NNMBCFTRI, DFRL, and NIPCCD (in brief).

International Organization concerned with Food and Nutrition (in brief)- FAO, WHO, UNICEF, World Bank

National Health Policy 2016 (in brief)

**UNIT II**

Nutritional assessment and surveillance: Meaning, need, objectives and importance.

Rapid assessment procedures: Need, importance, techniques. Sources of secondary health data: Vital health statistics, morbidity conditions

Nutritional epidemiology: Meaning and method

### **UNIT III**

Methods Assessing Nutritional Status

Anthropometry: Need, importance, standards for reference. Techniques of measuring height, weight, head circumference, chest circumference, mid arm circumference, skin fold thickness. Calculation of Waist of Hip Ratio (WHR), Waist-Height Ratio (WHtR), BMI, CED. Use of growth charts for various age groups.

### **UNIT IV**

Biochemical methods: Biophysical or Radiological assessment, functional assessment, laboratory and biochemical assessment. Biochemical values in major diseases.

Clinical assessment – Need, importance, identifying signs of deficiency diseases, interpretation of the clinical signs.

### **UNIT V**

Diet surveys: Need, importance, methods, concept of consumption unit, verifying the adequacy of the diet with respect to RDA, concept of family food security.

### **RELATED EXPERIENCES**

1. Diet and Nutritional Assessment of a population using different techniques
2. Case study of children with micro nutrient deficiencies
3. Visit to a Primary Health Centre, institutionalised canteens-hostels, old age homes

### **TEXTBOOKS/ REFERENCES**

1. Srilakshmi, B., Nutrition Science, New Age International Publication, New Delhi, 2010.
2. Park, A. Park" s Textbook of Preventive and Social Medicine, XIX Edition M/S Banarasidas, Bharat Publishers, 1167, Prem Nagar, Jabalpur,428 001(India), 2007.
3. Bamji M.S, Prahlad Rao N, Reddy V., Textbook of Human Nutrition, II Edition, Oxford and PBH Publishing Co. Pvt. Ltd , New Delhi, 2004.
4. Bhatt D.P, Health Education, Khel Sahitya Kendra, New Delhi, 2008.
5. Gibney, M.J., Margetts, B.M., Kearney, J.M., Arab, L., Public Health Nutrition, Blackwell Publishing Co. UK, 2004

**Discipline Specific Elective :DSE (Home Science)**

**SEMESTER :V**

**EXTENSION EDUCATION  
(Credits: 5 : Theory-5)**

**Course Code: UHSC356**

**Max. Marks: 100 (ICA = 25 + ESE = 75)**

**THEORY**

**Objectives**

To enable the students to:

- To obtain necessary skills in extension teaching and field work
- To know the role of extension workers in planning programmes for the community.

**UNIT I**

Rural Society: Meaning, scope, & characteristics.

Rural social groups-primary and secondary groups, formal and informal groups, temporary and permanent groups, reference groups, cultural interest groups (in brief).

Informal rural institutions: family, caste (in brief).

Formal rural institutions – Village school, Panchayat Raj, Village co-operatives (in brief).

**UNIT II**

Extension Education: Meaning, definition, philosophy, principles, and functions.  
Difference between formal and non-formal education.

Role and qualities of an extension worker. Functionaries in extension work – Block Development Officer (BDO), Extension Officer (EO), Village Level Worker (VLW) (in brief). Adoption-diffusion process.

Leadership – styles in leadership. Role and qualities of a leader.

**UNIT III**

Teaching: Factors contributing to good teaching, steps in extension teaching.

Learning: principles of learning, elements of learning situation, learning experiences.

**UNIT IV**

Communication: Meaning, definition, functions, elements of communication, models of communication, problems of communication.

Communication methods: individual, group and mass. Audio – Visual aids in extension work – projected and non-projected.

## **UNIT V**

Extension programme development: Meaning & importance of having a programme.  
Principles of programme planning, steps in extension programme cycle.  
Evaluation: Meaning & types of evaluation.

Development Programmes offered for the vulnerable segments by the Indian  
Ministry of Social Welfare, Ministry of Rural Development

### **RELATED EXPERIENCE / PRACTICAL**

1. Visit to a Block to understand its set up and importance in rural development
2. Visit to DRDA and discussion with officials on the current programme.
3. Visit to K.V.K
4. Visit to a Mahila Mandal.
5. Planning and implementing a programme for women and children
6. Familiarizing with audio visual aids
7. Studying the functions of ICDS.

### **TEXTBOOKS**

1. Supe, S.V., (1994): An Introduction to Extension Education, Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi.
2. Reddy, A., (2006): Extension Education, Sree Lakshmi Press, Bapatla, A.P.
3. Desai, A.R, Rural Sociology in India. Popular Prakashan, 1994
4. De, Rural Sociology, 2012, Pearson Publication, New Delhi

### **REFERENCES**

1. Dahama, O.P., and Bhatnagar, (1980): Education and Communication for development, Oxford and IBH publications Co.
2. Ray, G.L., Extension communication and management, Naya Prakash, Calcutta.

**Generic Elective : GE**

**SEMESTER :V**

**FUNDAMENTALS OF ADOLESCENT HEALTH**

**(Credits: 3 : Theory 3)**

**Course Code: UHSC357**

**Max. Marks: 100 (ICA = 25 + ESE = 75)**

**THEORY**

**Objective:**

This paper will enable the students to get acquainted with the physical, mental and social health aspects of adolescents and

**UNIT I**

Adolescents: Meaning, Age & sex-wise categorisation, characteristics. Theories of risk, vulnerability, resilience and behaviour change (in brief). Methods of adolescent study

Problems of Adolescents: Problems of adjustment in the environment; Early marriage, pregnancy & child birth; Violence, Alcohol & drugs; Tobacco use, Eating disorders; Malnutrition- CED & obesity, Juvenile Delinquency, Stress, injuries & road accidents and the like.

**UNIT II**

Adolescent Health: Meaning, Ecological model for determining the adolescent health and development.

Physical and physiological health: Changes in growth pattern, puberty, maturity, reproductive health, psychological significance of physical change.

Anthropometric measurements related to adolescents- Height, Weight, BMI, WHR, WHtR, CED, interpretation of results. Clinical assessment, Common nutritional and psychological disorders & discomforts; Coping mechanisms of stress. Emotional well being, Mental health Issues.

**UNIT III**

Emotional behaviour of adolescents, causes of emotional intensity, factors influencing emotional life, peer group interaction, sibling interaction.

**UNIT IV**

Social behaviours of adolescents- Morality in adolescents, factors influencing adolescent" s personality

**UNIT V**

Universal health coverage for adolescents: The WHO interventions.

Rights of adolescents (International), CEDAW, Indian National Youth Policy 2016 (in brief).

**TEXTBOOKS / REFERENCES / WEBLINKS**

1. Chaube, S.P., (2002). Psychology of Adolescents in India, Concept Publishing Co. Ltd., New Delhi
2. Bhuvanewari, K., Child & Adolescent Psychology (2011), CBS Publishers & Distributors Pvt. Ltd., Chennai.
3. [http://www.who.int/maternal\\_child\\_adolescent/topics/adolescence/second-decade/en/](http://www.who.int/maternal_child_adolescent/topics/adolescence/second-decade/en/)
4. [http://apps.who.int/iris/bitstream/10665/112750/1/WHO\\_FWC\\_MCA\\_14.05\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/112750/1/WHO_FWC_MCA_14.05_eng.pdf?ua=1)

<b>SEMESTER- VI 20 Credits</b>				
SEC-4	UHSC 361	Entrepreneurship Development	02	
DSE-1B** DSE-2B** DSE-3B** (Choose any 3 out of 5)362 &363 is compulsory for Home Science.	UHSC 362	Clothing Care &Construction	03	02
	UHSC 363	Housing &Interior Decoration	03	02
	UHSC 364	Personal Finance & Consumer Studies	05	--
	UHSC 365	Food Safety and Quality Control	05	--
	UHSC 367	Gender and Development	05	--
GE-2	UHSC 368	Alternate Healing Traditions in India	03	--
Practical*	UHSC352&362(PE)	Textiles &Clothing Construction		
	UHSC363(PE)	Housing & Interior Decoration		



**Skill Enhancement Course (SEC)- Home Science**

**SEMESTER :VI**

**ENTREPRENEURSHIP DEVELOPMENT**

**(Credits: 2 : Theory-2)**

**Course Code: UHSC361**

**Max. Marks: 100 (ICA = 25 + ESE = 75)**

**THEORY**

**Objectives**

To enable the students to:

- Get familiarized with the process & procedures for establishing an enterprise.
- Develop an aptitude for Entrepreneurship development.

**UNIT I**

Entrepreneurship – Definition, characteristics of an entrepreneur, entrepreneur and enterprise, types of entrepreneur, functions of entrepreneur, behavioural qualities required by an entrepreneur.

Entrepreneurial Motivation – motivating factors, facilitating factors, achievement motivation.

**UNIT II**

Entrepreneurial development training Need for training, objectives, methods and phases of EDP training, benefits of training, Institutional support for entrepreneurial developments – NSIC, SIDO, SISI, DIC, PIPDIC, TCO.

**UNIT III**

Project: Meaning, identification, classification. Project formulation – Need, concept, significance, elements of project formulation. Proposal format and content-steps in its preparation, Feasibility testing, SWOT analysis.

Programmed Evaluation and Review Technique (PERT), Critical Path Method (CPM). Break even analysis, Ratio Analysis. Preparation of a project report.

**UNIT IV**

Financing – sources of finance, term loans, and lease finance, working capital, financial incentives. Financing procedures, financial ratios and their significance. Financial institutional support for entrepreneurs – commercial banks, IDBI, IFCI, NABARD, LIC, SIDBI.

Books of accounts – Concepts, applications, advantages and disadvantages of single entry and double entry system. (in brief) Concepts of Journal, ledger, subsidiary books, cash book, trial balance. Profit and loss account. Concepts of bill and receipts. (in brief)

**UNIT V**

Licensing and Registration. Business ethics. Government policies. Factories act.

### **RELATED EXPERIENCES**

1. Visit to PIPDIC, DIC
2. Case study of two entrepreneurs
3. Preparation of a project proposal for funding.

### **TEXTBOOKS**

1. Saravananvel P, (1991): Enterpreneurial Development – Principles, Polices and Programmes, Ess Pee Kay Publishing House, Madras.
2. Gupta & Srinivasan,(2002) Enterpreneurial Development, S. Chand Publications, New Delhi
3. Khanka S.S., (2007): Enterpreneurial Development, S. Chand & Co., New Delhi.

### **REFERENCES**

1. Desai, V., (1996): Enterpreneurial Development, Volume I, II and III, Himalaya Publishing House, Bombay.
2. Murthy C.S.V., (2006): Entrepreneurship Development, Himalaya Pub. House, Mumbai.
3. Hirsch D, Peters P. Michael, Shepherd A. Dean, (2007): Entrepreneurship, 6<sup>th</sup> edition, Tata McGraw Pub. Co. New Delhi.
4. Chunawalla S.A. Sales Management, Himalayan publishing House New Delhi, 1999.
5. Dr.N.Rajan Nair, Sajith R. Nair Marketing, Sultanchand and Sons, New Delhi, 2002
6. Vasant Desai, Project Management and entrepreneurship, Himalaya Publishing House,New Delhi, 2000.
7. David H. Moll, Entrepreneurship, prentice Hall of India, New Delhi 1999.
8. Frank Jerkins, Advertising, prentice Hall of India, New Delhi, 2000

**Discipline Specific Elective :DSE (Home Science)**

**SEMESTER :VI**

**CLOTHING CARE &CONSTRUCTION**

**(Credits: 5 : Theory-3, Practical-2)**

**Course Code: UHSC362**

**Max. Marks: 100 (ICA = 25 + ESE = 75)**

**THEORY**

**Objectives**

To enable the students to:

- Get a basic idea of clothing care & selection.
- Develop skills in apparel designing and construction
- Understand about Machine parts and its functions

**UNIT I**

Care of textiles: Laundry agents – Selection of suitable soaps, detergents, bleaches, whitening agents, stiffening agents, dry cleaning agents and stain removal agents. Laundering equipments. Laundering – Principles of laundering, general methods of laundering – dry cleaning process, stain removal.

**UNIT II**

Family Clothing Plan: Principles of preparing a clothing budget, factors influencing a clothing budget. Planning the wardrobe requirements of the newborn, school going children and college going adolescents.

**UNIT – III**

Clothing Selection: Clothing in relation to season, occasion, size, figure and complexion. Texture and line in relation to size and figure. Fashion – Definition, fashion cycle.

**UNIT – IV**

Techniques of Clothing Construction: Study of basic hand stitches – temporary and permanent. Parts and function of sewing machine and sewing tools. Seams and seam finishes. Methods of introducing fullness into a fabric – darts, tucks, pleats and gathers, ruffles and smocking. Plackets – continuous bound, faced, zipper and tailored. Neck finishes – true bias facing, shaped facing, binding. Fasteners – Button and buttonhole, fabric loops, press buttons, hooks and eyes and eyelets. Types of sleeves & collars.

**UNIT V**

Principles of Clothing Construction: Importance of drafting and making paper patterns. Taking body measurements for different types of garments. Preparation of fabric for clothing construction. Placing and cutting of paper pattern in relation to texture and design of fabrics.

**PRACTICALS/ RELATED EXPERIENCES**

**Code No.: UHSC352&362(PE)**

**TEXTILES AND CLOTHING CONSTRUCTION**

1. Sewing Processes – Hand stitches, Seams and seam finishes.
2. Preparation and application of true bias, bias facing, shaped facing and bias binding.
3. Plackets and openings, continuous placket, bound and faced placket, zipper placket.
5. Fullness darts, tucks, pleats, gathers, frills, ruffles, smocking.
6. Types of sleeves & Collars
7. Decorative stitches
8. Garment Construction – Taking body measurements, drafting and stitching Petticoat, Sari Blouse, Salwar suit.
9. Workshop in Sewing Machine Mechanism.

**TEXTBOOKS/ REFERENCES**

1. Thangam Subramanian, Dress making, Tailoring and Embroidery College, Ambattur, Chennai.
2. Dantyagi., (1996): Fundamentals of Textiles and their care. Orient Longman Limited, New Delhi.
3. Mary Mathews, (1974): Practical Clothing Construction, Part I and Part II, Thompson and Co. Pvt. Ltd., Chennai
4. Agarwal.M., (2005): Home Science & Textiles, ABD Publishers, Jaipur.
5. Yadav. S, (1997): Textbook of Textile & Laundry, Anmol Publications, Pvt Ltd, N. Delhi.

**Discipline Specific Elective :DSE (Home Science)**

**SEMESTER :VI**

**HOUSING & INTERIOR DECORATION**

**(Credits: 5 : Theory-3, Practical-2)**

**Course Code: UHSC363**

**Max. Marks: 100 (ICA = 25 + ESE = 75)**

**THEORY**

**Objectives**

To enable the students to get acquainted with:

- The values and goals in housing.
- The principles of house maintenance that promote health and comfort of the family.
- The fundamental principles of interior design.

**UNIT I**

Design: Types, elements of design – line and direction, shape and form, size, colour, texture, space. Principles of design – harmony, proportion, balance, rhythm and emphasis – meaning, types and its application.

**UNIT II**

Colour: Definition, dimensions of colour, prang colour system. Munselcolour System. Colour harmonies, developing colour schemes for different rooms, principles of design in colour. Colour and emotional effect.

**UNIT: III**

Furniture: Selection and arrangement in various rooms. Furnishing – factors considered in selection of furnishing materials, floor coverings, curtains and draperies, window treatments. Accessories – definition, classification and use.

**UNIT: IV**

Flower arrangement: Materials used, types, steps in making flower arrangement.  
Hanging pictures – selection, framing and hanging of pictures.

Lighting: Importance, measurements, types and lighting requirements for various activities and rooms.

**UNIT V**

Housing: Importance of housing, functions of a house, site selection and principles of designing living space. Types of house plans for various income groups.

Kitchen: Various areas of kitchen, types of kitchen. Table setting – laying the table, general rules for table setting, western styles, buffet style and Indian style.

**PRACTICALS : Code No: UHSC363(PE)**

1. Evaluation of design.
2. Preparation of colour chart and various colour schemes.
3. Application of design principles in preparation of greeting card, poster and a wall hanging
4. Application of design principles in Flower arrangement
5. Application of design principles in Window treatment
6. Drawing floor plans for different income groups.
7. Furniture arrangement in different rooms by means of paper cut out.
8. Survey of the living standards of a few selected families based on their income.
9. Table Setting – Indian, Western styles.
10. Drawing various types of kitchen plans.

**TEXTBOOKS**

1. Varghese, M.A., Ogale, N.N. and Srinivasan, K. (1996): Home Management, New age International (P) Ltd., Publishing N.Delhi.
2. Despande, R.S., (1980): Build your own Home, United Book Corporation, Pune.
3. John, F.D., (1997): Colour in Interior Design, McGraw Hill Company, New York

**REFERENCES**

1. Kaur H and Macneil, C., (1994): Theory and Practice of Home Management, SurjeetPublicaitons, Delhi.
2. Goldstein, H.S., and Goldstein, V., (1964): Art in Everybody Life, IBH Publishing Co.Bombay.

**Discipline Specific Elective :DSE (Home Science)**

**SEMESTER :VI**

**PERSONAL FINANCE & CONSUMER STUDIES**

**(Credits: 5 : Theory-5)**

**Course Code: UHSC364**

**Max. Marks: 100 (ICA = 25 + ESE = 75)**

**UNIT I**

Income: Meaning, types, sources, supplementation of family income, household budget, factors influencing expenditure pattern.

Personal Finance: Meaning of personal finance, investment finance, retirement finance, types of taxes, calculation of personal income tax. Types of financial institutions. Savings account and Current account. (in brief)

Meaning and application of ATM transaction, Debit cards and credit cards

Savings and Investment: Meaning, types of formal savings- Short term & Long term-mutual funds, NSC, General Insurance, Medical insurance, Stocks & Shares (in brief)

**UNIT II**

Consumer: Meaning of consumer, consumerism. Rights and responsibilities of consumers. Consumer movement in India.

Human wants: Nature and classification, law of marginal utility, law of equi-marginal utility, consumer surplus.

Buyer behavior – buying motives, buying decision process, factors affecting consumer decisions.

Consumer products and promotion practices: types of products, product life cycle, branding, labeling, packaging, sales promotion and advertisement (in brief).

**UNIT III**

Market: Meaning, definition, classification of markets, market segmentation. concept of marketing, dimensions of marketing, functions of marketing. Channels of distribution for consumer goods – types and functions. Meaning and types of middlemen (in brief)

#### **UNIT IV**

Consumer Problems: Meaning, types – business malpractices -adulteration, faulty weight and measures, misbranding, deceptive labelling and packaging, black marketing & hoarding, conspicuous consumption.

#### **UNIT V**

Consumer Protection: Meaning, need for protection, laws for protection. Quality control measures – guarantee and warranty contracts, standardization, grading, BIS, AGMARK, FPO, Nutrition Labeling

Consumer Courts, consumer co-operatives, COPRA, consumer guidance societies.

#### **RELATED EXPERIENCE**

1. Evaluation of advertisements of products, services and social messages
2. To study the mechanism of consumer redressal
3. Food adulteration tests of ingredients in local markets

#### **TEXTBOOKS/ REFERENCES**

1. Sherlekar, S.A., (1984): Trade Practices and Consumerism, Himalaya Publishing House NewDelhi.
2. Pillai, R.S.N., and Bagavathi, (2007) Modern Marketing, S. Chand and Company Ltd., New Delhi.
3. Kumar N., (1999): Consumer Protection in India, Himalaya Publishing House, N. Delhi.
4. Khanna S.R., Hanspal S., Kapoor S. &Awasthi H.K., 2007, Consumer Affairs, Universities Press India Pvt. Ltd.
5. Sawhney, H.K. & Mital, M.,2007, Family Finance & Consumer Studies, Elite PublishingHouse Pvt. Ltd.
6. Seetharaman, P. and Sethi, M.,2001, Consumerism: Strength and Tactics, New Delhi:CBS Publishers.
7. Anand, S., Alchemy of Money: Think Rich Initiatives.(2017), Amazon Asia-Pacific Holdings Private Limited



**Discipline Specific Elective :DSE (Home Science)**

**SEMESTER :VI**

**FOOD SAFETY AND QUALITY CONTROL**

**(Credits: 5 : Theory-5)**

**Course Code: UHSC365**

**Max. Marks: 100 (ICA = 25 + ESE = 75)**

**THEORY**

**Objectives**

To enable the students to get acquainted with:

- Institutional food safety hazards, assessment of risk, and evaluation, quality control
- Principles, actions, and limitations of food sanitation procedures

**UNIT I**

Food Safety: Meaning, factors affecting food safety and importance of food safety.

Principles of food hygiene: Meaning of Food borne pathogens, allergens, non-microbial hazards-Physical & Chemical. Micro-organisms and food borne illnesses. Meaning of food poisoning, chemical food poisoning, and food infection

Hygienic aspects of food handlers. Hygienic aspects in dish washing, storing and garbage disposal

Pest control measures, bio-security

**UNIT II**

Food additives and contaminants: Meaning and safe levels of food colours, flavoring agents, artificial sweeteners, Preservatives, antioxidants, protease inhibitors, goitrogens, phytates, pesticide and insecticide residues, adulterants and metallic contaminants.

**UNIT III**

Food adulteration & adulterants: Meaning, adulterants, methods to identify the presence of adulterants, consequence of adulteration.

**UNIT IV**

Food laws and Regulations: National food legislation – Essential commodities Act, Standard of weight and measures Act, Export act, ISI, mark of BIS, Agmark and PFA, FPO, FSSAI. Regulation for bottled water and infant foods.

International Organization and Agreements – FAO, WHO, Codex Alimentarius, Codex Indian, WTO, JECFA, SPS and TBT and APEDA.

## **UNIT V**

Quality Control: Meaning, sampling and analysis of food chemical, microbiological, food packaging - functions, types and trends in packaging. Food labelling

HACCP: Meaning, importance and its principles. Meaning and principles of ISO4000 & ISO 14000

### **RELATED EXPERIENCE**

1. Visit to FCI storehouses & Star hotels to study the food safety measures taken
2. Visit to Food Processing industries to study the safety and quality measures undertaken by them

### **TEXT BOOKS / REFERENCES / WEBLINKS**

1. Manay, S. and Shadaksharamasamy, Food: Facts and Principles, New Age International.(P) Publishers, New Delhi.
2. Norman G. Marriott (1999), Principles of Food Sanitation, 4th ed., Sanitation in Food Processing, John A. Troller, 1993. Academic Press
3. Carolyn Meggitt, Food Hygiene and Safety: A Handbook for Care Practitioners, Heinemann
4. A Consumer" s Guide to Pesticides and Food Safety (<http://ificinfo.health.org/brochure/cgfs&p.htm>)
5. The Final Rule on Pathogen Reduction and Hazard Analysis and Critical Control Point (HACCP) system ([www.usda.gov/agency/fsis/finalrul.htm](http://www.usda.gov/agency/fsis/finalrul.htm))
6. Key Facts: How USDA" s New Food Safety System will Fight Bacteria that cause Foodborne Illness ([www.usda.gov/agency/fsis/keyfight/htm](http://www.usda.gov/agency/fsis/keyfight/htm))
7. Bacterial and Mycotic Diseases ([www.cdc.gov/ncidod/diseases/foodborn](http://www.cdc.gov/ncidod/diseases/foodborn))
8. Bacterial Food-borne Illness ([www.gen.ufl.edu/~foodsaf/co003.html](http://www.gen.ufl.edu/~foodsaf/co003.html))
9. Foodborne Illness: A Constant Challenge ([www.fightbac.org/problem/challenge.html](http://www.fightbac.org/problem/challenge.html))
10. Food Color Facts ([FDA/CFSAN/OPA: Food Additives and Premarket Approval](http://FDA/CFSAN/OPA: Food Additives and Premarket Approval))
11. Chemicals in the Food Supply ([www.nutramed.com/zeno/chemicals.htm](http://www.nutramed.com/zeno/chemicals.htm))
12. Pesticide residue on Fruits and Vegetables (<http://icdweb.cc.purdue.edu/~aaronj/pest.htm>)

**Discipline Specific Elective :DSE (Home Science)**

**SEMESTER :VI**

**GENDER AND DEVELOPMENT**

**(Credits: 5 : Theory-5)**

**Course Code: UHSC366**

**Max. Marks: 100 (ICA = 25 + ESE = 75)**

**THEORY**

**Objectives**

To enable the students to get acquainted with:

- The concept related to gender & development
- Women" s issues and problems
- Legal provisions and policies for women
- The significance of gender development in national development

**UNIT I**

Basic concepts related to Gender: Sex and Gender; Types of Gender, Gender Roles and Gender Division of Labour, Gender Stereotyping and Gender Discrimination, The Other and Objectification, Male Gaze, Patriarchy, Gender Mainstreaming, Androcentric & Gynocentric. Gender budgeting. Development and Empowerment (all in brief).

Social Dynamics of Gender: Patriarchy and Gender-power, Capitalism and Gender, Caste, Class and Gender

Evolution and Scope of Women" s Studies. A paradigm shift from Women,,s Studies to Gender Studies

**UNIT II**

Gender Vs.Political and Legal Systems- Gender representation in Indian polity, Gender dimensions in electoral politics, Gender exclusion in politics, Gender perspective of personal law

Gender and Education: Gender disparity in education- pre school to Ph.D; Gender bias in school curriculum, Education goals from gender perspective

**UNIT III**

Gender & Health: Gender Discrimination and Under Nutrition, Epidemiology of Menstruation and Menstrual Disorder, Health Indicators and Gender Gap, Socio-Economic Inequality and Women's Health, Biological and Psychological Determinants of Women's Health (all in brief)

Gender Inequality in Labour Market: Segmented labour market and occupational segregation, gendered jobs and social Inequality, sex segregation at work place (in brief)

#### **UNIT IV**

Domestic violence: Forms of violence against women in family - physical, sexual, psychological and verbal, denial of reproductive rights, Female Genital Mutilation (FGM), Female foeticide and infanticide, Dowry harassment and death, Wife battering, Denial of access to resources, Child abuse, Neglect, torture, humiliation (all in brief)

Gender Based Violence in Community: Eve-teasing, sexual abuse and harassment, Immoral trafficking (in brief).

#### **UNIT V**

Acts & Articles in Indian constitution that protects women and eliminates discrimination. National Human Rights Commission, National Commission for Women.

Women & Legal protection: Facts of Vishaka case, Roop Kanwar case, Shah bano case, & Nirubaya case.

#### **REFERENCE BOOKS**

1. Cornell R W (1995) Gender. Cambridge, Polity Press.
2. Gatens M (1991) A Critique of the Sex/Gender Distinction in S. Gunew (ed.) A Reader in Feminist Knowledge. London: Routledge.
3. Holmes M (2007) What is Gender. New Delhi, Sage Publications.
4. Jackson S and Scott S (2002) Gender: A Sociological Reader. New York: Routledge.
5. Agarwal, B. (Ed.) (1988) Structures of Patriarchy: State, Community and Household in modern south asia. New Delhi: Kali for Women.
6. Corea, G. (1985) The Mother Machine. London: Women's Press.
7. Cornick, J.C. and Meyers, M.K. (2009) Gender Equality: Transforming Family Divisions of Labor. New York: Verso.
8. De Beauvoir, S. (1988/1949) The Second Sex. London:
9. Bansal, D. K. (2006) Gender Violence. New Delhi: Mahaveer and Sons.
10. Fergusons, C. (ed) (2010) Violent Crime, clinical and implications. California: Sage publications.
11. Khanna, S. (2009) Violence against Women and Human Rights. Delhi: Swastik Publishers and Distributers.
12. Nayar, S. (2010) Violence against Women in South Asian Communities: Issues for Policy and Practice. Delhi: Navyug Books International.

13. Prabhakar, V. (2011) Gender Violence: Women Victims in Man's World. New Delhi: Wisdom Press.
14. Revathi (2009). Laws relating to domestic violence. Hyderabad: Asia Law House.
15. Wykes, M. and Welsh, K. (2009) Violence, Gender and Justice. London: Sage.
16. Abraham, T. (ed.) (2002) Women and the Politics of Violence. New Delhi: Har-Anand Publications Pvt. Ltd.
17. Bhatt, Savita (2010) Women and Human Rights. New Delhi: Altar Publishing House Ltd.
18. Chatterjee, Piya and et al. (eds.) (2009) States of Trauma: Gender and Violence in South Asia. New Delhi: Kali for Women.
19. Dinakar, Suchitra S. and Rajkumari, D. (2010) Violence Law and Women's Rights in South Asia. New Delhi: Axis Publications.
20. Agarwal, B. (2008) Rural Women in Indian Economy. Jaipur: ABD Publishers.
21. Anker Richard (1998) Gender and Jobs: Sex Segregation of Occupation in the World. Geneva: ILO.
22. Barbara R and Hart H (1986) Sex Segregation on the Job. Washington D. C: National Academy Press.
23. Jain Devaki (2005) Women development and the UN: A Sixty year quest for equality and justice. Bloomington: Indiana University
24. Momsen J. H. (2010) Gender and development, 2nd edition, New York: Routledge
25. Pubantz, J. & Alphin Moore Jr., J. (2008). Encyclopedia of United Nations. New York: Infobase Publishing.
26. Schechter M G (2005) United Nations Global Conferences New York: Routledge
27. Vishwanthan N. Ed (2006) The women gender and development reader. New Delhi: Zubaan

**Generic Elective : GE (Home Science)**

**SEMESTER :VI**

**ALTERNATE HEALING TRADITIONS IN INDIA**

**(Credits: 3 : Theory-3)**

**Course Code: UHSC367**

**Max. Marks: 100 (ICA = 25 + ESE = 75)**

**THEORY**

**Objective**

To enable the students to get acquainted, promote, propagate and advance the science of various healing traditions in India and their principles.

**UNIT I**

A brief introduction on Human Anatomy: The nine body systems and the associated organs and organ functions

Indian healing tradition: Overview of Indian healing tradition during Pre-history, Vedic, and Post-vedic times; Emergence of the Ayurveda Tradition, Persian and Arab Influences, Unani, Rasashastra, Siddha and Sa-Rigpa Traditions, Ashtavaidya Tradition Regional Folk Practices, Indian Medicine During Pre-colonial and Colonial Periods (all in brief)

**UNIT II**

Meaning of Holistic Medicine, Alternate Medicine, Complementary medicine. Pharmacognosy and Nutraceuticals,

Types of Alternate Medicine and their principles: Acupuncture, Accupressure, Ayurveda, Homeopathy, Naturopathy, Chinese or Oriental medicine, Unani, Siddha, Yoga, Reiki, Pranic Healing, Kinesiology, Magnet therapy, Radiesthesia and Radionics, Chiropractic, Aura healing, Pyramid healing (in brief)

**UNIT III**

Ayurveda: A Brief History, Its healing strategy- The balance of body, mind & consciousness, Concepts of Vata, Pitta, Kappa, Dosha, dietary considerations for each of them. (in brief)

Siddha :A Brief History, Fundamental aspects- The concept of three doshas, The cyclic representation of 3 doshas in a day and various seasons. Five types of Vayu, The seven principles of Siddha Medicine, Nature of diagnosis, treatment, drugs and diet. (in brief)

Difference between Ayurveda and Siddha

#### **UNIT IV**

Homeopathy: Brief history, The seven fundamental principles, diagnostic skill, nature of treatment, drug development and dietary do" s and dont" s. (in brief)

Naturopathy: Meaning, salient features, Diet Therapy, Fasting Therapy, Mud Therapy, Hydrotherapy, Masso Therapy, Acupressure, Acupuncture, Chromo Therapy, Air Therapy, Magnet Therapy. (in brief)

Yoga: A brief history, meaning, benefits and principles of Yoga. The five mental afflictions, the four major streams of Yoga, The five major types of Yogic practice, cautions to be adhered to.

#### **UNIT V**

AYUSH: A brief history, meaning, Functions of Ministry of Ayush, AYUSH in Puducherry & Andaman & Nicobar Island.

A brief description of National Institute of Unani Medicine (NIUM), Bangalore; National Institute of Naturopathy (NIN), Pune; National Institute of Homoeopathy (NIH), Kolkata; National Institute of Siddha (NIS), Chennai, Morarji Desai National Institute of Yoga, New Delhi

#### **RELATED EXPERIENCE**

1. Visit to Ayurvedic, Siddha, Homeopathy clinics and Yoga centre and get the feedback from the patients and participants.

#### **REFERENCE BOOKS/ WEBLINKS**

1. Upinder Singh, Nayanjot Lahiri, Ancient India: New Research, Oxford University Press, India 2010
2. Zysk,K. Medicine in the Veda: Religious healing in the Veda Motilal Banarisidas, Delhi 1996
3. M. M. Pandey, Subha Rastogi, and A. K. S. Rawat, (2013), Indian Traditional Ayurvedic System of Medicine and Nutritional Supplementation, Pharmacognosy & Ethnopharmacology Division, CSIR-National Botanical Research Institute, Rana Pratap Marg, Lucknow 226001, India
4. [https://www.ayurveda.com/pdf/intro\\_ayurveda.pdf](https://www.ayurveda.com/pdf/intro_ayurveda.pdf)
5. [http://www.icyer.com/documents/Principle\\_and\\_methods.pdf](http://www.icyer.com/documents/Principle_and_methods.pdf)
6. <http://nischennai.org/uploaded/pdf/e-Book-NIS.pdf>
7. [https://www.homeowatch.org/books/crews\\_workbook.pdf](https://www.homeowatch.org/books/crews_workbook.pdf)
8. [http://tkdl.res.in/tkdl/langdefault/Siddha/Sid\\_Principles.asp?GL=Eng](http://tkdl.res.in/tkdl/langdefault/Siddha/Sid_Principles.asp?GL=Eng)

9. <http://www.sysrevpharm.org/sites/default/files/2-7.pdf>
10. <https://www.ncbs.res.in/HistoryScienceSociety/content/overview-indian-healing-traditions>
11. [https://yogabog.com/sites/default/files/files/Iyengar\\_B\\_K\\_S\\_The\\_Illustrated\\_Light\\_On\\_Yoga.pdf](https://yogabog.com/sites/default/files/files/Iyengar_B_K_S_The_Illustrated_Light_On_Yoga.pdf)
12. <http://altmedworld.net/alternative.htm>



**PONDICHERRY UNIVERSITY**

**MODEL OF THEORY QUESTION PAPER**

**B.Sc. HOME SCIENCE**

(Choice Based Credit System)

(Effective from the academic year 2017-2018)

This pattern will be common to all the DSE, AECC, SEC, DSE, and GE offered by Home Science Department

**COURSE CODE & TITLE OF THE PAPER**

**Time: 3 hrs**

**Max. Marks: 75**

**Section- A**

**Answer ALL the questions** (10x2.5 = 25 marks)

Each answer should not exceed 25 words -

1. Unit I
2. Unit I
3. Unit II
4. Unit II
5. Unit III
6. Unit III
7. Unit IV
8. Unit IV
9. Unit V
10. Unit V

**Section- B**

**Answer ALL questions**

**Either 'a' or 'b' from each question** (5 x 10 = 50 marks)

Each answer should not exceed 750 words.

- 11a. Unit I  
OR
- 11b. Unit I
  
- 12a. Unit II  
OR
- 12b. Unit II
  
- 13a. Unit III  
OR
- 13b. Unit III
  
- 14a. Unit IV  
OR
- 14b. Unit IV
  
- 15a. Unit V  
OR
- 15b. Unit V

### **PRACTICAL EXTERNAL- GUIDELINE**

The Pondicherry University will nominate an external member from other colleges offering the respective papers. For instance, the examiners for practicals in Physiology, Microbiology, Nutrition and Dietetics, can be drawn from nursing colleges within the respective region with minimum qualification of M.Sc Home Science (any branch).

The duration shall be of 3 hours

Maximum marks will be 25 (Record-5, Written description or Procedure -5, experiment or slide viewing-15).

The staff incharge of the practical will be the Internal Examiner

The Skilled Assistant & Hall Superintendent will be two any other faculty from Home Science Department.

Guidelines and remuneration will be as prescribed by Pondicherry University, Puducherry.

### **PRACTICAL INTERNAL-GUIDELINE**

The staff handling the respective practical will be the Internal Examiner.

The other three faculty in Home Science Department will be the External Member, the Skilled Assistant & Hall Superintendent. This will go on rotation every year.

The duration shall be of 3 hours.

Maximum marks will be 25 (Record-5, Written description or Procedure -5, experiment or slide viewing-10, Viva-5).

Concurrence will be obtained from the Pondicherry University for duty chart & time table.

Guidelines and remuneration will be as prescribed by Pondicherry University, Puducherry.

**TEACHING, LEARNING & EVALUATION METHODS**

- Chalk & Talk Method with Power Point, Sharing weblinks and subject gateways
- Assignments & Seminars- Mandatory-1 per paper
- Class tests- Written test (mandatory – Minimum 2 tests per paper for assessing the CIA), Oral test (optional). The CIA will be calculated keeping in mind their overall performance in the class including integrity & punctuality
- Field Trip/ Educational tour – Wherever prescribed
- Group Discussion, Debate, Educational games (optional), Brain storming shall be encouraged for units that deals on social issues eg. Family Resource Management/ Consumer Studies/Gender & Development/ Family Dynamics etc.
- Peer teaching will be encouraged for final year Home Science students (Individual or Groups)