

# **Sadakathullah Appa College**

**(Autonomous)**

**(Reaccredited by NAAC at an 'A' Grade and ISO 9001:2015 Certified Institution)**

**Rahmath Nagar, Tirunelveli – 627 011, Tamil Nadu.**

## **DEPARTMENT OF NUTRITION AND DIETETICS**



### **CBCS SYLLABUS**

**For**

## **B.Sc. Nutrition and Dietetics**

**(Applicable for students admitted in June 2019 and onwards)  
(As per the Resolutions of the Academic Council Meetings  
held on 03-03-2018, 17-10-2018 and 02-03-2019).**



## CONTENTS

<b>Sl. No.</b>	<b>Contents</b>	<b>Subject Code</b>	<b>Page No.</b>
1	Course Structure	-	2
2	இக்காலத் தமிழ்	18ULTA11	7
3	Applied Grammar and Translation - I	18ULAR11	9
4	Prose, Poetry and Grammar I	18ULEN11	10
5	English for Communication	18ULEC11	11
6	Food Science	18UCND11	12
7	Human Development	18UCND12	13
8	Food Science Practicals	18UCND1P1	14
9	Human Physiology – I	18UAND11	15
10	Human Physiology - I Practical	18UAND1P1	16
11	Environmental Studies	18UENS11	17
12	சமயத் தமிழ்	18ULTA21	19
13	Applied Grammar and Translation – II	18ULAR21	21
14	Prose, Poetry and Grammar II	18ULEN11	22
15	Principles of Nutrition	18UCND21	23
16	Food Chemistry	18UCND22	24
17	Principles of Nutrition Practical	18UCND2P1	25
18	Human Physiology – II	18UAND21	26
19	Human Physiology - II Practical	18UAND2P1	27
20	Value Education-I	18USVE2A	28
21	Value Education-II	18USVE2B	29
22	பயன்பாட்டுத் தமிழ்	18ULTA31	30
23	Applied Grammar and Translation – III	18ULAR31	31
24	One-Act Plays and writing skill	18ULEN31	32
25	Nutrition Through Life Cycle	18UCND31	34
26	Functional Foods and Nutraceuticals	18UEND3A	35
27	Entrepreneurship Development	18UEND3B	36
28	Nutrition Through Life Cycle Practicals	18UCND3P1	37
29	Fundamentals of Baking	18UAND31	37
30	Fundamentals of Baking Practical	18UAND3P1	38
31	Introduction to Food and Nutrition	18UNND31	39
32	சங்கத் தமிழ்	18ULTA41	40
33	Classical Prose	18ULAR41	42
34	A practical course in Spoken English	18ULEN41	43
35	Family Resource Management	18UCND41	44

<b>Sl. No.</b>	<b>Contents</b>	<b>Subject Code</b>	<b>Page No.</b>
36	Food Safety and Quality control	18UEND4A	45
37	Medical laboratory Techniques	18UEND4B	46
38	Family Resource Management Practicals	18UCND4P1	47
39	Advanced Baking	18UAND41	48
40	Advanced Baking Practical	18UAND4P1	49
41	Health and Fitness	18UNND41	50
42	Introduction to Textiles	18UCND51	51
43	Clinical Biochemistry	18UCND52	52
44	Food Service Management	18UCND53	53
45	Food Preservation	18UEND5A	54
46	Post-Harvest Technology	18UEND5B	55
47	Clinical Bio-Chemistry Practical	18UCND5P1	56
48	Food Preservation Practical	18UCND5P2	56
49	Sports Nutrition	18USND51	57
50	Medical Nutrition Therapy	18UCND61	58
51	Food Microbiology	18UCND62	59
52	Project	18UCND63	60
53	Public Health and Community Nutrition	18UEND6A	61
54	Development of food product	18UEND6B	62
55	Medical Nutrition Therapy Practical	18UCND6P1	63
56	Food Safety and Quality control practical	18UCND6P2	63
57	Extension Education in Home Science	18USND61	64
58	Personality Development	18USPD62	65
59	Scheme of Examinations	-	66

**B.Sc. Nutrition and Dietetics (2018 – 2021 Onwards)**  
**(Applicable for students admitted in June 2019 and onwards)**

**DISTRIBUTION OF CREDITS, NO. OF PAPERS & MARKS**

Part	Course	Semester	Hours	Credits	Papers	Marks					
I	Tamil / Arabic	I to IV	24	16	4	400					
II	English	I to IV	24	16	5	400					
III	Discipline Specific Core (DSC) + Project + Practicals	I to VI	78	62	20	1800					
	Discipline Specific Elective (DSE)	III to VI	16	16	4	400					
	Allied Theory + Practicals	I to IV	24	16	8	600					
IV	Non-major Elective (NME)	III & IV	4	4	2	200					
	Skill Enhancement Course (SEC)	V & VI	4	4	2	200					
	Skill Based Common (SBC)	VI	2	2	1	100					
	Ability Enhancement Compulsory Course (AECC) Environmental Studies (EVS)	I	2	2	1	100					
	Value Education (VE)	II	2	2	1	100					
V	Extension Activities	I to IV+	--	1+1*	1	100					
	MOOC <sup>\$</sup>	I – V	-	2 <sup>#</sup>							
TOTAL			180	141+1*+2 <sup>#</sup>	49	4400					
SEMESTER WISE DISTRIBUTION OF HOURS											
Part	I	II	III				IV				Total
SEM	T/A	ENG	DSC	PRO/ FW	DSE	AL	NME	SEC	SBC	EVS/VE	
I	6	6	10	-	-	6	-	-	-	2	30
II	6	6	10	-	-	6	-	-	-	2	30
III	6	6	6	-	4	6	2	-	-	-	30
IV	6	6	6	-	4	6	2	-	-	-	30
V	-	-	24	-	4	-	-	2	-	-	30
VI	-	-	16	6	4	-	-	2	2	-	30
Total	24	24	72	6	16	24	4	4	2	4	180

+ Activities and evaluation are to be performed during Semesters I to IV and results to be declared at the end of the Semester IV along with those for other courses in the Mark Statement.

\* Extra credit for Sadakath Outreach Programme (SOP)

\$ As per the guidelines of the UGC all the UG and the PG students shall enrol for one Massive Open Online Course offered through SWAYAM, NPTEL, etc.

# Two extra credits will be given on completion of the course.

**B.Sc., Nutrition and Dietetics (2018-2021)**  
**COURSE STRUCTURE UNDER CBCS**  
**(APPLICABLE FOR STUDENTS ADMITTED FROM JUNE 2019 ONWARDS)**

I SEMESTER								
P	SUB	TITLE OF THE PAPER	S.CODE	H/W	C	MARKS		
						I	E	T
I	TA 1	இக்காலத் தமிழ்	18ULTA11	6	4	25	75	100
	AR 1	Applied Grammar and Translation-I	18ULAR11					
II	a) EN 1	Prose, Poetry and Grammar-I	18ULEN11	4	2	25	75	100/2
	b) EC	English for Communication	18ULEC11	2	2	25	75	100/2
III	DSC (1)	Food Science	18UCND11	4	4	25	75	100
	DSC (2)	Human Development	18UCND12	4	4	25	75	100
	DSCP (1)	Food Science Practicals	18UCND1P1	2	1	40	60	100/2
	I-A (I)	Human Physiology - I	18UAND11	4	3	25	75	100
	I-AP (I)	Human Physiology - I Practicals	18UAND1P1	2	1	40	60	100/2
IV	EVS	Environmental Studies	18UENS11	2	2	25	75	100
TOTAL				30	23			700
II SEMESTER								
I	TA 2	சமயத் தமிழ்	18ULTA21	6	4	25	75	100
	AR 2	Applied Grammar and Translation – II	18ULAR21					
II	EN 2	Prose, Poetry and Grammar II	18ULEN21	6	4	25	75	100
III	DSC (3)	Principles of Nutrition	18UCND21	4	4	25	75	100
	DSC (4)	Food Chemistry	18UCND22	4	4	25	75	100
	DSCP (2)	Principles of Nutrition Practicals	18UCND2P1	2	1	40	60	100/2
	I-A (II)	Human Physiology - II	18UAND21	4	3	25	75	100
	I-AP(II)	Human Physiology - II Practicals	18UAND2P1	2	1	40	60	100/2
IV	VE	Value Education-I	18USVE2A	2	2	25	75	100
		Value Education-II	18USVE2B					
TOTAL				30	23			700
III SEMESTER								
I	TA 3	பயன்பாட்டுத் தமிழ்	18ULTA31	6	4	25	75	100
	AR 3	Applied Grammar and Translation – III	18ULAR31					
II	EN 3	One-Act Plays and Writing Skill	18ULEN31	6	4	25	75	100
III	DSC5	Nutrition Through Life Cycle	18UCND31	4	4	25	75	100
	DSEI	A) Functional Foods and Nutraceuticals	18UEND3A	4	4	25	75	100
		B) Entrepreneurship Development	18UEND3B					
	DSCP (3)	Nutrition Through Life Cycle Practicals	18UCND3P1	2	1	40	60	100/2
	II A(I)	Fundamentals of Baking	18UAND31	4	3	25	75	100
II AP (I)	Fundamentals of Baking Practicals	18UAND3P1	2	1	40	60	100/2	
IV	NME (1)	Introduction to Food and Nutrition	18UNND31	2	2	25	75	100
TOTAL				30	23			700

IV SEMESTER								
P	SUB	TITLE OF THE PAPER	S.CODE	H/W	C	MARKS		
						I	E	T
I	TA 4	சங்கத் தமிழ்	18ULTA41	6	4	25	75	100
	AR 4	Classical Prose	18ULAR41					
II	EN 4	A practical Course in Spoken English	18ULEN41	6	4	25	75	100
III	DSC (6)	Family Resource Management	18UCND41	4	4	25	75	100
	DSE (2)	A) Food Safety and Quality Control	18UEND4A	4	4	25	75	100
		B) Medical Laboratory Techniques	18UEND4B					
	DSCP (4)	Family Resource Management Practicals	18UCND4P1	2	1	40	60	100/2
	II-A –II	Advanced Baking	18UAND41	4	3	25	75	100
	II-AP(II)	Advanced Baking Practicals	18UAND4P1	2	1	40	60	100/2
IV	NME (2)	Health and Fitness	18UNND41	2	2	25	75	100
V	EX	Extension Activities (Choose from the list)	---	--	1	--	100	100
		SOP	18UEXSOP		1*			
TOTAL				30	24+1*			800
V SEMESTER								
III	DSC (7)	Introduction to Textiles	18UCND51	6	4	25	75	100
	DSC (8)	Clinical Bio-Chemistry	18UCND52	5	4	25	75	100
	DSC (9)	Food Service Management	18UCND53	5	4	25	75	100
	DSE(3)	A) Food Preservation	18UEND5A	4	4	25	75	100
		B) Post Harvest Technology	18UEND5B					
	DSCP (5)	Clinical Bio-Chemistry Practicals	18UCND5P1	4	2	40	60	100
	DSCP(6)	Food Preservation Practicals	18UCND5P2	4	2	40	60	100
IV	SEC - I	Sports Nutrition	18USND51	2	2	25	75	100
Total				30	22			700
VI SEMESTER								
III	DSC (10)	Medical Nutrition Therapy	18UCND61	4	4	25	75	100
	DSC (11)	Food Microbiology	18UCND62	4	4	25	75	100
	DSC (12)	Project	18UCND63	6	6	25	75	100
	DSE (4)	A)Public Health and Community Nutrition	18UEND6A	4	4	25	75	100
		B) Development of Food Product	18UEND6B					
	DSCP(7)	Medical Nutrition Therapy Practicals	18UCND6P1	4	2	40	60	100
	DSCP (8)	Food Safety and Quality Control Practicals	18UCND6P2	4	2	40	60	100
IV	SEC-II	Extension Education in Home Science	18USND61	2	2	25	75	100
	SBC	Personality Development	18USPD62	2	2	25	75	100
Total				30	26			800
I-V Sem		Massive Open Online Course \$		-	2#			

**B.Sc. Nutrition and Dietetics (2018-2021) Course Structure (CBCS)**  
**(Applicable for students admitted in June 2019 and onwards)**

**TITLE OF THE PAPERS, CREDITS & MARKS**

<b>GROUP II COURSES (TWO -YEAR LANGUAGE COURSES)</b> <b>(B.A. Arabic, B.A. Tamil, B.A. English, B.A. History, B.Sc. Mathematics, B.Sc. Physics, B.Sc. Chemistry, B.Sc. Zoology, B.Sc. Microbiology and B.Sc. Nutrition and Dietetics)</b>							
<b>SEM</b>	<b>Title of the paper</b>	<b>S.CODE</b>	<b>H/W</b>	<b>C</b>	<b>I</b>	<b>E</b>	<b>T</b>
<b>PART I - TAMIL</b>							
<b>I</b>	இக்காலத் தமிழ்	<b>18ULTA11</b>	6	4	25	75	100
<b>II</b>	சமயத் தமிழ்	<b>18ULTA21</b>	6	4	25	75	100
<b>III</b>	பயன்பாட்டுத் தமிழ்	<b>18ULTA31</b>	6	4	25	75	100
<b>IV</b>	சங்கத் தமிழ்	<b>18ULTA41</b>	6	4	25	75	100
<b>TOTAL</b>			<b>24</b>	<b>16</b>			<b>400</b>
<b>PART I – ARABIC</b>							
<b>I</b>	Applied Grammar and Translation – I	<b>18ULAR11</b>	6	4	25	75	100
<b>II</b>	Applied Grammar and Translation – II	<b>18ULAR21</b>	6	4	25	75	100
<b>III</b>	Applied Grammar and Translation – III	<b>18ULAR31</b>	6	4	25	75	100
<b>IV</b>	<i>Classical Prose</i>	<b>18ULAR41</b>	6	4	25	75	100
<b>TOTAL</b>			<b>24</b>	<b>16</b>			<b>400</b>
<b>PART II – ENGLISH</b>							
<b>I</b>	Prose, Poetry and Grammar-I	<b>18ULEN11</b>	4	2	25	75	100/2
	English for Communication	<b>18ULEC11</b>	2	2	25	75	100/2
<b>II</b>	Prose, Poetry and Grammar-II	<b>18ULEN21</b>	6	4	25	75	100
<b>III</b>	One – Act Plays and Writing Skill	<b>18ULEN31</b>	6	4	25	75	100
<b>IV</b>	A Practical Course in Spoken English	<b>18ULEN41</b>	6	4	25	75	100
<b>TOTAL</b>			<b>24</b>	<b>16</b>			<b>400</b>



**PART III**

Part III DSC, DSE, Project and SEC								
SEM	P	TITLE OF THE PAPER	S.CODE	H/W	C	MARKS		
						I	E	T
I	DSC1	Food Science	18UCND11	4	4	25	75	100
	DSC2	Human Development	18UCND12	4	4	25	75	100
	CP 1	Food Science Practical	18UCND1P1	2	1	20	30	50
II	DSC3	Principles of Nutrition	18UCND21	4	4	25	75	100
	DSC4	Food Chemistry	18UCND22	4	4	25	75	100
	CP 2	Principles of Nutrition Practical	18UCND2P1	2	1	20	30	50
III	DSC5	Nutrition Through Life Cycle	18UCND31	4	4	25	75	100
	CP 3	Nutrition Through Life Cycle Practical	18UCND3P1	2	1	20	30	50
	DSE-I	A) Functional Foods and Nutraceuticals	18UEND3A	4	4	25	75	100
		B) Entrepreneurship Development	18UEND3B					
IV	DSC6	Family Resource Management	18UCND41	4	4	25	75	100
	CP 4	Family Resource Management Practical	18UCND4P1	2	1	20	30	50
	DSE-II	A) Food Safety and Quality control	18UEND4A	4	4	25	75	100
		B) Medical laboratory Techniques	18UEND4B					
V	DSC7	Introduction to Textiles	18UCND51	6	4	25	75	100
	DSC8	Clinical Bio-Chemistry	18UCND52	5	4	25	75	100
	DSC9	Food Service Management	18UCND53	5	4	25	75	100
	CP 5	Clinical Bio-Chemistry Practical	18UCND5P1	4	2	40	60	100
	CP 6	Food Preservation Practical	18UCND5P2	4	2	40	60	100
	DSE-III	A) Food Preservation	18UEND5A	4	4	25	75	100
		B) Post Harvest Technology	18UEND5B					
VI	DSC10	Medical Nutrition Therapy	18UCND61	4	4	25	75	100
	DSC11	Food Microbiology	18UCND62	4	4	25	75	100
	DSC12	Project	18UCND63	6	6	25	75	100
	CP 7	Medical Nutrition Therapy Practical	18UCND6P1	4	2	40	60	100
	CP 8	Food Safety and Quality control practical	18UCND6P2	4	2	40	60	100
	DSE-IV	A)Public Health and Community Nutrition	18UEND6A	4	4	25	75	100
		B) Development of food product	18UEND6B					
TOTAL				94	78			2200

**PART III – ALLIED**

SEM	SUB	TITLE OF THE PAPER	S.CODE	H/W	C	MARKS		
						I	E	T
<b>I</b>	AI-1	Human Physiology - I	18UAND11	4	3	25	75	100
	AI-P1	Human Physiology - I Practical	18UAND1P1	2	1	20	30	50
<b>II</b>	AI-2	Human Physiology - II	18UAND21	4	3	25	75	100
	AI-P2	Human Physiology - II Practical	18UAND2P1	2	1	20	30	50
<b>III</b>	AII-1	Fundamentals of Baking	18UAND31	4	3	25	75	100
	AII-P1	Fundamentals of Baking Practical	8UAND3P1	2	1	20	30	50
<b>IV</b>	AII-2	Advanced Baking	18UAND41	4	3	25	75	100
	AII-P2	Advanced Baking Practical	18UAND4P1	2	1	20	30	50
<b>TOTAL</b>				<b>24</b>	<b>16</b>			<b>600</b>

**PART IV – NON-MAJOR COURSE (FOR OTHER MAJOR STUDENTS)**

SEM	Sub	Title of the paper	S.CODE	H/W	C	MARKS		
						I	E	T
<b>III</b>	NME-I	Introduction to Food and Nutrition	18UNND31	2	2	25	75	100
<b>IV</b>	NME-II	Health and Fitness	18UNND41	2	2	25	75	100
<b>TOTAL</b>				<b>4</b>	<b>4</b>			<b>200</b>

**Part IV – SEC/SBC**

SEM	Sub	Title of the paper	S.CODE	H/W	C	MARKS		
						I	E	T
<b>V</b>	SEC-I	Sports Nutrition	18USND51	2	2	25	75	100
<b>VI</b>	SEC-II	Extension Education in Home Science	18USND61	2	2	25	75	100
<b>VI</b>	SBC	Personality Development	18USPD62	2	2	25	75	100
<b>TOTAL</b>				<b>6</b>	<b>6</b>			<b>300</b>

**Part IV – EVS & Value Education**

SEM	Sub	Title of the paper	S.CODE	H/W	C	MARKS		
						I	E	T
I	EVS	Environmental Studies	18UENS11	2	2	25	75	100
II	VE	Value Education I (OR)	18USVE2A	2	2	25	75	100
		Value Education II	18USVE2B					
TOTAL				4	4			200

**PART – V – Extension Activities**

SEM	Extension Activities (Choose any one)	S.CODE	H/W	C	MARKS		
					I	E	T
<b>I to IV</b>	NCC	18UEXNCC		<b>1</b>			<b>100</b>
	NSS	18UEXNSS					
	Physical Education	18UEXPHE					
	Red Ribbon Club	18UEXRRC					
	Youth Red Cross	18UEXYRC					
	Youth Welfare	18UEXYWL					
	Yoga	18UEXYOG					
<b>III-IV</b>	Sadakath Outreach Programme (SOP)	18UEXSOP		<b>1*</b>			
	<b>Total</b>		<b>-</b>	<b>1+1*</b>			<b>100</b>

முதல் பருவம்			
PART - 1 TAMIL			
TA - 1	இக்காலத்தமிழ்		18ULTA11
Hrs/Week: 6	Hrs/Sem: 90	Hrs/UNIT: 18	Credits:4

### நோக்கம்

1. தமிழ்ப்படைப்பிலக்கியங்களான புதுக்கவிதைகள், சிறுகதைகள் ஆகியவற்றை முதலாவதில்
2. சமூகம் பற்றிய சிந்தனைகளைப் படைப்பிலக்கியங்கள் மூலம் ஏற்படுத்துதல்.

### அலகு - 1 தமிழ்க்கவிதைகள்

- |                                      |                              |
|--------------------------------------|------------------------------|
| 1. பரம்பொருள் வாழ்த்து               | - மகாகவி பாரதியார்           |
| 2. தமிழின் இனிமை                     | - பாவேந்தர் பாரதிதாசன்       |
| 3. கொக்கு                            | - ந.பிச்சமூர்த்தி            |
| 4. நான்                              | - தருமு சிவராம் (பிரமிள்)    |
| 5. முக்காலம்                         | - சி.மணி                     |
| 6. தோழர் மோசிகேரனார்                 | - ஞானக்கூத்தன்               |
| 7. நகுலன் கவிதைகள்                   | - நகுலன்                     |
| 8. எதிர்வரும் யாவரும்                | - கல்யாணஜி                   |
| 9. ஆயிரம் திருநாமம் பாடி             | - கவிக்கோ அப்துல் ரகுமான்    |
| 10. மரங்களைப் பாடுவேன்               | - வைரமுத்து                  |
| 11. இளைய தோழனுக்கு                   | - மு.மேத்தா                  |
| 12. செய்யுள்                         | - கலாப்ரியா                  |
| 13. பெயர் தெரியாப்பறவை               | - தேன்மொழிதாஸ்               |
| 14. நிசப்த்தத்தில் குளிரும் வார்த்தை | - அனார்                      |
| 15. முதல்துளி                        | - பாலைவன லாந்தர்             |
| 16. இந்தக்காலம்                      | - மனுஷ்யபுத்திரன்            |
| 17. பூவின் பதில்                     | - நாகூர் ருமி                |
| 18. அறிவுமதி கவிதைகள்                | - அறிவுமதி                   |
| 19. வேர் பிடித்த மரம்                | - க.அம்சப்ரியா               |
| 20. நட்சத்திரக் கிழவி                | - ப.சுடலைமணி                 |
| 21. கீதாஞ்சலி                        | - மகாகவி இரவீந்தரநாத் தாகூர் |
| 22. ஜென் கவிதைகள்                    | - பாஷா                       |

### அலகு - 2 சிறுகதை இன்பம்

- |                         |                            |
|-------------------------|----------------------------|
| 1. விடியுமா?            | - கு.பா.ராஜகோபாலன்         |
| 2. காலனும் கிழவியும்    | - புதுமைப்பித்தன்          |
| 3. கதவு                 | - கி.ராஜநாராயணன்           |
| 4. காலத்தின் ஆவர்த்தனம் | - தோப்பில் முஹம்மது மீரான் |
| 5. சொர்க்கக் கன்னிகை    | - கருணா மணாளன்             |
| 6. செடிகளுக்கு          | - வண்ணதாசன்                |
| 7. கனவில் உதிர்ந்த பூ   | - நாகூர் ருமி              |
| 8. சங்காத்தி            | - தீன்                     |
| 9. ராஜமீன்              | - கீரனார் ஜாகீர் ராஜா      |

### அலகு - 3 கட்டுரைக் கனிகள்

1. தமிழில் ஹைக்கூ கவிதைகள்
2. கவிக்கோ அப்துல் ரகுமானின் கவிதைகள்
3. நாட்டுப்புற இலக்கியங்கள்
5. இணையத்தில் தமிழ்
6. தமிழ்ச் சிறுகதை இலக்கியம்
7. இயற்கையைக் கொண்டாடும் ஜென் கவிதைகள்

**அலகு - 4 இலக்கியவரலாறு**

1. தமிழ்ப் புதுக்கவிதை தோற்றமும் வளர்ச்சியும்
2. தமிழ்ச் சிறுகதை தோற்றமும் வளர்ச்சியும்
3. தற்காலச் சிறுகதையாசிரியர்கள் ஓர் அறிமுகம்
4. புதுக்கவிதைகள் எழுதப்பயிற்சி தந்து மாணவர் கவிதைத் தொகுப்பை வெளியிடல்.

**அலகு - 5 எழுத்து இலக்கணம் & எழுத்து வகைகள் அறிமுகம்**

1. முதலெழுத்துகள், சார்பெழுத்துகள், சுட்டெழுத்துக்கள், வினாவெழுத்துகள்
2. மொழி முதல் எழுத்துகள், மொழி இறுதி எழுத்துகள், வல்லினம் மிகுமிடங்கள், வல்லினம் மிகாவிடங்கள்.
3. நாளிதழ்களில் இடம்பெறும் செய்திகளில் பிழைகளைக் கண்டறிந்து எழுதப்பயிற்சி

**பாடநூல்**

**“இன்பத்தமிழ்”**

சதக்கத்துல்லாஹ் அப்பா கல்லூரித் தமிழ்த்துறை வெளியீடு  
ரஹ்மத்நகர், திருநெல்வேலி & 627 011.

**பார்வை நூல்கள் மற்றும் வழிகாட்டு இணையதளங்கள்**

1. வல்லிக்கண்ணன்  
புதுக்கவிதை தோற்றமும் வளர்ச்சியும்
2. ந.சுப்புரெட்டியார்  
புதுக்கவிதை போக்கும் நோக்கம்
3. பேராசிரியர் சு.பாலசந்திரன்  
புதுக்கவிதை & ஒரு புதுப்பார்வை
4. எஸ். ராமகிருஷ்ணன்  
கதாவிலாசம்  
விகடன் பிரசுரம்  
757, அண்ணாசாலை  
சென்னை & 600 002.

**இணையதளங்கள்**

1. [www.tamilvu.org](http://www.tamilvu.org)
2. [www.azhiyasudargal.blogspot.in](http://www.azhiyasudargal.blogspot.in)
3. [www.neelamegam.blogspot.in](http://www.neelamegam.blogspot.in)
4. [www.jeyamohan.in](http://www.jeyamohan.in)
5. [www.sramakrishnan.com](http://www.sramakrishnan.com)

SEMESTER - I			
AR-1	APPLIED GRAMMAR AND TRANSLATION-I		18ULAR11
Hrs/ Week: 6	Hrs/ Sem: 90	Hrs/ Unit: 18	Credits: 4

**Objectives:** To enable the students to learn Alphabets, Pronunciation, Basic Grammar, Reading, Writing of Arabic Language

**UNIT I: Lessons 1 to 4 (Textbook – 1)**

من الدرس الأول إلى الدرس الرابع

**UNIT II: Lessons 5 to 8 (Textbook – 1)**

من الدرس الخامس إلى الدرس الثامن

**UNIT III: Grammar Portions (Textbook – 2)**

- 1) Words and the types of words (أجزاء الكلام)
- 2) Nominal Sentence (الجملة الاسمية)
- 3) Adjective and Noun-qualified (الصفة والموصوف)
- 4) Subject and Predicate (المذكر والمؤنث)
- 5) Masculine and Feminine (أدوات الاستفهام)
- 6) Interrogatives (المفرد والتثنية والجمع)
- 7) Singular, Dual and Feminine (المضاف والمضاف إليه)
- 8) Possessiveness (الضمائر المنفصلة)
- 9) Detached Pronouns (حروف الجر)
- 10) Prepositions (أسماء الإشارة)
- 11) Demonstrative pronouns (الأسماء الموصولة)
- 12) Relative pronouns

**UNIT IV: Lessons 9 to 12 (Textbook – 1)**

من الدرس التاسع إلى الدرس الثاني عشر

**UNIT V: Lessons 13 to 16 (Textbook – 1)**

من الدرس الثالث عشر إلى الدرس السادس عشر

## TEXTBOOKS

- 1) Duroosul Lughatil Arabiya Part – I Lessons 1 to 16 only by Dr.V. Abdur Rahim. Available at: Islamic foundation Trust, 78 Perambur High Road, Perambur, Chennai - 600 012.
- 2) Arabic for Beginners (selected topics only) By Dr. Syed Ali (Former HOD of Arabic, The New College, Royappettach, (Chennai) (International Edition 2001) (UBS Publishers & Distributors Ltd) 5, Ansari Road New Delhi -110 002.

<b>I SEMESTER</b>			
<b>EN I A</b>	<b>Part – II English Prose, Poetry and Grammar - I</b>		<b>18ULEN11</b>
<b>Hrs/ Week: 4</b>	<b>Hrs/ Sem: 60</b>	<b>Hrs/ Unit: 12</b>	<b>Credits:2</b>

**Objectives:**

1. To answer comprehensive questions on passages of moderate level of difficulty.
2. To write a critical appreciation of the prescribed poems.
3. To write grammatically.

**UNIT I: PROSE**

1. Education Provides a Solid Foundation - A.P. J. Abdul Kalam
2. Love Story - Maneka Gandhi

**UNIT II: PROSE**

3. Speech on Indian Independence - Jawaharlal Nehru
4. Film-Making - Satyajit Ray

**UNIT III: POETRY**

1. In the Bazaars of Hyderabad - Sarojini Naidu
2. Middle Age - Kamala Das

**UNIT IV: GRAMMAR**

1. Parts of Speech: Verb
2. Tenses

**UNIT V: COMMUNICATION SKILLS**

1. Unseen Passages
2. Letter Writing: Personal and Business Letters
3. Curriculum Vitae (CV)

**TEXTBOOK:**

1. Kulat L. Ambadas, Dr. Joshi, Sandeep. et. al. (ed).

*Blooming Buds.* Hyderabad: Orient Black Swan, 2017.

<b>I SEMESTER</b>			
<b>EN I B</b>	<b>ENGLISH FOR COMMUNICATION</b>	<b>18ULEC11</b>	
<b>Hrs/ Week: 2</b>	<b>Hrs/ Sem: 30</b>	<b>Hrs/ Unit: 6</b>	<b>Credits: 2</b>

**Objectives:**

1. To teach students basic Grammatical categories.
2. To teach students the four skills viz. Listening, Speaking, Reading and Writing and to impart language skills through tasks.
3. To inculcate in students the skills necessary for social and academic circumstances.

**UNIT I**

Parts of Speech (Pages 5 to 17)

**UNIT II**

Listening and Speaking (Pages 22 to 34) and (56 to 59)

**UNIT III**

Reading (Pages 35 to 45)

**UNIT IV**

Writing - I

Punctuation and Kinds of Sentences (Pages 46 to 55)

**UNIT V**

Writing - II

Filling in Forms & Wrap-up (Pages 60 to 78)

**TEXTBOOK:**

Board of Editors. *Content and Language Integrated Learning to Enhance Communication Skills. Semester I Module 1*. Chennai: Tamil Nadu State Council for Higher Education, 2017.

<b>I SEMESTER</b>			
<b>DSC 1</b>	<b>FOOD SCIENCE</b>		<b>18UCND11</b>
<b>Hrs / week: 4</b>	<b>Hrs / Sem:60</b>	<b>Hrs / unit: 12</b>	<b>Credits:4</b>

**OBJECTIVES:** To enable students

- To understand the vital link between nutrition and health.
- To gain knowledge of nutrition and their role in body's smooth functioning.
- To gain practical experience in different methods of cooking.

#### **UNIT I Introduction to Food Science**

- a. Definition: Food Science, Food, Nutrients, Nutritional Status, Mal-nutrition, under –Nutrition, over Nutrition, Balanced diet and Health.
- b. Food Groups: Basic four and Basic five, Functions of food, Nutritional Classification of foods – Energy yielding, Body Building and protective foods.
- c. Cooking Methods: Moist and Dry heat methods of cooking, merits and demerits.

#### **UNIT II Cereals, Grains and Pulses**

- a. Cereals - Structure, Nutritive value, milling and parboiling of rice, wheat.
- b. Pulses - Composition and Nutritive value, toxic substances in pulses, Milling, factors affecting cooking quality of pulses and germination of pulses.

#### **UNIT III Plant Foods**

- a. Vegetables – classification, Nutritive value, changes during cooking of Vegetables,
- b. Fruits- classification, nutritive value, changes during ripening of fruits, Storage.

#### **UNIT IV Animal Foods**

- a. Milk & Milk Products: Composition and Nutritive value, Different types of milk and Milk products
- b. Egg: Structure, Composition and Nutritive value, uses of egg in cookery.
- c. Flesh Foods: Composition, Nutritive value, selection of meat, fish and poultry-Rigormortis and tenderization of meat

#### **UNIT V Nuts and Oilseeds, Spices and Condiments**

- a. Nuts and Oilseeds: Composition and Nutritive value of common Nuts and Oilseeds.
- b. Beverages: Classification and Nutritive value of Coffee, Tea, Cocoa, milk-based fruit Juices, aerated and alcoholic beverages.
- c. Spices and Condiments: Definition, uses and abuses of spices

#### **Reference Books:**

1. Dr.M. Swaminathan, Advanced Text – Book on Food & Nutrition, Bappco, Bangalore. 1985
2. Subbulakshmi., Food Processing and Preservation
3. Raheena Begum., Textbook of Food and Nutrition
4. N. Shakuntala Manay, M. Shadaksharaswamy, Foods Facts and principles, New age International (p) Ltd., Publishers Second Edition, 2001
5. B. Srilakshmi., Food Science, New age International (p)Ltd., 2001
6. Nutritive value of Indian foods- G. Gopalan



<b>I SEMESTER</b>			
<b>DSC 2</b>	<b>HUMAN DEVELOPMENT</b>		<b>18UCND12</b>
<b>Hrs / week: 4</b>	<b>Hrs / Sem:60</b>	<b>Hrs / unit: 12</b>	<b>Credits:4</b>

**Objectives:** To enable students

- Understand the philosophy and aims of pre-school education and its value to children, parents and community
- Gain practical experience by observation and participation in the pre-school
- Understand the growth development of the child during the period 6-12 years and study his needs during this period
- Gain knowledge of the needs, interest and problems of the adolescent, relation to the family, friends, peers and community

### **UNIT I- Fundamentals of Growth and Development**

- a) The principle of Growth and development- Factors that influence the development.
- b) Methods of child study with special emphasis on case study and observation methods.

### **UNIT II- Period of Infancy**

- a) Appearance, size and proportion of newborn- Physical care and daily routine- bathing, clothing and sleeping.
- b) Feeding –natural and artificial.
- c) Immunization Schedule

### **UNIT III- Early and Late Childhood Period**

- d) Early Childhood period (1-6 years) -Physical and motor growth, Language, intellectual, Emotional and social development.
- e) Late Childhood Period (6-12 years) - Physical and motor growth, intellectual development, Emotional and social development - Habits and Habit formation.

### **UNIT IV- Period of Adolescence**

- a) Physical, Social, Emotional and Cognitive development
- b) Juvenile delinquency

### **UNIT V- Period of Old age**

- a) Age related changes – Physical and Psychological problems of old age
- b) Family attitudes towards the aged

### **Reference Books:**

1. Suriyakanthi, Child Development
2. Rajaammal P. Devdas., Child Development
3. Breckenridge, M.E. & Vincent, E. Lee – Child Development, W.B. Saunders & CO., 1956.
4. Hurlock, E.B. Child Development McGraw-Hill Co., New York 1950.
5. Breckenridge: Mariaan. E. Murphy: Margaret Neatitt – Growth and Development of the young child W.D. Saunders & Co., Philadelphia: 1958.

<b>I SEMESTER</b>		
<b>DSCP1</b>	<b>FOOD SCIENCE</b>	<b>18UCND1P1</b>
<b>Hrs / week: 2</b>	<b>Hrs / Sem: 30</b>	<b>Credits: 1</b>

### **FOOD SCIENCE PRACTICALS**

#### **1. Cereals and cereal cookery**

a. Preparation of cereal products using Rice, Wheat, Ragi etc.

#### **2. Pulses**

a. Preparation of pulse dishes.

#### **3. Vegetables**

a. Effect of cooking on vegetable pigments.

b. Darkening of vegetable

c. Preparation of vegetable recipes.

#### **4. Fruits**

Preparation of recipes using fruits

#### **5. Milk Cookery**

Preparation of milk and milk product recipes

#### **6. Egg**

Preparation of egg products

#### **7. Meat**

Preparation of different meat recipes

#### **8. Fish**

Preparation of different fish recipes

#### **9. Poultry**

Preparation of different poultry recipes

#### **10. Sugar and Jaggery**

Stages in sugar cookery

Preparation of different sweets.

<b>I SEMESTER</b>			
<b>AI-1</b>	<b>HUMAN PHYSIOLOGY- I</b>		<b>18UAND11</b>
<b>Hrs / week: 4</b>	<b>Hrs / Sem:60</b>	<b>Hrs / unit: 12</b>	<b>Credits: 3</b>

**Objectives**

To enable the students to understand the

1. Organs of the body and their functions
2. Different systems of the body, their functions with special reference to the control and feedback mechanisms
3. Physiological changes at different stages of life

**UNIT I      Cell and Tissues**

- a) Cell –types, structure and functions.
- b) Tissues– Structure and functions of epithelial, connective, muscular and nervous tissues

**UNIT II      Blood and Circulatory System**

- a) Blood - Composition, functions, blood groups – Rh factors, blood coagulation
- b) Heart – Structure of heart and blood vessels, structure of artery, vein and capillaries.
- c) cardiac cycle and blood circulation

**UNIT III      Digestive System**

- a) Digestive System – Anatomy, Swallowing.
- b) Process of digestion – changes in stomach and small intestine and absorption

**UNIT IV      Excretory System**

- a) Structure and Functions of Kidney, Cross section of kidney
- b) Structure of Nephron and formation of urine

**UNIT V      Respiratory System**

- a) Anatomy and Mechanism of Respiration
- b) Gaseous changes in tissues, oxygen transport, CO<sub>2</sub> transport

**Reference Books:**

1. Dr. N. Arumugam., Human Physiology, Saras Publication, 2016
2. Evelyn C. Pearce with new illustrations by Audrey Besterman, Anatomy and Physiology for Nurses, Jaypee Brothers, 16<sup>th</sup> Edition,

<b>I SEMESTER</b>		
<b>AI-P1</b>	<b>HUMAN PHYSIOLOGY- I PRACTICAL</b>	<b>18UAND1P1</b>
<b>Hrs / week: 2</b>	<b>Hrs / Sem: 30</b>	<b>Credits: 1</b>

### **HUMAN PHYSIOLOGY- I PRACTICAL**

1. Determination of hemoglobin (ABD blood group)
2. Spotter – Histology of Epithelial tissue
3. Spotter – Histology of muscular tissue
4. Spotter – Histology of connective tissue
5. Spotter – Histology of cartilage tissue
6. Spotter – Histology of nerve tissue
7. Spotter – Sphygmomanometer
8. Spotter – Stethoscope
9. Demonstration of microscope
10. Preparation of models – Kidney, Heart, Brain
11. Demonstration of blood pressure (Rest and exercise)

I SEMESTER			
EVS	ENVIRONMENTAL STUDIES		18UENS11
Hrs/ Week: 2	Hrs/ Sem: 30	Hrs/ UNIT: 6	Credits: 2

### UNIT I: Nature of Environmental Studies

Goals, Objectives and guiding principles of environmental studies. Towards sustainable development - Environmental segments- Atmosphere, Hydrosphere, Lithosphere, Biosphere – definition. Pollution episodes -- Hiroshima – Nagasaki, - Bhopal gas Tragedy, Fukushima. Stone leprosy in Taj Mahal

### UNIT II: Natural Resources

Renewable and Non-Renewable resources - classification.

- Forest resources: Use and over - exploitation, Afforestation and deforestation.
- Water resources: Use and over - utilization and conservation of surface and ground water - Rain harvesting.
- Marine Resources: Fisheries and Coral reefs.
- Mineral resources: Use and exploitation - environmental impacts of extracting and using mineral resources.
- Food resources: Effects of modern agriculture fertilizers - pesticide problem.
- Energy resources: Growing energy needs - use of alternate energy source - Solar cells & windmills.
- Land resources: Land degradation

### UNIT III: Ecosystem

- Concept of Eco-systems - Tropic level, food chains, food web and Ecological pyramids, Living conditions on other planets (Brief account).  
Types, structure & Functions of the following:
  - a) Aquatic ecosystem
  - b) Grassland ecosystem
  - c) Forest ecosystem
  - d) Desert ecosystem

### UNIT IV: Biodiversity & Its Conservation

Introduction - Definition: ecosystem diversity, species diversity and Genetic diversity. Hot spots of biodiversity - Western Ghats, Eastern Himalayas and Gulf of Mannar. Threats to biodiversity - Habitat Loss, Poaching of wildlife and Man - wildlife conflicts.

Conservation of biodiversity: *In-situ* and *Ex-situ*.

### UNIT V: Environmental Pollution

Sources, effects, prevention and control measures of the following.

- a) Air pollution: Composition of clean air, Global warming, Ozone layer depletion.
  - b) Water Pollution: Fresh water and Marine water.
  - c) Noise Pollution
  - d) Soil pollution
- Biodegradable and Non-Biodegradable wastes; Environmental Acts
- Air (prevention & Control of Pollution) Act.
  - Environmental Protection Act
  - Water (Prevention & Control of pollution) Act
  - Environmental movements - Green peace and Chipco movement.
  - Role of Central & State pollution Control Boards.

**REFERENCE BOOKS:**

1. Basic of Environmental Science. Vijayalakhmi, Murugesan and Sukumaran - Manonmaniam Sundaranar University publications.
2. Environmental Studies. John de Brito, Victor, Narayanan and Patric Raja - published by St. Xavier's College, Palayamkottai, 2008.
3. Environmental Science and Biotechnology. A.G. Murugesan and C. Raja Kumar - MJP Publishers.
4. Fundamental of Environmental pollution - Krishnan Kannan - Chand & Company Ltd., New Delhi, 1997.
5. Environmental Studies. S. Muthiah, Ramalakshmi publications, Tirunelveli.
6. Environmental Studies. V.M. Selvaraj, Bavani Publications, Tirunelveli.

இரண்டாம் பருவம்			
PART - 1 TAMIL			
TA- 2	சமயத்தமிழ்		18ULTA21
Hrs/Week: 6	Hrs/Sem: 90	Hrs/UNIT: 18	Credits:4

### நோக்கம்

1. பலசமயக் கருத்துக்களை ஒப்பிட்டுச் சமயநல்லிணக்கத்தோடு வாழ்வழிகாட்டுதல்
2. தமிழ்நாடு அரசுப் பணியாளர் தேர்வாணையத் தேர்வுக்கு மாணவர்களை ஆயத்தப்படுத்துதல்.

### அலகு - 1தமிழ்ச் செய்யுள் (துறை வெளியீடு)

1. அ. திருநாவுக்கரசர்
  - சைவம்
  - மாசில் வீணையும்...
  - நாமார்க்கும் குடியல்லோம்...
  - அப்பன் நீ அம்மை நீ
- ஆ. திருஞானசம்பந்தர்
  - தோடுடைய செவியன்...
  - வேயுறு தோளிபங்கன்
  - மருந்தவை மந்திரம்...
  - பித்தா பிறைகுடி...
- இ. சுந்தரமூர்த்தி நாயனார்
  - பால் நினைந்தாட்டும்....
2. திருவாசகம் & மாணிக்கவாசகர்
  - ஆதியும் அந்தமும் இல்லா...
3. திருவெம்பாவை
  - ஒன்றே குலமும் ஒருவனே தேவனும்
4. திருமந்திரம் & திருமூலர்
  - வைணவம்
  - வையம் தகளியா...
  - அன்பேதகளியா...
  - திருக்கண்டேன்..
5. அ. பொய்கையாழ்வார்
  - மார்கழித் திங்கள்...
- ஆ. பூதத்தாழ்வார்
  - சமணம்
  - மக்கட் செல்வம்
- இ. பேயாழ்வார்
  - பௌத்தம்
  - மு.ரா.பெருமாள்
6. திருப்பாவை & ஆண்டாள்
  - கிறித்தவம்
  - கண்ணதாசன்
7. வளையாபதி
  - இஸ்லாம்
  - உமறுப்புலவர்
8. புத்தபிரான்
  - சதாவதானிசெய்குத்தம்பிபாவலர்
  - (குறிப்பிட்டபாடல்கள்)
9. இயேசு காவியம் (மலைப் பொழிவு)
  - பாசக்கயிற்றுவலை
- முதல் நான்கு பாடல்கள்
  - தக்கலை பீர்முகம்மது அப்பா
10. அல்லாஹ்
  - இறையருட் கவிமணி
11. நபிகள்நாயக மான்மிய மஞ்சரி
  - கா. அப்துல்கபூர்
12. குணங்குடி மஸ்தான் பாடல்கள்
  - நீதிஇலக்கியம்
  - ஒழுக்கமுடைமை
13. ஞானப்புகழ்ச்சி
  - கல்விகரையில்
14. அலகிலா அருளம்
  - கல்விகரையில்
15. திருக்குறள்
  - கல்விகரையில்
13. நாலடியார்
  - கல்விகரையில்

**அலகு - 2 புதினம்**  
- சி.சு.செல்லப்பா,  
காலச்சுவடு பதிப்பகம், நாகர்கோவில்

**அலகு - 3 உரைநடை (தமிழ்த்துறை வெளியீடு)**  
போட்டித் தேர்வுகளுக்குக் கட்டுரை எழுதும் பயிற்சி

1. தமிழ் இலக்கியத்தில் சமயநல்லிணக்கச் சிந்தனைகள்
2. நபிகள்நாயகம் (ஸல்) அன்பின் தாயகம்
3. சதக்கத்துல்லாஹ் அப்பா அவர்களின் வாழ்வும் பணியும்
4. தமிழ் இலக்கியங்களில் மனிதநேயச் சிந்தனைகள்
5. தமிழ் இலக்கியத்தில் மதுஒழிப்புச் சிந்தனைகள்
6. சூஃபியச் சித்தாந்தமும் சித்தர்களும்

**அலகு - 4**  
(போட்டித் தேர்வுத் தயாரிப்பு)  
இலக்கியவரலாறு

1. சைவம், வைணவம், கிறித்தவம், இசுலாம் வளர்த்த தமிழ்
2. புகழ் பெற்றதமிழ் நூல்கள், நூலாசிரியர்கள்

**அலகு - 5**  
தமிழ்நாடு அரசுப் பணியாளர் தேர்வாணையம் நடத்தும் போட்டித் தேர்வுக்குரிய  
பொதுத் தமிழ் இலக்கணப்பகுதி & ஓர் அறிமுகம்

1. வேர்ச் சொல்லைக் கண்டறிதல்
2. பெயரெச்சம், வினையெச்சம், முற்றெச்சம் பற்றி அறிதல்
3. வினைத்தொகை, பண்புத்தொகை பற்றி அறிதல்
4. வினைமுற்று, வினையாலணையும் பெயர் கண்டறிதல்
5. இரட்டைக்கிளவி, அடுக்குத் தொடர் அறிதல்
6. வேற்றுமைத் தொகையைக் கண்டறிதல்

**பாடநூல்**  
நற்றமிழ், சதக்கத்துல்லாஹ் அப்பா கல்லூரித் தமிழ்த்துறை வெளியீடு

**வழிகாட்டு இணையதளங்கள்**

1. [www.noolulagam.com](http://www.noolulagam.com)
2. [www.tamilauthors.com](http://www.tamilauthors.com)
3. [www.tnpsc.gov.in](http://www.tnpsc.gov.in)
4. [www.tnpscexams.in](http://www.tnpscexams.in)
5. [www.tamilvu.org](http://www.tamilvu.org)



SEMESTER - II			
AR-2	APPLIED GRAMMAR ANDTRANSLATION-II		18ULAR21
Hrs/ Week: 6	Hrs/ Sem: 90	Hrs/ Unit: 18	Credits: 4

**Objectives:** To make the students to develop the skill of basic Arabic Grammar and Translation skills from Arabic to English vice-versa.

**UNIT I: Lessons 1 to 3 (Textbook – 1)**

من الدرس الأول إلى الدرس الثالث

**UNIT II: Lessons 4 to 6 (Textbook – 1)**

من الدرس الرابع إلى الدرس السادس

**UNIT III: Grammar Portions (Textbook – 2)**

- 1) Inna and Its sisters (إن وأخواتها)
- 2) Elative (اسم التفضيل)
- 3) Perfect Tense (الفعل الماضي) 4) Imperfect Tense (الفعل المضارع)
- 5) Doer and Object (الفاعل والمفعول)
- 6) Kaana and Its sisters (كان وأخواتها)
- 7) Classification of Verb into Sound and weak verb (تقسيم الفعل إلى صحيح ومعتل)
- 8) Transitive and Intransitive verb (الفعل اللازم والمتعدي)
- 9) Verbal Noun (المصدر)

**UNIT IV: Lessons 7 to 9 (Textbook – 1)**

من الدرس السابع إلى الدرس التاسع

**UNIT V: Lessons 10 to 12 (Textbook – 1)**

من الدرس العاشر إلى الدرس الثاني عشر

**TEXTBOOKS**

1. Duroosul Lughatil Arabiya Part – II Lessons 1 to 12 only by Dr.V.Abdur Rahim. Available at: Islamic foundation Trust, 78 Perambur High Road, Perambur, Chennai- 600 012.
2. Arabic Tutor Part-I, II & III, By: Moulana Ebrahim Muhammad Karachi - DarulIshaat.

II SEMESTER			
<b>EN2</b>	<b>PART II ENGLISH</b> <b>Prose, Poetry and Grammar - II</b>		<b>18ULEN21</b>
<b>Hrs/ Week: 6</b>	<b>Hrs/ Sem: 90</b>	<b>Hrs/ Unit: 18</b>	<b>Credits: 4</b>

**Objectives:**

1. To answer comprehensive questions on a passage of moderate level of difficulty.
2. To write a critical appreciation of the prescribed poems and write sentences in English grammatically.

**UNIT I PROSE**

- |              |                    |
|--------------|--------------------|
| 1. Appro JRD | - Sudha Murthy     |
| 2. Packing   | - Jerome K. Jerome |

**UNIT II PROSE**

- |                                  |                   |
|----------------------------------|-------------------|
| 3. How I Became a Public Speaker | - G. B. Shaw      |
| 4. Values in Life                | - Rudyard Kipling |

**UNIT III POETRY**

- |                        |                  |
|------------------------|------------------|
| 1. Money-Madness       | - D. H. Lawrence |
| 2. No Men are Foreign  | - James Kirkup   |
| 3. On Another's Sorrow | - William Blake  |

**UNIT IV GRAMMAR**

1. Subject-Verb Agreement
2. Verbs: Forms of 'to be', 'have', 'do'; modal auxiliaries

**UNIT V COMMUNICATION SKILLS**

1. Story Building
2. e-Communication: Fax; e-mail
3. Notices, Agendas and Minutes

**TEXTBOOK:**

Kulat L Ambadas, Dr. Joshi, Sandeep. et. al. (ed). *Blooming Buds*. Hyderabad: Orient Black Swan, 2017.

II SEMESTER			
<b>DSC 3</b>	<b>PRINCIPLES OF NUTRITION</b>		<b>18UCND21</b>
<b>Hrs / week: 4</b>	<b>Hrs / Sem:60</b>	<b>Hrs / UNIT: 12</b>	<b>Credits:4</b>

### Objectives

1. To understand the role of nutrition in the maintenance of good health.
2. To study nutrition deficiencies and their prevention.

### UNIT I- Energy

- a. Definition – Direct and indirect calorimetric methods - Determination of energy value of food, Bomb calorimeter, and specific dynamic action of food.
- b. BMR, factors affecting BMR, Determination of energy requirements – Direct and Indirect methods

### UNIT II- Macro Nutrients

- a. Carbohydrates-Classification, functions, Digestion, absorption, sources, and requirements of carbohydrates.
- b. Protein – Classification, functions, Digestion, absorption, sources and requirements of proteins and deficiency -PEM
- c. Lipids - classification, functions, sources and requirements of lipids, and role of EFA.

### UNIT III- Micronutrient – Vitamins

- a. Water soluble vitamins- C and B complex (B1, B2, B3, B6, B9 and B12) functions, sources, requirements and effects of deficiency.
- b. Fat soluble vitamins - A, D, E, K functions, sources, requirements and effects of deficiency.

### UNIT IV- Micronutrient - Minerals

- a. Minerals – functions, sources, requirements and deficiency of Calcium, Phosphorus, Iron, Sodium, Potassium and Magnesium.
- b. Importance of trace elements – Copper, Cobalt, Iodine, Selenium, Fluorine, Zinc.

### UNIT V- Fibre and water

- a. Role of fibre – functions and requirements.
- b. Water – Functions, water balance, dehydration, intoxication.

### Reference Books:

1. Dr. M. Swaminthan Advanced Textbook on Food and Nutrition Bappco
2. Seema Yadav Basic Principles of Nutrition Ammol Publication Pvt. Ltd. First Edition.
3. Robinson C.H. and Lawler RM Normal and Therapeutic Nutrition Macmillan Publication and Co New York.
4. Mahtab Bamiji Pralhapa Rao. R and Vinodhini Textbook of human Nutrition, Oxford and IBH publishing Co. Pvt. New Delhi.

II SEMESTER			
DSC 4	FOOD CHEMISTRY		18UCND22
Hrs / week: 4	Hrs / Sem:60	Hrs / UNIT: 12	Credits:4

**Objectives:**

- Understand the meaning and chemical preparation of carbohydrates in foods
- Explain the role of lipids and protein in foods
- Acquire knowledge on the chemical changes occurring in foods

**UNIT I: Carbohydrates:**

- a) Introduction to food chemistry, Functional role of sugars in foods, Maillard Reactions
- b) Monosaccharide (Glucose, Fructose and Galactose) - Structure, Physical and Chemical properties, derivatives and their functional role
- c) Disaccharides (Sucrose, Lactose and Maltose) - Structure, Physical and Chemical properties and their functional role
- d) Polysaccharides (Starch, Glycogen, Cellulose and Chitin) - Structure, Physical and Chemical properties and their functional role

**UNIT II: Proteins:**

- a) Proteins – Structure (Primary, Secondary, Tertiary and Quaternary) Physical and Chemical Properties,
- b) Denaturation of proteins, Enzymatic and Non enzymatic browning Reactions
- c) Functional role of proteins in foods

**UNIT- III: Lipids**

- a) Lipids – Structure, Physical and Chemical properties
- b) Rancidity its types and prevention
- c) Functional role of Lipids in foods

**UNIT IV: Vitamins and Minerals**

- a) Vitamins: (Fat Soluble Vitamins A, D, E, K, and Water-Soluble Vitamins B<sub>1</sub> B<sub>2</sub> B<sub>3</sub> B<sub>5</sub> B<sub>6</sub> B<sub>9</sub> B<sub>12</sub> and Vitamin C)-Physical and Chemical Properties and functional role in foods.
- b) Minerals: Major Minerals (Calcium, Sodium, Potassium, Phosphorous, Magnesium) Minor Minerals (Iron, Iodine, Chloride, Manganese) Trace Minerals (Copper, Zinc, Selenium) - Physical and Chemical Properties and functional role in foods.

**UNIT V: Colloidal Chemistry**

- a) Colloids – Definition, Types, Properties and Applications, Tyndall Effect,
- b) Emulsion – Definition, Types, Properties, Emulsifying agents and Uses,
- c) Sols - Definition, Types, Lyophilic and Lyophobic sols, Properties, Gels - Definition, Types, Properties and Applications of gels
- d) Plant Pigments-Chlorophyll, Carotenoids, Anthocyanins, Anthoxanthin, Myoglobin, Tannins, Phenols and Poly Phenols, Effect of changes in cooking of different pigments

**Reference Books:**

1. Seema Yadav, 1997, Food Chemistry, Anmol Publications Pvt. Ltd, New Delhi
2. Meyer. L.H, Food Chemistry
3. Srilakshmi. B, 2002, Food Science, New Age International (P) Ltd, New Delhi
4. Shankuntala Manay, 2001, Foods Facts and Principles, New Age International (P) Ltd,
5. Fundamentals of Biochemistry for Medical Students, Ambika Shanmugam., 2006.

<b>II SEMESTER</b>		
<b>DSCP 2</b>	<b>PRINCIPLES OF NUTRITION PRACTICALS</b>	<b>18UCND2P1</b>
<b>Hrs / week: 4</b>	<b>Hrs / Sem:60</b>	<b>Credits: 3</b>

### **PRINCIPLES OF NUTRITION PRACTICALS**

1. Qualitative estimation of Glucose
2. Qualitative estimation of protein
3. Quantitative estimation of reducing sugar in fruits juices
4. Quantitative Estimation of vitamin C in orange juice
5. Quantitative estimation of Vitamin C in drumstick leaves
6. Quantitative estimation of Vitamin C in green chili
7. Quantitative estimation of Pentose
8. Quantitative estimation of starch
9. Quantitative estimation of fructose
10. Observation of water quality.

II SEMESTER			
<b>A II-2</b>	<b>HUMAN PHYSIOLOGY - II</b>		<b>18UAND21</b>
<b>Hrs / week: 4</b>	<b>Hrs / Sem:60</b>	<b>Hrs / unit: 12</b>	<b>Credits: 3</b>

### Objectives

To enable the students to understand the

- Organs of the body and their functions
- Different systems of the body, their functions with special reference to the control and feedback mechanisms
- Physiological changes at different stages of life

### UNIT I- Reproductive System

- a) Anatomy and Physiology of Male reproductive system – Spermatogenesis, Spermatozoan, Transportation of sperm, Semen and Female reproductive system – Ovary & Ovum
- b) Menstrual cycle, Fertilization, Process of Pregnancy, Childbirth, Lactation and birth control measures

### UNIT II-Endocrine System

- a) Structure, Functions of Pituitary gland – GH, TSH, ACTH, FSH, LH, LTH, MSH, Vasopressin and Oxytocin, Thyroid gland – Thyroxine, Triiodothyronine, Calcitonin, Hypothyroidism - Cretinism, Myoedema and Hyperthyroidism - Exophthalmic Goitre
- b) Parathyroid gland and Adrenal gland – Addison's disease and Cushing's syndrome
- c) Structure, Functions of Islets of Langerhans and Sex gland

### UNIT III - Nervous System

- a) Brain – Structure and Functions of Cerebrum, Cerebellum
- b) Structure and Functions of Thalamus, Hypothalamus, Mid brain, medulla Oblongata and Pons

### UNIT IV - Spinal Cord and Autonomic Nervous System

- a) Spinal Cord – Structure, functions, reflex action reflex arch
- b) Autonomic nervous system – Sympathetic and Parasympathetic nervous system

### UNIT V- Special Senses

- a) Eye - Structure and Functions
- b) Ear - Structure and Functions
- c) Skin - Structure and Functions

### Reference Books:

1. Dr. N. Arumugam., Human Physiology, Saras Publication, 2016
2. Evelyn C. Pearce with new illustrations by Audrey Besterman, Anatomy and Physiology for Nurses, Jaypee Brothers, 16<sup>th</sup> Edition.

<b>II SEMESTER</b>		
<b>AI P - 2</b>	<b>HUMAN PHYSIOLOGY PRACTICALS - II</b>	<b>18UAND2P1</b>
<b>Hrs / week: 2</b>	<b>Hrs / Sem: 30</b>	<b>Credits: 1</b>

### **HUMAN PHYSIOLOGY - II PRACTICAL**

1. Estimation of Haemoglobin
2. Spotter – Heart
3. Spotter – pH meter
4. Spotter – brain
5. Spotter – sperm
6. Spotter – pancreas
7. Spotter – Haemoglobinometer
8. Spotter – Haemocytometer
9. Preparation of models – digestive system, reproductive system, respiratory system, nervous system, excretory system.
10. Preparation of model – eye, ear
11. Effect of different pH on activity of salivary amylase on starch

II SEMESTER			
VE1	VALUE EDUCATION – I		18USVE2A
Hrs/ Week: 2	Hrs/ Sem: 30	Hrs/ Unit: 6	Credits: 2

**Objectives:**

1. To inculcate moral values in the minds of students.
2. To teach ethical practices to be adopted by students in their life.
3. To make students honest and upright in their life.

**UNIT I**

Islam – Meaning – Importance – A complete Religion – The religion accepted by God – Five Pillars of Islam – Kalima – Prayers – Fasting – Zakat – Haj.

Iman – Monotheism – Angels – Books – Prophets – Dooms Day – Life after death – Heaven and Hell.

**UNIT II**

Quran – The Book of Allah – Wahi – Revelation to Prophet Muhammad(sal) – Compilation – Perseverance – Structure – Content – Purpose – Source of Islamic Law– Sura Fathiha, Kafirun, Iqlas, Falakh and Nas.

**UNIT III**

Hadith – Siha Sitha – Buhari – Muslim – Tirmithi – Abu Dawood – Nasai – Ibn Maja – Collection of Hadith – Meaning of 40 Hadith.

**UNIT IV**

Life History of Prophet Muhammad (sal) – Aiamul Jahiliya – Prophet's Childhood and Marriage – Prophethood – Life at Mecca – Life at Medinah – Farewell Address – Seal of Prophethood.

**UNIT V**

Good character – Etiquettes – Halal and Haram – Duties towards Allah – Duties towards fellow beings – Masnoon Duas.

**REFERENCE BOOKS:**

1. V.A. Moahmed Ashrof – Islamic Dimensions – Reflection and Review on Quranic Themes.
2. The Presidency of Islamic Researchers – Revised & Edited – The Holy Quran.
3. M. Manzoor Nomani – Islamic Faith & Practice.
4. Abdul Hasan Ali Nadvi – Muhammad Rasulullah.
5. K. Ali – A Study of Islamic History.
6. Abdul Rahuman Abdullah – Islamic Dress code for Women.
7. Dr. Munir Ahamed Mughal – Code for Believers.
8. Abdul Malik Mujahid – Gems and Jewels.



<b>II SEMESTER</b>			
<b>VE2</b>	<b>VALUE EDUCATION – II</b>		<b>18USVE2B</b>
<b>Hrs/ Week: 2</b>	<b>Hrs/ Sem: 30</b>	<b>Hrs/ Unit: 6</b>	<b>Credits:2</b>

**UNIT I**

Individual Morality – Objective of Moral life – Living in accordance with the code of Morality – the goodness of Morality – Morality and *Thirukural* – The need for faith.

**UNIT II**

Adherence to higher code of Morality – Fear of God – Good Moral Values – Duty to Parents – Teacher, respecting elders – Moral Etiquettes – Right-minded Principle – High Principles for Proper conduct.

**UNIT III**

Inculcating good attitudes – Open mindedness – Morale – analysing the pros and cons of good and bad – Service to others – Mind Power, tolerance, respecting others, showing love to others, patience – tranquility – Modesty, kindness and forgiveness.

**UNIT IV**

Quotations and moral Stories expressing Good characters of Great personalities – Life History of Great people: Mahatma Gandhi, Abraham Lincoln, Dr. A.P.J. Abdul Kalam.

**UNIT V**

Truth, the importance of uprightness, integrity, friendship – Health awareness on Alcohol and drug abuse – inculcating reading habit – reading good books – Hygiene – Dowry – Corruption.

**TEXTBOOK:**

Publication of Sadakathullah Appa College.

மூன்றாம் பருவம் PART - 1 TAMIL			
TA - 3	பயன்பாட்டுத்தமிழ்		18ULTA31
Hrs/Week: 6	Hrs/Sem: 90	Hrs/UNIT: 18	Credits:4

**நோக்கம்**

1. தமிழின் காப்பியஇலக்கிய வளத்தை மாணவர்களுக்கு உணர்த்துதல்.
2. இந்திய ஆட்சிப் பணித்தேர்வுக்கு மாணவர்களை ஆயத்தப்படுத்துதல்.
3. செய்தி வெளிப்பாட்டு உத்திகளைத் கற்றுத் தந்து மாணவர்களை ஊடகவியலாளர்களாக உருவாக்க முயலுதல்

**அலகு - 1தமிழ்ச் செய்யுள்திரட்டு (துறை வெளியீடு)**

1. சிலப்பதிகாரம் - காட்சிக்காதை
2. மணிமேகலை - ஆபுத்திரன் திறம் அறிவித்த காதை
3. பெரியபுராணம் - கண்ணப்பநாயனார் புராணம்
4. கம்பராமாயணம் - வாலிவதைப்படலம்
5. இரட்சண்ய யாத்திரிகம் - தீயமகன் திருந்திய கதை
6. சீறாப்புராணம் - மானுக்குப் பிணைநின்றபடலம்

**அலகு - 2**

“ஐ.ஏ.எஸ். தேர்வும் அணுகுமுறையும்” வெ.இறையன்பு இ.ஆ.ப, நியூ செஞ்சரி புக் ஹவுஸ், அம்பத்தூர், சென்னை-8

**அலகு - 3ஊடகப்படைப்பாக்கம்**

- வானொலிக்கு உரைச்சித்திரம் தொலைக்காட்சி நிகழ்ச்சித் தயாரிப்புக்கு எழுதுதல்
- தொலைக்காட்சிச் செய்தியறிக்கை தயாரித்தல்.
- தமிழ் நாளிதழ்களுக்குச் சிறப்புக் கட்டுரைகள், வாசகர் கடிதங்கள் எழுதுதல் &இலக்கியப்படைப்பாளருடன் நேர்காணல்-தொலைக்காட்சி விவாதம்
- நேர்முக வருணனை
- சமூகஊடகங்களின் தாக்கம்

**அலகு - 4 தமிழ் இலக்கியவரலாறு**

- ஐம்பெரும் காப்பியங்கள்
- ஐஞ்சிறு காப்பியங்கள்
- சிற்றிலக்கியங்கள் (உலா, தூது, பிள்ளைத்தமிழ், பரணி)

**அலகு - 5 இலக்கணம்**

(தமிழ்நாடு அரசுப் பணியாளர் தேர்வாணையத்தின் பொதுத்தமிழ்

பிழைத் திருத்தம், சந்திப்பிழைகள், ஒருமை&பன்மை பிழைகள், மரபுப் பிழைகள்

- வழுவச் சொற்களை நீக்குதல், பிறமொழிச் சொற்களை நீக்குதல், வேர்சொல்லைச் தேர்வு செய்தல்.

**பாடநூல்**

இருந்தமிழ், சதக்கத்துல்லாஹ்அப்பா கல்லூரித் தமிழ்த்துறை வெளியீடு

**பார்வை நூல்கள்**

- |                                      |  |
|--------------------------------------|--|
| தமிழ் இலக்கியவரலாறு                  | க.பஞ்சாங்கம், அன்னம் அகரம் வெளியீடு, கும்பகோணம். |
| இதழியல் நுணுக்கங்கள்                 | -செண்பகா பதிப்பகம், சென்னை-17                    |
| வானொலிநிகழ்ச்சிக் கலை                | -சிந்துமலர் வெளியீடு, சென்னை                     |
| சீறாப்புராணம் மூலமும் பொழிப்புரையும் | -ஹாஜி எம்.முகமது யூசுப், இரண்டாம் பாகம்          |
| மக்கள்ஊடகத் தொடர்பியல்               | -மீடியா பப்ளிகேஷன்ஸ், மதுரை                      |
| தொலைக்காட்சி நிகழ்ச்சிக் கலை         | -வள்ளுவன் வெளியீட்டகம், சென்னை.                  |

SEMESTER III			
AR-3	APPLIED GRAMMAR AND TRANSLATION-III		18ULAR31
Hrs/ Week: 6	Hrs/Sem: 90	Hrs/ Unit: 18	Credits: 4

**Objectives:** To enable the students to understand simple Arabic sentences and construct Arabic sentences simple by their own

**UNIT I: Lessons 13 to 16 (Textbook – 1)**

من الدرس الثالث عشر إلى الدرس السادس عشر

**UNIT II: Lessons 17 to 19 (Textbook – 1)**

من الدرس السابع عشر إلى الدرس التاسع عشر

**UNIT III: Grammar Portions (Textbook – 2)**

- 1) Imperative and Prohibition (الأمر والنهي)
- 2) Original letters which are not enhanced (الفعل المجرد)
3. Original letters which are enhanced (مزيد فيه)
- 4) Subjunctive mood (الحروف الناصبة)
- 5) Jussive Mood (الحروف الجازمة)
- 6) Negative particles (ما و لا وما ولا النافيتان)
- 7) Number 1 to 10,000 (العدد من الواحد إلى عشرة آلاف)

**UNIT IV: Lessons 20 to 22 (Textbook – 1)**

من الدرس العشرون إلى الدرس الثاني والعشرون

**UNIT V: Lessons 23 to 25 (Textbook – 1)**

من الدرس الثالث والعشرون إلى الدرس الخامس والعشرون

**TEXTBOOKS**

- 1) DuroosulLughatil Arabiya Part – II Lessons 13 to 25 only by Dr. V. Abdur Rahim. Available at: Islamic foundation Trust, 78 Perambur High Road, Perambur, Chennai- 600 012.
- 2) Arabic Tutor Part-I, II & III, By: Moulana Ebrahim Muhammad Karachi-Darullshaat

III SEMESTER			
<b>EN 3</b>	<b>Part - II - English ONE-ACT PLAYS AND WRITING SKILL</b>		<b>18ULEN31</b>
<b>Hrs/ Week: 6</b>	<b>Hrs/ Sem: 90</b>	<b>Hrs/ Unit: 18</b>	<b>Credits: 4</b>

**Objectives:**

1. To expose the conversational patterns to students and enable them to make use of the patterns in a given practical situation.
2. To write sentences in English grammatically.

**UNIT I- ONE-ACT PLAYS**

1. The Bishop's Candlesticks - Norman McKinnell
2. The Proposal - Anton Chekov
3. The Hour of Truth - Percival Wilde

**UNIT II- ONE-ACT PLAYS**

4. Aladdin and His Magic Lamp - Y. Sayed Mohammed
5. Tippu Sultan - Y. Sayed Mohammed
6. Evergreen Merchant of Venice - Y. Sayed Mohammed

**UNIT III- WRITING SKILL**

1. **Messages** (Pages 1-9 of *Written English for You* to be taught and the tasks given to be accomplished in the *Record of Writing*)
  - i) What is a message?
  - ii) When do we write messages?
  - iii) Why do we write messages?
  - iv) How do we write messages?
2. **Letters – 1** (Pages 10-20 *Written English for You* to be taught and the tasks given in pages 17 and 19 should be accomplished in the *Record of Writing*)
  - i) Letters for Ordering Supply of Goods
  - ii) Letters of Complaint
  - iii) Letters of Enquiry
3. **Letters – 2** (Pages 36-42 of *Written English for You* to be taught and the tasks given in the pages 38 and 44 should be accomplished in the *Record of Writing*)
  - i) Letters to inform your plan of visit
  - ii) Letters of Request
  - iii) Letters of Asking for Advice

**UNIT IV- WRITING SKILL**

4. **Essays** (Pages 66-79 to be taught and only the tasks 1-3 from pages 79 and 80 should be accomplished in the *Record of Writing*)
  - i) What is an Essay?
  - ii) Types of Essays.
  - iii) The structure of an Essay.
  - iv) Introductory paragraph.
  - v) Supporting paragraph.
  - vi) What can be the length of an Essay?
  - vii) Why am I writing this Essay?
  - viii) Who am I writing for?
  - ix) How to begin an Essay?
  - x) How to organize an Essay?
  - xi) What to avoid in writing an Essay?
5. **Narrating** (Pages 109-116 of *Written English for You* to be taught only the tasks 1 and 2 from pages 115 to 116 to be accomplished in the *Record of Writing*)
  - i) Describing events in a chronological order.

- ii) Narrating events from different points of view
- iii) Narrating events from different view point in time

#### **UNIT V- WRITING SKILL**

6. **Reporting** (Pages 127-136 be taught. The tasks given in pages 129- 134 and 136-137 must be accomplished in the *Record of Writing*)
  - i) News Reports
  - ii) Reporting events or Developments.
  - iii) Reporting Interviews and Press Conferences
  - iv) Reports of Meetings.
7. **Summarizing** (Pages 164-172 of *Written English for You* be taught and the tasks 1-3 in pages 172-178 to be accomplished in the *Record of Writing*)
  - i) What is a Summary?
  - ii) How to write a Summary?
  - iii) How long should a Summary be?
  - iv) Should the Summary be in a Paragraph?
  - v) Analysis of the process of Summarizing.

**NOTE:** Questions for Units III, IV and V should be framed from the tasks given in the prescribed textbook ***Written English for You.***

#### **TEXTBOOKS**

1. Compiled by a Board of Editors. *Plays for Pleasure*. Chennai: Paavai Publications, 2009.
2. Sayed Mohammed. Y, ed. *Three One-Act Plays*. Tirunelveli: Muhammed Taahaa Publications, 2011.
3. Radhakrishna Pillai. G, ed. *Written English for you*. Chennai: Emerald Publishers, 1990 (rpt. 2008).

III SEMESTER			
<b>DSC 5</b>	<b>NUTRITION THROUGH LIFE CYCLE</b>		<b>18UCND31</b>
<b>Hrs/ Week: 4</b>	<b>Hrs/ Sem: 60</b>	<b>Hrs/ Unit: 12</b>	<b>Credits: 4</b>

**Objectives**

- To help students to understand the basis of meal planning
- To obtain knowledge on various nutritional deficiency disorders
- To understand the nutritional needs of different age groups.

**UNIT I: Menu Planning**

- a) Planning balanced diets – Principles of planning diets, factors to be considered and steps in planning a diet.
- b) Food guide, low cost balanced diet, Modifications for vegetarian diets, food exchange list, Recommended Dietary Allowances for different age groups (2010).

**UNIT II: Nutritional & food requirements for pregnancy and lactation**

- a) Pregnant woman – Nutritional requirements, food requirements, Nutrition related problems and menu planning.
- b) Nursing mothers – Nutritional requirement, Food requirement and menu planning.

**UNIT III: Nutritional & food requirements for Infancy and preschool**

- a) Infancy –Nutritional requirements, food requirements, weaning and supplementary foods.
- b) Pre- School – Nutritional and food requirements, nutrition related problems.

**UNIT IV: Nutritional & food requirements for school going & adolescence**

- a) School going children - Nutritional requirements, food requirements, packed lunches.
- b) Adolescence – Nutritional requirements, Nutrition related problems.

**UNIT V: Nutritional & food requirements for Adult and old age**

- a) Adult – Definition – Reference Man, Women, Food requirements, menu planning for High, Middle and Low-Income group
- b) Geriatric Nutrition – Nutritional requirements, food requirements, Nutrition related problems of old age.

**Reference Books:**

1. Srilakshmi (2004) Dietetics Eastern publishers
2. Srilakshmi., Food Science,
3. Shakundala Manay., Food Facts and Principles
4. Carrine J. Robinson (1990) Principles of Nutrition and Dietetics Babbco publishers Bangalore
5. Swaminathan M (2003) Principle of nutrition and Dietetics Babbco publishers Bangalore
6. Gopalan (1999) Nutritive Value of Indian food NN publication Hyderabad
7. Bhavana Sabrawal (1999) principles and practices of Dietetics Ajay verma
8. Davidson and Passmare (1989) Human Nutrition and dietetic London Churchill and Livingston Publishers

III SEMESTER			
<b>DSE 1A</b>	<b>FUNCTIONAL FOODS AND NUTRACEUTICALS</b>	<b>18UEND3A</b>	
<b>Hrs/ Week: 4</b>	<b>Hrs/ Sem: 60</b>	<b>Hrs/ Unit: 12</b>	<b>Credits: 4</b>

### Objectives

- To enable understand the relation between Functional Foods and Nutraceuticals to Food and drugs
- To introduce them to various functional food groups and products
- To enable students to understand the clinical role of functional foods and

### UNIT I: Introduction to Functional Foods and Nutraceuticals

- a) Functional foods and Nutraceutical – Definition, History of functional foods and classification
- b) Antioxidants, Major functions of phytonutrients.

### UNIT II: Functional Components from Plant Sources

- a) Dietary Fibre – Types and sources
- b) Carotenoids – Lycopene, Beta – carotene, Lutein and Zeaxanthin
- c) Terpenes, Flavonoids, Isoflavonoids, Inositol Phosphates
- d) Saponins and Tannins

### UNIT III: Functional Components from Animal Sources

- a) Omega 3 and Omega 6 fatty acids
- b) Minerals – Zinc, Selenium and Calcium
- c) Dietary lipids – Conjugated Linoleic acid, Linoleic acid, Oleic Acid

### UNIT IV: Microbes as functional foods

- a) Prebiotics – Definition, role of Prebiotics as functional ingredient
- b) Probiotics – Definition, role of probiotics as functional ingredient
- c) Symbiotics - Definition, role of synbiotics as functional ingredient

### UNIT V: Clinical Application of Functional Foods

- a) Functional foods in oral gut health
- b) Functional foods in Obesity and Cardiovascular disease
- c) Functional foods in Nervous system
- d) Functional foods in Bone health
- e) Functional foods in Diabetes Mellitus
- f) Functional foods in Cancer

### Reference Books:

1. B. Srilakshmi, Food Science, Sixth multi-colour edition New Age International Publishers, 2015
2. T. Sujatha, Phytonutrients rich fruits and vegetables, VSA Publication, 2008
3. Mary K Schmidl and Theodore P. Labuza, Essential of Functional foods culinary and hospitality industry Publications Service 2000
4. N. Shakuntala Manay, M. Shadaksharaswamy, Foods facts and Principles, New Age International (P)Ltd, 2<sup>nd</sup> edition 2001

III SEMESTER			
<b>DSE 1B</b>	<b>ENTREPRENEURSHIP DEVELOPMENT</b>		<b>18UEND3B</b>
<b>Hrs/ Week: 4</b>	<b>Hrs/ Sem: 60</b>	<b>Hrs/ Unit: 12</b>	<b>Credits: 4</b>

**Objectives**

To enable students to

- Develop entrepreneurship skills
- Understand the process and procedures of setting up small enterprises

**UNIT I: Entrepreneurship**

Definition, need, scope and characteristics of entrepreneurship, entrepreneurship development

**UNIT II: Opportunities**

Employment promotion, Identification of opportunities

**UNIT III: Project Formulation**

Major steps involved in setting up a small scale UNIT project identification, formulation

**UNIT IV: Innovation & Marketing**

Creativity and innovation problem solving, personnel management, marketing and sales management

**UNIT V: legal Issues**

Legislation (Licensing, registration, municipal laws, business ethics, income tax, labour law, consumer complaint redressal)

**Reference Books:**

1. Deshpande, V. (1984) "Entrepreneurship of small-scale food industries, concept, growth and management" Deep and Deep Pub, New Delhi.
2. Parek, U. and Rao, T.V. (1978) "Personal efficacy in developing entrepreneurship" Learning systems, New Delhi
3. Rao, T.V and Parekh, L.U (1982) 'Developing Entrepreneurship, A handbook Learning Systems, New Delhi.



III SEMESTER		
<b>DSCP 3</b>	<b>NUTRITION THROUGH LIFE CYCLE PRACTICAL</b>	<b>18UCND3P1</b>
<b>Hrs/ Week: 2</b>	<b>Hrs/ Sem: 30</b>	<b>Credits: 1</b>

### NUTRITION THROUGH LIFE CYCLE PRACTICALS

Menu Planning, Preparation and serving of diets for

1. Pregnant women – Anaemia
2. Lactating mother – Calcium Deficiency
3. Preschool children- PEM
4. School going children – Vitamin –A Deficiency, underweight
5. College going adolescent girls – obesity, Anaemia
6. Old age- osteoporosis
7. A report on visit to dialysis Unit

III SEMESTER			
<b>AII- 1</b>	<b>FUNDAMENDALS OF BAKING</b>		<b>18UAND31</b>
<b>Hrs/ Week: 4</b>	<b>Hrs/ Sem: 60</b>	<b>Hrs/ Unit: 12</b>	<b>Credits: 3</b>

#### Objectives:

To enable the students to

- Understand the principles of baking
- Acquire basic knowledge on bakery techniques.

#### UNIT- I

- a) Baking: Introduction, principles of baking, basic ingredients
- b) Types of wheat flour and their baking quality.
- c) Role of water and Salt in baking.

#### UNIT- II

- a) Leavening agents: Definition, physical, chemical and biological leavening agents, role of leavening agents in baking.
- b) Sugars: Types of sugars, role in baking.

#### UNIT-III

- a) Fats - Types of fats, role in baking
- b) Milk and Milk products - Role in baking
- c) Egg – Role in baking

#### UNIT-IV

- a) Dried Fruits and Nuts role in baking
- b) Flavoring and coloring agents' role in baking
- c) Enzymes – Role in baking

#### UNIT-V

- a) Major and Minor Equipment for constructing bakery UNIT
- b) Hygiene and Sanitation in bakery UNIT

#### Reference Books:

1. Vijaya Khader, Textbook of food science and technology, Indian council of Agricultural Research, New Delhi, 2001
2. Kumud Khanna et al, The art and science of cooking, A student manual, 3<sup>rd</sup> edition, Published by Pr. Ouseph for phoenix, publishing House Pvt Ltd, 1998
3. Earl R.Palan, Judith A. Studler, preparing for the service industry, An introductory approach, AVI publishing co Ltd, 2000
4. William C practical in baking, 2000
5. Lilian Hiagland Meyer, Food chemistry CBS publishers and Distributors, 2004

<b>III SEMESTER</b>		
<b>AII- P1</b>	<b>FUNDAMENDALS OF BAKING PRACTICALS</b>	<b>18UAND3P1</b>
<b>Hrs/ Week: 2</b>	<b>Hrs/ Sem: 30</b>	<b>Credits: 1</b>

1. Visit to a well-established bakery UNIT
2. Demonstration of various bakery equipment.
3. Demonstration of Bread
4. Preparation on preparation of biscuits and cookies
  1. Butter Biscuit
  2. Salt and Sweet Biscuit
  3. Spicy Biscuit
  4. Cashew Biscuit
  5. Jam Darts
  6. Melting Marvel
  7. Multi grain Biscuit
  8. Nangathai

III SEMESTER			
<b>NME-I</b>	<b>INTRODUCTION TO FOOD AND NUTRITION</b>		<b>18UNND31</b>
<b>Hrs/ Week: 2</b>	<b>Hrs/ Sem: 30</b>	<b>Hrs/ Unit: 6</b>	<b>Credits: 2</b>

**Learning Outcome:**

On successful completion of the course, the learners will be equipped to

- understand the principles of nutrition.
- acquire knowledge on functions of nutrients.
- analyze the importance of nutrients.
- obtain knowledge about macro- nutrients.

**UNIT I**

Definitions of food nutrition-over nutrition-under nutrition and malnutrition. Food- functions of foods - basic five food groups. Cooking-objectives, moist heat, dry heat and combination methods of cooking.

**UNIT II**

Carbohydrates- classification, functions and sources.  
Protein – nutritional classification of protein, functions, sources. PEM

**UNIT III**

Lipids - classification, functions, sources and requirements of lipids, and role of EFA.  
Water- functions, Role of fibre in preventing diseases

**UNIT IV**

Water soluble vitamins- C and B complex (B1, B2, B3, B6, B9 and B12) functions, sources, and effects of deficiency.  
Fat soluble vitamins - A, D, E, K functions, sources, and effects of deficiency.

**UNIT V**

Minerals – functions, sources, requirements and deficiency of Calcium, Phosphorus, Iron, Sodium.  
Importance of trace elements –Iodine, Fluorine, Zinc.

**Reference Books:**

- 1) Srilakshmi B. Food Science, New Age International (P) Ltd., Publishers, Fifth edition, 2010.
- 2) Swaminathan M. Essentials of Food and Nutrition, Vol I & II Bappo Publications, 1996.

நான்காம் பருவம்			
PART - I - TAMIL			
TA - 4	சங்கத்தமிழ்		18ULTA41
Hrs/Week: 6	Hrs/Sem: 90	Hrs/UNIT: 18	Credits: 4

### நோக்கம்

1. சங்க இலக்கியம் குறித்த புரிதலை மாணவர்களுக்கு ஏற்படுத்துதல்.
2. இணையத்தில் தமிழின் இடத்தினை உணர்த்துதல்.
3. மாணவர்களை இணையத்தைப் பயன்படுத்த அறிவுறுத்துதல்.

### அலகு - 1

தமிழ்ச் செய்யுள் (துறை வெளியீடு)

நற்றிணை (பாடல் எண்கள் 68-95), குறுந்தொகை (பாடல் எண்கள் 2, 23), ஐங்குநாறு (பாடல் எண்கள் 23, 49), பதிற்றுப்பத்து (பாடல் எண் 69), பரிபாடல் (செவ்வேள்-திருப்பரங்குன்றத்தின் அமைப்பும் சிறப்பும்-பாடல் எண்கள் 1 முதல் 20 வரை), கலித்தொகை (பாடல் எண் 10), அகநானூறு (பாடல் எண் 44), புறநானூறு (பாடல் எண் 187) மற்றும் பத்துப்பாட்டில் குறிஞ்சிப்பாட்டு முதல் 98 வரிகள்.

### அலகு-2

நம்பிக்கைத் தமிழ் -கல்லூரித் தமிழ்த்துறை வெளியீடு,

### அலகு - 3

இணையமும் தமிழும்

- தமிழ் இலக்கியப் பதிவுகளும் இணையமும்
- இணையத்தில் படைப்பை வெளியிடும் முறைகள்
- தமிழ் விக்கிபீடியா -அறிமுகம்
- வலைப்பூக்களை உருவாக்க மாணவர்களுக்குப் பயிற்சிதரல்
- தமிழ் மின் நூலகம்
- மின் நூல்களும் வாசகத்தன்மையும்
- புகழ்பெற்ற தமிழ் இலக்கியத் தளங்கள் குறித்த அறிமுகம்.

### அலகு - 4

இலக்கியவரலாறு

- சங்க இலக்கியம் ஓர் அறிமுகம்
- எட்டுத்தொகை, பத்துப்பாட்டு
- சங்க இலக்கியத் திணைக் கோட்பாடும் சங்ககால மக்கள் வாழ்வியலும்

### அலகு - 5

இலக்கணம்

- தமிழர் வாழ்வில் அகமும் புறமும்
- ஐவகை நிலங்களின் முதல், கரு, உரிப் பொருட்கள்
- அறத்தொடு நின்றல்
- களவு, கற்பு விளக்கம்
- புறத்திணைகள்

**பார்வை நூல்கள்**

தமிழ்க் கணினிஇணையப்பயன்பாடுகள் - முனைவர் துரை.மணிகண்டன்  
 த.வானதி  
 கமலினிபதிப்பகம்  
 கச்சமங்கலம் அஞ்சல்,  
 தோகூர் வழி,  
 தஞ்சாவூர் மாவட்டம்

இணையத் தமிழ்

- தமிழ்த்துறை வெளியீடு  
 சதக்கத்துல்லாஹ்அப்பா கல்லூரி  
 திருநெல்வேலி.

வழிகாட்டு இணையதளங்கள்

1. [www.selliyal.com](http://www.selliyal.com)
2. [www.tamilvu.org](http://www.tamilvu.org)
3. [www.tamilcanadian.com](http://www.tamilcanadian.com)
4. [www.bbc.com](http://www.bbc.com)
5. [www.tamilinayam.com](http://www.tamilinayam.com)

	<b>SEMESTER - IV</b>		
<b>AR-4</b>	<b>CLASSICAL PROSE</b>		<b>18ULAR41</b>
<b>Hrs/ Week: 6</b>	<b>Hrs/ Sem: 90</b>	<b>Hrs/ Unit: 18</b>	<b>Credits:4</b>

**Objectives:** To impart the moral values in the students and build their personality to make them better citizens to serve the society.

**UNIT I: Verses from 1 to 12 from (Sura – al – Hujraat) (Textbook – 1)**

من الآية "يا أيها الذين آمنوا لا تقدموا" إلى الآية "يا أيها الذين آمنوا اجتنبوا"

**UNIT II: Verses from 10 to 18 from (Sura – al – Hujraat) & verses from Surah Lqman from (12 to 19) (Textbook – 1)**

من الآية "يا أيها الناس إنا خلقناكم" إلى الآية "إن الله يعلم غيب السموات"

من الآية "ولقد آتينا لقمان الحكمة" إلى الآية "واقصد في مشيك"

**UNIT III: Collection and compilation of Quran and Hadeeth,**

**History of Imam Abu Hanifa, Malik, Asshafi, Ahmad, Bukhari,**

**Muslim, Abu Dawood, At-Tirmidi, An-Nasaee and Ibn-Majah**

**(Textbook – 1)**

**UNIT IV: Hadeeth 1 to 10 (Textbook – 2)**

من الحديث "لا تأكلوا بالشمال" - إلى الحديث "خيركم من تعلم القرآن"

**UNIT V: Hadeeth 11 to 20 (Textbook – 2)**

من الحديث "لا تمنعوا نساءكم" - إلى الحديث "حق المسلم على المسلم خمس"

**TEXTBOOK**

1. Tafseer Suratul Hujuraath and from Suraah Luqman (verses from 12-19) A study material prepared by Dept. of Arabic, Sadakathullah Appa College, Rahmath Nagar, Tirunelveli – 627 011.
2. Hadeeth: Ahadeeth Sahlah, Available at: Islamic foundation Trust, 78, Perambur High Road, Perambur, Chennai – 600012.

IV SEMESTER			
EN4	Part - II - English A PRACTICAL COURSE IN SPOKEN ENGLISH		18ULEN41
Hrs/ Week: 6	Hrs/ Sem: 90	Hrs/ Unit: 18	Credits: 4

**Objectives:**

1. To express one's needs orally in a fluent, simple and direct style.
2. To pronounce words intelligibly
3. To use the right intonation pattern in speech.

**UNIT I**

Interactive Expressions and Pronunciation Practice: Consonants  
(Chapters 1 – 3 of *A Course in Spoken English*)

**UNIT II**

Introducing oneself / others, patterns for greeting, requesting, expressing and responding to thanks etc., & Pronunciation Practice: Vowels (Chapters 4 – 8 of *A Course in Spoken English*)

**UNIT III**

Developing descriptive competency, narrative competency, arguing competency, comparing competency and pronunciation practice: Diphthongs (Chapters 9 – 13 of *A Course in Spoken English*)

**UNIT IV**

Practicing continuous speech, group discussion and pronunciation practice: Word Accent and Intonation  
(Chapters 14 – 19 of *A Course in Spoken English*)

**UNIT V LISTENING PRACTICE**

Students will listen to audio and video materials for 10 – 12 hours.

**Textbook, Workbook, Record Note:**

1. Nihamathullah. A. et al. *A Course in Spoken English*. Tirunelveli: MSU, 2005. (rpt.2010).
2. Board of Editors, Department of English, Sadakathullah Appa College, *A Workbook for A Course in Spoken English*, 2011.
3. Spoken English Practice Record.

**Evaluation Scheme:**

I Internal Oral Test : 15 Marks	}	The best two of the three CIA test marks will be added up
II Internal Oral Test: 15 Marks		
III Internal Oral Test : 15 Marks		

**Distribution of Marks**

The best two of the three CIA test marks	: 30 Marks
Loud Reading	: 5 Marks
Listening Test	: 5 Marks
Internal Marks	: <u>40 Marks</u>
External Oral Test	: 50 Marks
Record Note	: 05 Marks
Workbook	: <u>05 Marks</u>
External Marks	: <u>60 Marks</u>

IV SEMESTER			
<b>DSC 6</b>	<b>FAMILY RESOURCE MANAGEMENT</b>		<b>18UCND41</b>
<b>Hrs/ Week: 4</b>	<b>Hrs/ Sem: 60</b>	<b>Hrs/ Unit: 12</b>	<b>Credits: 4</b>

**Objectives:**

- To attain a thorough knowledge of understanding values and goals in house keeping
- To gain a basic knowledge of planning and constructing a house
- To understand a basic designs and art.

**UNIT I      Housing**

- a. Functions of the house and its environment
- b. House planning – site selection, factors to be considered, features of a house contributing to livability, orientation, grouping, roominess, lighting and ventilation, storage facility, privacy, flexibility, sanitation and economy
- c. House plans – low, middle and high-income groups

**UNIT II      Care and maintenance of house**

- a. Care and maintenance of house and its surroundings.
- b. Daily, weekly and periodical cleaning to keep the house in good condition.
- c. Insect and pest control – preventive and remedial measures to be adopted.

**UNIT III      Elements and Principles of Design**

- a) Elements of design – Line, Form, Texture, Shape, Direction, Design
- b) Principles of Design –Proportion, Balance, Harmony, Emphasis,

**UNIT –IV      Colour**

- a. Qualities of Colour – hue, value, intensity of colours and emotions, advancing and receding colours.
- b. Prang Colour Chart

**UNIT –V      Flower Arrangement and Accessories**

- a. Selection, use and care of picture and wall hangings
- b. Flower arrangement – Principles, types of flower arrangement (Mass, Japanese, L – Shaped, Triangle, Crescent, Fan, Inverted U, Inverted V and Floating), Accessories used for flower arrangement

**Reference Books:**

1. Desh Pande, R.S., Modern Ideal Homes for India – United Book Corporations, Poone – 1971.
2. Stella Soundararaj. A Textbook of Household Arts, Orient Longmans, Bombay – 1968.
3. Margaret Kaye. A. A Students handbook of House Wifery, J.M. Dent Sons Ltd., London.
4. Paulena Nickell, Jean Muir Dorsey – Management in Family Living, Wiley Eastern Private Ltd



IV SEMESTER			
<b>DSE 2A</b>	<b>FOOD SAFETY AND QUALITY CONTROL</b>		<b>18UEND4A</b>
<b>Hrs/ Week: 4</b>	<b>Hrs/ Sem: 60</b>	<b>Hrs/ Unit: 12</b>	<b>Credits: 4</b>

### Objectives

This course will enable the students

- Develop good habits of personal and environmental hygiene
- Learn safe, handling of food and ensure completely, safety of raw and processes foods.

### UNIT –I Introduction to food safety

- a. Definition of food safety, threats to safety of food supply
- b. Definition and Principles of quality control

### UNIT II Sensory Evaluation of Foods

- a. General guideline – requisites, guidelines for panel members, preparation of samples, evaluation card, and difference test – rating test, sensitivity test and distribution test.

### UNIT III Hazard Analysis critical control point (HACCP)

- a. Definition, principles – guidelines for application of HACCP

### UNIT IV Care of premises and Equipment

- a. Impervious washable floors and walls, Tabletops and floors. Good ventilation and lighting care of dark corner. Crevices and cracks.
- b. Garbage disposal

### UNIT V Food Adulteration and laws – FSSAI

- a. Food adulteration and public health hazards, prevailing food standards in India P.F.A, F.P.O Agmark and B.I.S.
- b. Food safety standards act 2011

### Reference Books:

1. Shirley and Mary wood Beuran Food preservation and safety.
2. Principles and actives Surabli Publications 1999
3. Pomeranz and Healan C.E (1996) Food Analysis Theory and practical CBS Publications and distributors New Delhi.

IV SEMESTER			
DSE 2B	MEDICAL LABORATORY TECHNIQUES		18UEND4B
Hrs/ Week: 4	Hrs/ Sem: 60	Hrs/ Unit: 12	Credits: 4

**Objectives:**

- Explain the knowledge of medical laboratory science
- Perform medical laboratory procedures according to standard practice
- Consider safety of self and surrounding while working in the lab
- Play a professional role as an MLT
- Cooperate well and effectively in the organization
- Respond quickly and accurately in solving lab procedural problems in the lab

**UNIT 1**

- a) Organization of clinical laboratory and role of medical laboratory technician
- b) Safety measures - clinic borne infection and personnel hygiene

**UNIT II**

- a) Incubator, Hot Air Oven, Water Bath -Anaerobic Jar, Centrifuge, Autoclave
- b) Microscope - Fundamentals of Microscopy, Resolution & Magnification, Light Microscopy, Electron Microscopy-

**UNIT III**

- a) Glassware – Description of Glassware, its use, handling and care
- b) Methods of measuring liquids

**UNIT IV**

- a) Requirement of Blood Collection - Blood collection - Phlebotomy - Sampling errors
- b) Collection and preservation of biological fluids -Anticoagulants - Preservation of samples

**UNIT V**

- a) Process of analysing the specimens generating the laboratory report.
- b) Safe disposal methods

**REFERENCE BOOKS:**

1. Fischbach, 2005. Manual of lab and diagnostic tests, Lippincott Williams Wilkins, New York.
2. Gradwohl, 2000. Clinical laboratory methods and diagnosis. (ed) Ales C. Sonnenwirth and Leonard Jarret, M.D.B.I., New Delhi.
3. J Ochei and Kolhatkar, 2002. Medical laboratory science theory and practice, Tata McGraw- Hill, New Delhi.
4. Kanai L. Mukherjee, 2007, Medical laboratory technology Vol.1.Tata McGraw Hill.

<b>IV SEMESTER</b>		
<b>DSCP 4</b>	<b>FAMILY RESOURCE MANAGEMENT PRACTICAL</b>	<b>18UCND4P1</b>
<b>Hrs/ Week: 2</b>	<b>Hrs/ Sem: 30</b>	<b>Credits: 1</b>

### **FAMILY RESOURCES MANAGEMENT PRACTICAL**

1. Visit to hotels to obtain knowledge on interior decoration and house keeping
2. Draw the house plan for Low, Middle and High-income groups
3. Preparation of colour chart
4. Different types of Flower arrangement
  - Mass arrangement
  - Japanese
  - Triangle
  - L - Shaped
  - U- Shaped
  - Crescent
  - Inverted U and V
  - Fan
  - Floating
5. Demonstration on wall hangings and picture mounting
6. Preparation of Greeting Card
7. Preparation of posters
8. Preparation of menu card
9. Preparation of invitations
10. Preparation of duty chart

IV SEMESTER			
<b>AII- 2</b>	<b>ADVANCED BAKING</b>		<b>18UAND41</b>
<b>Hrs/ Week: 4</b>	<b>Hrs/ Sem: 60</b>	<b>Hrs/ Unit: 12</b>	<b>Credits: 4</b>

### Objectives

To enable the students to

- Understand the principles of baking
- Acquire basic knowledge and preparation of bakery products.

### UNIT I

- a) Basic concepts, batch / continuous dough mixing
- b) Dividing, moulding, panning, proofing and baking

### UNIT II

- a) Bread –Ingredients, Types and methods of bread making
- b) Defects in bread making

### UNIT III

- a) Cakes – Ingredients, types of cakes and preparation of cake
- b) Common defects in cake making
- c) Icing – Ingredients, types

### UNIT IV

- a) Biscuits –Ingredients, preparation of biscuits
- b) Cookies – Ingredients and different types of cookies

### UNIT V

- a) Pastries – Ingredients, types and preparation of pastries
- b) Sandwiches - Ingredients, types and preparation of Sandwiches

### Reference Books:

- 1) Vijaya Khader, Textbook of food science and technology, Indian council of Agricultural Research, New Delhi, 2001
- 2) Kumud Khanna et al, The art and science of cooking, A student manuum, 3<sup>rd</sup> Edition, Published by Pr. Ouseph for phoenix, publishing House Pvt Ltd, 1998
- 3) Earl R.Palan, Judith A. Studler, preparing for the service industry, An introductory approach, AVI publishing co Ltd, 2000
- 4) William C practical in baking, 2000
- 5) Lilian Hiagland Meyer, Food chemistry CBS publishers and Distributors, 2004

IV SEMESTER		
<b>A-II P2</b>	<b>ADVANCED BAKING PRACTICALS</b>	<b>18UAND4P1</b>
<b>Hrs/ Week: 2</b>	<b>Hrs/ Sem: 30</b>	<b>Credits: 1</b>

- 1. Visit to a well-established bakery UNIT**
- 2. Demonstration of various bakery equipment.**
- 3. Demonstration of Buns**
- 4. Preparation of different cakes.**
  - a. Vanilla Cake
  - b. Plum Cake
  - c. Black Cake
  - d. Christmas Cake
  - e. Cup Cake
  - f. Swiss Roll
  - g. Upside down Pudding
- 5. Preparation of Black forest and White forest cake.**
  - a. Demonstration of Icings
  - b. Preparation of Puff, pizza and sandwiches

IV SEMESTER			
NME 2	HEALTH AND FITNESS		18UNND41
Hrs/ Week: 2	Hrs/ Sem: 30	Hrs/ Unit: 6	Credits: 2

### Learning Outcome:

On successful completion of the course, the learners will be equipped to

- familiarize about the terms related to health and fitness
- acquire knowledge about role of healthy food and exercise.
- understand the importance of personal hygiene.
- compare the relationship between fitness and nutrition.

### UNIT I

- a) Health – Definition, physical health and mental health - public health activities.
- b) Hygiene- food hygiene, personnel hygiene

### UNIT II

- a) Environment and health – Water, uses of water, sources of water supply
- b) Water borne diseases- cholera, tuberculosis, typhoid

### UNIT III

- a) Health situation in India - Health problems, primary health care in India- PHC
- b) National programs- AIDS Control, National Malaria eradication Program, National Tuberculosis program

### UNIT IV

- a) Balanced Diet- definition, food pyramid, low cost balanced diets.
- b) Menu planning- points to be considered in planning menu, principles in menu planning,

### UNIT V

- a) Weight management- importance of weight management and exercise.
- b) Famous diets in weight management- paleo diet, vegan diet, and low carbohydrate diet, low fat diet, Keto diet.

### Reference Books:

- 1) K. Park Text book of preventive and social medicine, 15th edition, MIS Banarsidas Bhano Publishers, Jabalpur, 1997.
- 2) Public health and hygiene, R. Sornaraj V. Kumaresan, Sara's publication.
- 3) 3.Srilakshmi. B, (2002). Nutrition Science, New Age International (P) Limited, Publishers, New Delhi, 110002, Third Edition.

V SEMESTER			
<b>DSC 7</b>	<b>INTRODUCTION TO TEXTILES</b>		<b>18UCND51</b>
<b>Hrs/ Week: 6</b>	<b>Hrs/ Sem: 90</b>	<b>Hrs/ Unit: 18</b>	<b>Credits: 4</b>

### Objectives

To help the students to

1. Study the science of Textiles and use this knowledge in wise buying
2. Select clothing appropriate for various family members.
3. Learn the techniques involved in garment construction.
4. Learn about various stitches

### UNIT I

- a) Fiber- Definition, classification of fiber, natural fiber- Characteristics, identification of fiber, Use and care of natural fiber - Cotton, Silk, Wool
- b) Manmade fibers- Characteristics, Use and care of manmade fiber – rayon, nylon, polyester.

### UNIT II

- a) Yarn – Definition -forms of yarn -Types – spun yarn- filament yarn – textured yarn- novelty yarn
- b) Weaving- warp – weft, basic weaving operation, loom operation, Types of weaves – Plain, Twill, Satin.

### UNIT- III

- a) Finishes – Definition- classification- Sizing, Calendaring and Mercerizing.
- b) Printing- process, methods- block, roller, screen, stencil, Dyeing- tie and die, batik printing.

### UNIT IV

- a) Basic hand Stitches- temporary - definition, types, Permanent Stitches – definition, types.
- b) Decorative Stitches – Chain, Lazy daisy, Stem, Back, Buttonhole, Herring Bone, French Knot, Feather and Satin.

### UNIT V

- a) Seams and seam finishes – types of seam, neckline finishes - Binding and Facing
- b) Tools for clothing construction- cutting tools, hand sewing and embroidery tools, measuring tools, marking tools, general tools, pressing tools.

### Reference Books:

- 1) Hoss X.P, Textiles fibers and their use.
- 2) Fundamentals of Textiles and their use (Orient Longman Ltd.,)
- 3) Danlkar and Mary Mathew, Household Textiles and laundry work.
- 4) Macmillan and Co, Clothing for modern.
- 5) Bela Kapoor, Pattern drafting and making up.

<b>V SEMESTER</b>			
<b>DSC 8</b>	<b>CLINICAL BIOCHEMISTRY</b>		<b>18UCND52</b>
<b>Hrs/ Week: 5</b>	<b>Hrs/ Sem: 75</b>	<b>Hrs/ Unit: 15</b>	<b>Credits: 4</b>

**Objectives**

1. To study different test for diseases
2. To know the biochemical composition of bloods and different parts of the body.

**UNIT I: Blood Sugar**

- a) Level of blood glucose – glucose in normal conditions, Maintenance of blood glucose level, Ketosis, Diabetic Coma
- b) Inborn errors of Carbohydrate metabolism - Pentosuria, Galactosuria, Glycosuria and Glycogen storage diseases.

**UNIT II: Blood Lipids**

- a) Types and level of lipids in blood. Determination of serum cholesterol.
- b) Hyper and hypo lipidemia.

**UNIT III: Plasma Protein**

- a) Plasma - Functions and determination of total plasma proteins.
- b) Inborn errors of amino acid metabolism - Phenyl ketonuria, Albiminism, Alkaptonuria and Maple syrup disease.

**UNIT IV: Gastric Disorders**

- a) Bile-Salt Functions, formations of bile acids, bile salts and bile pigments from haemoglobin, b) Test for liver function.

**UNIT V: Urine**

- a) Urine examination - their significance in health and disease.
- b) Test for kidney function- Creatinine clearance test, urea clearance, insulin clearance, Dye test, dilution test.

**Reference Books:**

1. Cantrow and Trumper Clinical Biochemistry M.A.S. Saunders Co-1975
2. Swaminthan M. Biochemistry for medical students,
3. Ambika Shanmugam Fundamentals of Biochemistry for Medical studies – 2006.
4. L. Veera Kumar Biochemistry HJP Publisher.



<b>V SEMESTER</b>			
<b>DSC 9</b>	<b>FOOD SERVICE MANAGEMENT</b>		<b>18UCND53</b>
<b>Hrs/ Week: 5</b>	<b>Hrs/ Sem: 75</b>	<b>Hrs/ Unit: 15</b>	<b>Credits: 4</b>

### **Objectives**

- Gain knowledge about various types of food science
- Understand the principles and functions of management
- Understand personnel management, financial management and legal aspects of catering
- Realize the importance of sanitation and hygiene in food service institution.

### **UNIT –I Management and organization**

- a. Location and Layout for Kitchen, work centers, Structural features
- b. Storage spaces – location, types of storage, layout
- c. Service areas – location, layout

### **UNIT –II Management and Equipment**

- a. Tools of Management – organizational chart, job description, job specifications, Job analysis, work and time schedule
- b. Equipment – classification, selection, care and maintenance

### **UNIT –III Food Service Management**

- a. Procedure for purchasing, receiving and storage
- b. Types of menu, Style of service – waiter service, self-service, vending and mobile catering.
- c. Portion control and utilization of leftovers.

### **UNIT IV Personnel Management**

- a. Recruitment - sources, procedure, selection, steps in selection
- b. Induction- methods of induction, training.

### **UNIT V Financial Management**

- a. Food cost, factors responsible for losses, method of controlling food cost.
- b. Bookkeeping, advantages of double entry system, book of accounts, purchase book, sales book, purchase return book, sales return book, journal and balance sheet.

### **Reference Books:**

1. Mohini Sethi and subject Mathan 1993, Caleing management and Integrated approach Wiley western Ltd New Delhi.
2. West BB Wood L. Harger V.F and Shugart G. (1993) food science in institutions John willey and sons, New York.
3. The theory of catering Scintin and (1996) ILBS.

V SEMESTER			
DSE3A	FOOD PRESERVATION		18UEND5A
Hrs/ Week: 4	Hrs/ Sem: 60	Hrs/ Unit: 12	Credits: 4

### OBJECTIVES

- Learn about suitable methods of preservation with special reference to our country
- To boost the shelf life of food articles
- To gain knowledge about transport and food storage
- To aware about production process to make food

### UNIT I: Introduction

- a) Introduction to food Preservation and its importance
- b) Basic principles of food preservation
- c) Types of Food Preservation

### UNIT II: Preservation by Using Sugar, Salt, Chemicals

- a) **Preservation by sugar** – Principles, Sugar concentrates, Preparation of jam, squash, jelly, marmalade, candies and RTS beverages.
- b) **Preservation by using salt**- Pickling, principles involved and types of pickles,
- c) **Preservation by using chemicals**- Class – I and Class II Preservatives, permitted doses of preservatives

### UNIT III: Preservation by High Temperature

- a) Pasteurization – Types, Merits and demerits
- b) Canning – Types, Principles and Procedure

### UNIT IV: Preservation by Low Temperature

- a) Refrigeration – Methods, Advantages, Factors to be considered in Low temperature
- b) Freezing – Types of Freezing, Freeze drying and its Advantages

### UNIT V: Preservation by Dehydration and Irradiation

- a) permitted doses of irradiation

### REFERENCE BOOKS:

1. Srilakshmi. B., Food Science
2. Shakundala Many., Foods Facts and Principles
3. Frazier., Food Microbiology
4. Anna K. Joshua., Microbiology
5. Norman W. Desrosier., James N. Desrosier., The Technology of Food Preservation, 4<sup>th</sup> edition, CBS Publishers and distributors., New Delhi
6. Anupama Rani., Food Processing Preservation and Storage, 2010., Sonali Publications., New Delhi

<b>V SEMESTER</b>			
<b>DSE3B</b>	<b>POST-HARVEST TECHNOLOGY</b>		<b>18UEND5B</b>
<b>Hrs/ Week: 4</b>	<b>Hrs/ Sem: 60</b>	<b>Hrs/ Unit: 12</b>	<b>Credits: 4</b>

**UNIT I**

History, Need and scope of post-harvest management, physiology of maturity, ripening and senescence

**UNIT II**

Importance of post-harvest management of food, causes of pre and post-harvest losses, Maturity, ripening and biochemical change after harvesting; Importance of microorganism in food industry

**UNIT III**

General principles and method of preservation; Principle and applications of modern techniques in food processing.

**UNIT IV**

Post-harvest loss reduction technology including aspects of packaging storage, post-harvest treatment

**UNIT V**

Post-harvest management as an enterprise 1. Processing sector in India and Kerala; An overview 2. Food laws and regulations 3. Setting up a processing UNIT 4. Fruit and Vegetable Processing Unit Equipment 5. Quality assurance and legislation

**REFERENCE BOOKS:**

1. Spices-vol. II- Parry J.W.
2. spice and condiments - Pruthi J.S
3. Herbs and spices- rosemary hemphill
4. The book of spices – Rosen Garten, F and Livingston Jr.
5. Spices and herbs for the food industry- Lewies, Y.S
6. Spices Vol. I and II; tropical Agril. Series - Purseglove, J.W. Brown E.G., Green C.L and Robbins SRJ.

<b>V SEMESTER</b>		
<b>DSCP V</b>	<b>CLINICAL BIOCHEMISTRY PRACTICALS</b>	<b>18UCND5P1</b>
<b>Hrs/ Week: 4</b>	<b>Hrs/ Sem: 60</b>	<b>Credits: 2</b>

1. Qualitative analysis of urine for sugar
2. Qualitative analysis of urine for proteins
3. Estimation of Serum Cholesterol
4. Estimation of Blood Glucose
5. Estimation of Blood Urea
6. A report on blood analysis techniques

<b>V SEMESTER</b>		
<b>DSCP VI</b>	<b>FOOD PRESEVATION PRACTICALS</b>	<b>18UCND5P2</b>
<b>Hrs/ Week: 3</b>	<b>Hrs/ Sem: 45</b>	<b>Credits: 2</b>

**1. Preparation of Jam**

- a) Apple
- b) Pineapple
- c) Papaya
- d) Mixed Fruit jam

**2. Preparation of Jelly**

- a) Guava
- b) Synthetic Jelly

**3. Preparation of Squash**

- a) Pineapple
- b) Grapes
- c) Orange

**4. Preparation of Sauces**

- a) Tomato
- b) Chilly

**5. Preparation of Pickles**

- a) Ginger
- b) Garlic
- c) Tomato
- d) Fish
- e) Mixed Vegetables
- f) Green Chilly

**6. Preparation of Ketchup**

**7. Preparation of Cocktail**

**8. Preparation of preserves**

- a) **Ginger Murappa**
- b) **Tutti Fruitti**

<b>V SEMESTER</b>		
<b>SEC-I</b>	<b>SPORTS NUTRITION</b>	<b>18USND51</b>
<b>Hrs/ Week: 2</b>	<b>Hrs/ Sem: 30</b>	<b>Credits: 2</b>

**Objectives:**

To enable the students to

1. Understanding the basic principles of sports nutrition
2. Acquire basic knowledge on nutrients and its effect on health.
3. Creating awareness using health education

**UNIT I**

- a. Definition of health education and sports nutrition
- b. Aims and objectives of health education
- c. Need and Importance of health education and nutrition

**UNIT II**

- a. Types of exercises -Aerobic exercises and Yoga
- b. Health effects of doing exercise regularly

**UNIT III**

- a. Doping in athletes and its types
- b. Claimed dietary supplements

**UNIT IV**

- a. Balanced diet in sports
- b. Role of a healthy diet in promoting an athlete
- c. How diet affects sports performances

**UNIT V**

- a. Fluid and electrolytes balance
- b. Water dehydration and fluid replacement
- c. Sports anemia and female athlete
- d. Antioxidants rich foods for athletes

**Reference Books:**

1. Dr. Swaminathan, Handbook of Food and Nutrition
2. Srilakshmi B. Dietetics
3. B. Srilakshmi, Nutrition Science 4<sup>th</sup> edition, New Age International Publishers, 2012

VI SEMESTER			
DSC 10	MEDICAL NUTRITION THERAPY		18UCND61
Hrs/ Week: 4	Hrs/ Sem: 60	Hrs/ Unit: 12	Credits: 4

### Objectives

- To gain insight into the national nutritional problems and their implications.
- To obtain knowledge about the methods of assessment of nutritional status.
- Develop skills in organizing and evaluating nutrition projects in the community.

### UNIT I- Therapeutic Diet

- a. Definition of dietetics – purpose of diet therapy - Routine hospital diets – clear fluid diet, full fluid diet – soft diet, regular normal diet - preoperative diet, postoperative diet.
- b. Special feeding methods – Enteral & Parental feeding-advantages and disadvantages.

### UNIT II- Fever and Diabetes

- a. Diet in fevers - causes, types, metabolic changes during fever, Principles of dietary management.
- b. Diet in Diabetes Mellitus – etiology, symptoms, types, dietary management and treatment.

### UNIT III- Cardiac Disorders and GI tract

- a. Diet in Cardiac disorders – Atherosclerosis, role of fat in the development in Atherosclerosis, Hypertension - types, symptoms, risk factors and dietary modification of CVD.
- b. Diet in diseases of the digestive tract – Causes, symptoms and dietary modification for peptic ulcer, diarrhoea and constipation.

### UNIT IV- Kidney and Liver Diseases

- a. Diet in kidney diseases – Causes, Symptoms and Dietary Modification for glomerulonephritis, nephrosis, acute, chronic renal failure and Kidney stone.
- b. Diet in liver diseases – Causes, Symptoms and Dietary Modification for Cirrhosis of liver, Hepatitis, gall stones

### UNIT V- Obesity, underweight and cancer

- a. Obesity and underweight –Causes, Causes, Symptoms and Dietary Modification.
- b. Cancer – types, clinical symptoms and dietary management.

### Reference Books:

1. Srilakshmi (2004) Dietetics Eastern publishers
2. Carrine J.Robinson (1990) Principles of Nutrition and Dietetics Babbco publishers Bangalore
3. Swaminathan M (2003) Principle of nutrition and Dietetics Babbco publishers Bangalore
4. Gopalan (1999) Nutritive Value of Indian food NN publication Hyderabad
5. Bhavana Sabrawal (1999) principles and practices of Dietetics Ajay verma
6. Davidson and Passmare (1989) Human Nutrition and dietetic London Churchill and Livingston Publishers

VI SEMESTER			
<b>DSC 11</b>	<b>FOOD MICROBIOLOGY</b>		<b>18UCND62</b>
<b>Hrs/ Week: 4</b>	<b>Hrs/ Sem: 60</b>	<b>Hrs/ Unit: 12</b>	<b>Credits: 4</b>

### **Objectives**

1. To gain knowledge on microbes in daily life.
2. Develop skills in food fermentation microbiology.

### **UNIT I: INTRODUCTION TO FOOD MICROBIOLOGY**

- a. Definition of Food Microbiology-Aims and objectives of food microbiology
- b. General classification of microorganism
- c. Factors affecting growth of microorganisms in food

### **UNIT II: MORPHOLOGY OF MICROORGANISMS**

- a. Structure of molds, types, characteristic features and economic uses
- b. Structure of yeast, characteristic features and economic uses
- c. Structure of bacteria, characteristic features and economic uses

### **UNIT III: FOOD SPOILAGE AND CONTAMINATION**

- a. Contamination and spoilage of cereals and cereals products
- b. Contamination and spoilage of fruits and vegetables products
- c. Contamination and spoilage of dairy products

### **UNIT IV: FOOD SPOILAGE AND CONTAMINATION**

- a. Contamination and spoilage of Meat
- b. Contamination and spoilage of Fish
- c. Contamination and spoilage of Egg and Poultry

### **UNIT V: MICROBES IN FOOD PRODUCTION AND DISEASES**

- a. Wine and beer production
- b. Food spoilage – Salmonella, Staphylococcus Clostridium

### **REFERENCE BOOKS:**

1. Frazier 2012, Food microbiology
2. Anna K. Jshua, Microbiology

<b>VI SEMESTER</b>		
<b>DSC 12</b>	<b>PROJECT</b>	<b>18UCND63</b>
<b>Hrs/ Week: 6</b>	<b>Hrs/ Sem: 90</b>	<b>Credits: 6</b>

**Objectives:**

At the end of the semester the students should be able to:

1. Identify the potential areas of research in his/her field;
2. Collect data from various sources including the internet, analyze them, make new connections and link them to life.
3. Read and write originally and usefully.

**GUIDELINES:**

1. The project may be done individually or in groups not exceeding five per group.
2. The minimum length of the project should be 30 pages in A4 size.
3. Marks for the project report will be 100 divided as 60% for the project and 40% for viva – voce.

**Evaluation scheme:**

The project will be evaluated by both Internal and External Examiners. Each Examiner will evaluate for 100 marks. The allocation of marks for project is as follows:

<b>Project</b>	<b>Internal</b>	<b>External</b>
Word of title	5	5
Objectives / Formulation including Hypothesis	5	5
Review of literature	10	10
Relevance of project to social needs	5	5
Methodology / Technique / Procedure adopted	20	20
Summary / Findings / Summation	5	5
Works cited / Annexure / Footnotes	10	10
<b>Total</b>	<b>60</b>	<b>60</b>



VI SEMESTER			
<b>DSE4A</b>	<b>PUBLIC HEALTH AND COMMUNITY NUTRITION</b>	<b>18UEND6A</b>	
<b>Hrs/ Week: 4</b>	<b>Hrs/ Sem: 60</b>	<b>Hrs/ Unit: 12</b>	<b>Credits: 4</b>

### Objectives

- To gain insight into the national nutritional problems and their implications.
- To obtain knowledge about the methods of assessment of nutritional status.
- Develop skills in organizing and evaluating nutrition projects in the community.

### UNIT I Introduction to community nutrition

- a. Definition of Community Nutrition - Aims and objectives of community nutrition
- b. Need and Importance of community nutrition
- c. Characteristic of a community-types of community, Characters of rural and urban communities.
- d. Factors affecting community health

### UNIT II Hazards to Community Health

- a. Hazards to community health-food adulteration, water pollution, air pollution, land pollution, pesticide residue in food, toxins in food-industrial effluents.
- b. Sewage treatment, waste management.

### UNIT III Communicable and non-communicable diseases and its prevention

- a. Communicable diseases -AIDS, Cholera, TB, Typhoid, Malaria, causes, signs and symptoms
- b. Non-communicable – Anemia, obesity, malnutrition, causes, symptoms.

### UNIT IV Nutritional Monitoring and Surveillances

- a. **Nutritional Assessment** – Definition, types, direct- Anthropometric, Biochemical, clinical examination, Diet survey.
- b. Nutrition Education – Definition, Channels and methods – steps in planning, evaluation and implementation

### UNIT V National and International Agencies

- a. National Agencies-NIN, ICMR, CFTRI, Mid-day meal programme, ICDS
- b. International Agencies – FAO, WHO, UNICEF

### REFERENCE BOOKS:

1. Suryatapa Das 2016, Textbook of Community Nutrition, Second Edition, Academic Publications, Kolkatta, ISBN:978-83420-69-8
2. LaithaIshwarn Punnya 2017, Health Education and Sports Nutrition, Khel Shahiya Kendra Publications, New Delhi, ISBN: 978-81-7524-889-2
3. The Educational Planning Group 2007, Food and Nutrition for Nurses, Arya Publishing Group New Delhi, ISBN:81-7064-070-9
4. Park 1997, A Textbook of Preventive and Social Medicine

<b>VI SEMESTER</b>			
<b>DSE4B</b>	<b>DEVELOPMENT OF FOOD PRODUCT</b>		<b>18UEND4B</b>
<b>Hrs/ Week: 4</b>	<b>Hrs/ Sem: 60</b>	<b>Hrs/ Unit: 12</b>	<b>Credits: 4</b>

**UNIT I**

Introduction and scope, need, importance and objective of formulation for new product development.

**UNIT II**

Formulation of new product, ideas, business philosophy and strategy of new product, formulation based on sources availability and cost competitiveness for concept developments of new products

**UNIT III**

Technology for new product, adaptable technology and sustainable technology for standardized formulation for process development.

**UNIT IV**

Scale up and trials, process control parameters and scale-up, production trials for new product development at lab and pilot scale

**UNIT V**

Marketing, economics of new product, commercialization and launching, market testing and marketing plan, costing and economic evaluation of developed products, commercialization/ product launch for marketing

**REFERENCE BOOKS:**

1. New food products design and development: Beckley, Blackwell publishing oxford UK
2. Sensory and consumer research in food Moskowitz, Blackwell product design and development publishing oxford UK

VI SEMESTER		
<b>DSCP-VII</b>	<b>MEDICAL NUTRITION THERAPY PRACTICALS</b>	<b>18UCND6P1</b>
<b>Hrs/ Week: 4</b>	<b>Hrs/ Sem: 60</b>	<b>Credits: 2</b>

1. Principles of menu planning, RDA
2. Routine hospital diets
3. Menu planning preparation and evaluation for Diabetes mellitus
4. Menu planning preparation and evaluation for peptic ulcer
5. Menu planning preparation and evaluation for Cancer
6. Menu planning preparation and evaluation for hypertension
7. Menu planning preparation and evaluation for acute renal failure
8. Menu planning preparation and evaluation for obesity
9. Menu planning preparation and evaluation for under weight
10. Menu planning preparation and evaluation for atherosclerosis.
11. Menu planning preparation and evaluation for fever (Tuber culosis)
12. Menu planning preparation and evaluation for hepatitis
13. A report on Visit to dietary department of a reputed Hospital

VI SEMESTER		
<b>DSCP-VIII</b>	<b>FOOD SAFETY AND QUALITY CONTROL PRACTICALS</b>	<b>18UCND6P2</b>
<b>Hrs/ Week: 4</b>	<b>Hrs/ Sem: 60</b>	<b>Credits: 2</b>

**1. Determining adulterants in various foods**

- a) Coffee
- b) Turmeric
- c) Sugar
- d) Chili powder
- e) Tea Leaves
- f) Pepper

**2. Preparation of score card**

**3. Sensory evaluation of food**

- a) Taste
- b) Texture
- c) Color
- d) Appearance
- e) Flavour

**4. Egg quality test**

**5. Flour quality test**

VI SEMESTER			
SEC -II	EXTENSION EDUCATION IN HOME SCIENCE		18USND61
Hrs/ Week: 2	Hrs/ Sem: 30	Hrs/ Unit: 6	Credits: 2

### Objectives

#### To enable students:

1. To understand principles of extension and community development work in our country.
2. To Prepare for higher studies in Extension Education.
3. To Become effective Home Science extension workers.
4. To Offer effective leadership in the community.

### UNIT I

- a) Extension education – Meaning, aim, objectives, significance
- b) Communication – Definition, Methods, Individual, Group Contacts, Mass media, Use of AV aids.

### UNIT- II

- a) Village - Meaning, Village Level Institution, Co-operatives, Local Organization, Mahila Mandals, Youth Club, Village School,
- b) Panchayat, PHC (Primary Health Centers and SHG (Self Help Group).

### UNIT-III

- a) On-going programmes of the department of rural development and department of social welfare TRYSEM, DWCRA, and ICDS.
- b) National commission for Women

### UNIT-IV

- a) Status and problems of women - Sexual harassment, Atrocities against women.(If possible list them)

### UNIT-V

- a) Audio visual aids in extension work
- b) Motion pictures, slides, flannel Graphs, flash cards, charts, graphs, and puppet shows.

### Reference Book:

Adevi Reddy., Extension Education

VI SEMESTER		
<b>SBC</b>	<b>PERSONALITY DEVELOPMENT</b>	<b>18USPD62</b>
<b>Hrs/ Week: 2</b>	<b>Hrs / Sem: 2 x 15 = 30</b>	<b>Credits: 2</b>

**UNIT I**

**PERSONALITY** - Definition – Determinants – Personality Traits –Theories of Personality – Importance of Personality Development. **SELF AWARENESS** – Meaning – Benefits of Self – Awareness – Developing Self – Awareness. **SWOT** – Meaning – Importance- Application – Components.

**UNIT II**

**SELF MONITORING** – Meaning –Advantages and Disadvantages self-monitor - Self – monitoring and job performance. **PERCEPTION**- Definition-Factor influencing perception- Perception process. **ATTITUDE** – Meaning-Formation of attitude – Types of attitude - Measurement of Attitudes. **ASSERTIVENESS** - Meaning – Assertiveness in Communication – Assertiveness Techniques.

**UNIT III**

**TEAM BUILDING** – Meaning – Types of teams – Importance of Team building- Creating Effective Team. **LEADERSHIP** – Definition – Leadership style – Qualities of an Effective leader. **NEGOTIATION SKILLS** – Meaning – Principles of Negotiation – Types of Negotiation – The Negotiation Process. **CONFLICT MANAGEMENT** – Definition- Types of Conflict- Levels of Conflict.

**UNIT –IV**

**COMMUNICATION** – Definition – Importance of communication – Process of communication –Barriers in communication – Overcoming Communication Barriers. **EMOTIONAL INTELLIGENCE**: Meaning – Components of Emotional Intelligence- Significance of managing Emotional intelligence. **STRESS MANAGEMENT** – Meaning – Sources of Stress – Symptoms of Stress – Consequences of Stress – Managing Stress.

**UNIT V**

**SOCIAL GRACES** – Meaning – Social Grace at Work – Acquiring Social Graces. **TABLE MANNERS** – Meaning – Table Etiquettes in Multicultural Environment- Do's and Don'ts of Table Etiquettes. **DRESS CODE** – Meaning- Dress Code for selected Occasions – Dress Code for an Interview. **GROUP DISCUSSION** – Meaning – Personality traits required for Group Discussion- Process of Group Discussion. **INTERVIEW** – Definition- Types of skills – Employer Expectations –Planning for the Interview – Interview Questions- Critical Interview Questions.

**REFERENCE BOOKS:**

1. Dr. S. Narayana Rajan, Dr. B. Rajasekaran, G. Venkadasalapathi, V. Vijuresh Nayaham and Herald M. Dhas, **Personality Development**, Publication Division, Manonmaniam Sundaranar University, Tirunelveli
2. Stephan P. Robbins, **Organisational Behaviour**, Tenth Edition, Prentice Hall of India Private Limited, New Delhi, 2008
3. Jit S. Chandan, **Oragnisational Behaviour**, Third Edition, Vikas Publishing House Private Limited, 2008
4. Dr. K.K. Ramachandran and Dr. K.K. Karthick, **From Campus to Corporate**, Macmillan Publishers India Limited, New Delhi, 2010.

<b>SCHEME OF EXAMINATIONS UNDER CBCS (2018 - 2021)</b>
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The medium of instruction in all UG and PG courses is English, and students must write the CIA Tests and Semester Examinations in English.

**DISTRIBUTION OF MARKS FOR CIA AND SEMESTER EXAMINATIONS  
UNDERGRADUATE, CERTIFICATE & DIPLOMA COURSES**

SUBJECT	TOTAL MARKS	CIA TEST	SEMESTER EXAMINATION	PASSING MINIMUM		
				CIA TEST	SEM. EXAM.	OVERALL
<b>Theory</b>	100	25	75	Nil	30	40
<b>Practical (4 hrs)</b>	100	40	60	Nil	24	40
<b>Practical (2 hrs)</b>	50	20	30	Nil	12	20
<b>Project</b>	100	Nil	Report - 60 marks Viva Voce - 40 marks	Nil	Nil	40

**DIVISION OF MARKS FOR CIA TEST**

SUBJECT	MARKS	ASSIGNMENT FOR UG / ASSIGNMENT OR SEMINAR FOR PG	RECORD NOTE	TOTAL MARKS
<b>Theory</b>	20	5	--	<b>25</b>
<b>Practical (4 hrs)</b>	30	--	10	<b>40</b>
<b>Practical (2 hrs)</b>	15	--	5	<b>20</b>

1. The duration of each CIA Test is ONE hour and the Semester Examination is THREE hours.
2. Three CIA tests of 20 marks each will be conducted and the average marks of the best two tests out of the three tests will be taken.
3. The I test will be based on the first 1.5 units of the syllabus, the II test will be based on the next 1.5 units of the syllabus and the III test will be based on the next 1.5 units of the syllabus.
4. Two assignments for Undergraduate, Certificate, Diploma and Advanced Diploma Courses and two assignments OR two seminars for Postgraduate Courses has to be submitted.
5. The duration and the pattern of question paper for practical examination may be decided by the respective Boards of Studies. However, out of 60 marks in the semester practical examination, 10 marks may be allotted for record and 50 marks for practical.
6. Two internal practical tests of 30/15 marks each will be conducted for science students in the respective semester and the average will be taken. The record marks allotted for the above practical are 10 and 5 respectively.

**QUESTION PAPER PATTERN FOR CIA TEST (THEORY)****Duration: 1 Hr****Maximum Marks: 20**

<b>Section</b>	<b>Question Type</b>	<b>No. of Questions &amp; Marks</b>	<b>Marks</b>
<b>A</b>	No Choice Answer should not exceed 75 words	2 Questions 2 marks each	$2 \times 2 = 4$
<b>B</b>	Internal choice (Either or type) Answer should not exceed 200 words	2 Questions 4 marks each	$2 \times 4 = 8$
<b>C</b>	Open Choice (Answer ANY ONE out of Two) Answer should not exceed 400 words	1 Question 8 marks	$1 \times 8 = 8$
<b>TOTAL</b>			<b>20 MARKS</b>

**QUESTION PAPER PATTERN FOR SEMESTER EXAMINATION (THEORY)****Duration: 3 Hrs****Maximum Marks: 75**

<b>Section</b>	<b>Question Type</b>	<b>No. of Questions &amp; Marks</b>	<b>Marks</b>
<b>A</b>	No Choice Answer should not exceed 75 words	10 Questions - 2 marks each (2 Questions from each unit)	$10 \times 2 = 20$
<b>B</b>	Internal choice (Either or type) Answer should not exceed 200 words	5 Questions with internal choice. Each carry 5 marks (Two questions from each unit)	$5 \times 5 = 25$
<b>C</b>	Open Choice (Answer ANY THREE out of FIVE) Answer should not exceed 400 words	3 Questions out of 5 - 10 marks each (1 Question from each unit)	$3 \times 10 = 30$
<b>TOTAL</b>			<b>75 MARKS</b>