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BE BOUNDLESS

BENGALURU CITY UNIVERSITY

SYLLABUS For B.Sc/BA HOME SCIENCE & B.Sc. NDCZ COURSES (I to VI Semester)

CHOICE BASED CREDIT SYSTEM

2020-2021



BE BANGALURU
UNIVERSITY

BENGALURU CITY UNIVERSITY

SYLLABUS FOR B.S.V.D.A HOME SCIENCE

&

B.S. NDCX COURSE

(I to VI Semester)

CREDIT BASED SYSTEM

2020-2021

Under Graduate Program

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Undergraduate Program

OPTIONAL

Year	Course	Prerequisites
1-2	Introduction to Optics	
3-4	Advanced Optics	Introduction to Optics

Proceedings of the BOS meeting in Home Science (UG), Bengaluru Central University held on 15th December 2018.

Date: 15.12.2018

A meeting of the BOS in Home Science (UG), Bengaluru Central University held on 15th December 2018 at 10.30 am in room number 13, Department of Human Development and Research Centre, at Smt.V.H.D. Central Institute of Home Science, Seshadri Road, Bengaluru-560 001.

The following members were present for the meeting:

1. Dr.K.S Roopa

BOS Chairperson UG & PG (BCU)
Bengaluru Central University (BCU)
Central College Campus, Bengaluru-560 001
Associate Professor & HOD,
Department of Human Development
Smt. V.H.D. Central Institute of Home Science,
Seshadri Road, Bengaluru – 560001.

K.S. Roopa
15/12/18

2. Dr. Mamatha B

Member
Associate Professor
Department of Resource Management
Smt. V.H.D. Central Institute of Home Science,
Seshadri Road, Bengaluru – 560001.

Mamatha B
15/12/18

3. Dr.Usha Devi C

Member
Associate Professor & HOD,
Department of Food & Nutrition,
Smt.VHD Central Institute of Home Science,
Seshadri Road, Bengaluru-560 001

Usha Devi C
15/12/18

4. Dr. Srilakshmi R

Member
Assistant Professor
Department of Extension Education and Communication
Smt. V.H.D. Central Institute of Home Science,
Seshadri Road, Bengaluru – 560001.

Srilakshmi R.

Proceedings of the 10th Meeting of the International Commission on the History of Statistics
19-23 September 1988, London, U.K.

1988, 1989

The meeting was held at the University of London, U.K. The main theme of the meeting was the history of statistics, with particular emphasis on the development of statistical theory and practice in the 19th and 20th centuries.

The meeting was organized by the International Commission on the History of Statistics, which was established in 1978.

The meeting was held at the University of London, U.K. The main theme of the meeting was the history of statistics, with particular emphasis on the development of statistical theory and practice in the 19th and 20th centuries.

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5. Dr. Rajalakshmi M. S

Member

Associate Professor

Department of Early Childhood Education and Administration

Smt. V.H.D. Central Institute of Home Science,

Seshadri Road, Bengaluru - 560001

Rajalakshmi M
15/12/2018

6. Dr. Devaraj V.R

Member

Professor

Department of Biochemistry,

Bangalore University Central College Campus,

Palace Road, Bangalore-560 001.

R. Devaraj
15/12/18

Members Absent:

7. Dr. Asna Urooz

Professor

Department of Studies in Food Science & Nutrition,

Manasagangotri,

University of Mysore,

Mysore- 570 006.

8. Dr. Sudhakar R

Member

Assistant Professor & Coordinator,

Department of Apparel Technology Management,

Bangalore University Central College Campus,

Palace Road, Bangalore- 560 001.

The meeting began with Dr.Roopa.K.S Chairperson BOS in Home Science, welcoming the members to the meeting and apprising the members of the agenda for the scheduled meeting. She also informed the members that at present, Bishop Cotton Women's Christian College is offering BA Home Science as an optional and B.Sc NDCZ course and Faith British Academy College offering at undergraduate level BSc NDCZ course.

The Chairperson informed the members that the HODs of all the departments of Home Science, Smt. V.H.D. Central Institute of Home Science (Autonomous) and staff members of Bishop Cotton Women's Christian College have met twice in the month of October and November 2018 to give their inputs in framing the new syllabus for the BA Home Science as

1911
1912

1913
1914

The following is a list of the names of the persons who were members of the Board of Directors of the City of New York during the year 1911.

The following is a list of the names of the persons who were members of the Board of Directors of the City of New York during the year 1912.

The following is a list of the names of the persons who were members of the Board of Directors of the City of New York during the year 1913.

The following is a list of the names of the persons who were members of the Board of Directors of the City of New York during the year 1914.

The following is a list of the names of the persons who were members of the Board of Directors of the City of New York during the year 1915.

The following is a list of the names of the persons who were members of the Board of Directors of the City of New York during the year 1916.

One Optional course and then the different papers were allotted to re-frame the syllabus. She then thanked the members for taking the responsibility to scrutinize and to frame the new syllabus for the said course.

She also mentioned the members that for the BSc NDCZ course, Dr. Usha Devi, member, has taken the responsibility to review the existing syllabus and to propose the new syllabus by discussing with the faculty members of the Bishop Cotton Women's Christian College and Faith British Academy College where they are offering the NDCZ course. The inputs given by them were also incorporated. Finally, members were allotted the responsibility to work towards reframing the syllabus in their respective subjects to be offered from 2019-20 for a period of three years by BCU.

The Chairperson informed the members that in the previous BOS meeting, the board recommended to co-opt two members for the existing BOS to work towards the reframing the syllabus.

1. The Board approved the new syllabus for the BA Home Science as an Optional course from the academic year 2019-20. The scheme of study and the syllabus for I to VI semester is approved.
2. The Board approved the new syllabus for NDCZ course for the academic year 2019-20 onwards. The scheme of study and the syllabus for I to VI semester is approved.

The meeting concluded with the Chairperson thanking the members for attending the meeting and giving their valuable inputs.

Mamatha B
15/12/18
Dr. Mamatha B

Usha Devi
15/12/18
Dr. Usha Devi C

Sr. R
15/12/18
Dr. Srilakshmi R

Rajalakshmi M. S
15/12/18
Dr. Rajalakshmi M. S

K. Devaraj V.R.
Dr. Devaraj V.R.

K.S. Roopa
15/12/18
Dr. K.S. Roopa,
Chairperson

After a long and hard day's work, I feel very tired and need to rest. I have been thinking about the things I have done today and how much I have accomplished. It is a good feeling to know that I have made progress in my work.

I also enjoyed the time I spent with my family today. They are very supportive and I love spending time with them. We had a picnic in the park and it was a very pleasant surprise. The weather was perfect and the food was delicious. I will definitely be going back soon.

I am looking forward to the weekend and to spending more time with my family. I will be going to the beach and I will be taking a long walk. I will be taking a lot of pictures and I will be bringing home a lot of souvenirs.

I am also looking forward to the start of the new week. I will be going to work and I will be taking a lot of notes. I will be reading a lot of books and I will be listening to a lot of music. I will be taking a lot of breaks and I will be taking a lot of time for myself.

I am also looking forward to the start of the new month. I will be going to the gym and I will be taking a lot of classes. I will be taking a lot of classes and I will be taking a lot of time for myself.

I am also looking forward to the start of the new year. I will be going to the gym and I will be taking a lot of classes. I will be taking a lot of classes and I will be taking a lot of time for myself.

I am also looking forward to the start of the new decade. I will be going to the gym and I will be taking a lot of classes. I will be taking a lot of classes and I will be taking a lot of time for myself.

I am also looking forward to the start of the new century. I will be going to the gym and I will be taking a lot of classes. I will be taking a lot of classes and I will be taking a lot of time for myself.

I am also looking forward to the start of the new millennium. I will be going to the gym and I will be taking a lot of classes. I will be taking a lot of classes and I will be taking a lot of time for myself.

I am also looking forward to the start of the new era. I will be going to the gym and I will be taking a lot of classes. I will be taking a lot of classes and I will be taking a lot of time for myself.

I am also looking forward to the start of the new age. I will be going to the gym and I will be taking a lot of classes. I will be taking a lot of classes and I will be taking a lot of time for myself.

I am also looking forward to the start of the new world. I will be going to the gym and I will be taking a lot of classes. I will be taking a lot of classes and I will be taking a lot of time for myself.

I am also looking forward to the start of the new universe. I will be going to the gym and I will be taking a lot of classes. I will be taking a lot of classes and I will be taking a lot of time for myself.

SCHEME OF STUDY

SEMESTER I, II, III, IV BA/BSc HOME SCIENCE AS AN OPTIONAL

Parts	Subjects	Paper	Instruction Hours/Week	Duration of Exam (Hours)	Marks			Credits	Total Credits
					IA	Exam	Total		
Part 1	2 Languages	2 T	2x4	2x3	2x30	2x70	100	2x2	4
Part 2	Semester 1	1 T	1x4	1x3	1x30	1x70	100	1x2	2
	Optional 1 - HSc								
	Nutrition and Meal Management	1P	1x3	1x3	1x15	1x35	1x50	1x3	1
	Semester 2	1 T	1x4	1x3	1x30	1x70	100	1x2	2
	Optional 1 – HSc								
	Fundamentals of Textiles and Clothing	1 P	1x3	1x3	1x15	1x35	1x50	1x3	1
	Semester 3	1 T	1x4	1x3	1x30	1x70	100	1x2	2
	Optional 1 - HSc								
Early Childhood Education and Administration	1P	1x3	1x3	1x15	1x35	1x50	1x3	1	
Part 3	Semester 4	1 T	1x4	1x3	1x30	1x70	100	1x2	2
	Optional 1- HSc								
	Introduction to Resource Management	1P	1x3	1x3	1x15	1x35	1x50	1x3	1
	Foundation Course/SDC	IT	3	3	30	70	100	2	2

SCHEME OF STUDY

V, VI Semester BA/BSc HOME SCIENCE AS AN OPTIONAL

Parts	Subjects	Paper	Instruction Hours/Week	Duration of Exam (Hours)	Marks			Credits	Total Credits
					IA	Exam	Total		
Part 2	Semester 5								
	Optional 1 - HSc 1 Human Development	1 T	1x3	1x3	1x30	1x70	1x100	1x2	2
		1P	1x3	1x3	1x15	1x35	1x50	1x1	1
	Optional 2 – HSc 2 Extension Education and Communication	1 T	1x3	1x3	1x30	1x70	1x100	1x2	2
		1P	1x3	1x3	1x15	1x35	1x50	1x1	1
	Semester 6								
	Optional 1 – HSc 1 Guidance and Couselling	1 T	1x3	1x3	1x30	1x70	1x100	1x2	2
		1 P	1x3	1x3	1x15	1x35	1x50	1x1	1
	Optional 2 – HSc 2 Interior Decoration	1 T	1x3	1x3	1x30	1x70	1x100	1x2	2
		1 P	1x3	1x3	1x15	1x35	1x50	1x1	1
Part 3	ISDC	1 T	1x3	1x3	1x30	1x70	1x100	1x2	2

TABLE 1

Summary of the results of the regression analysis

Variable	Parameter estimate	Standard error	t-ratio	Probability > t
Constant	1.000	0.000		
Age	0.000	0.000	0.000	1.000
Sex	0.000	0.000	0.000	1.000
Income	0.000	0.000	0.000	1.000
Education	0.000	0.000	0.000	1.000
Occupation	0.000	0.000	0.000	1.000
Marital status	0.000	0.000	0.000	1.000
Health status	0.000	0.000	0.000	1.000
Religious affiliation	0.000	0.000	0.000	1.000
Political affiliation	0.000	0.000	0.000	1.000
Region	0.000	0.000	0.000	1.000
Year	0.000	0.000	0.000	1.000

SEMESTER I
NUTRITION AND MEAL MANAGEMENT

Code: HSFN101

Hours: 52

Instruction Hours/week: 04

Total Marks: 100

Theory: 70

Internal Assessment: 30

Objectives:

1. To understand the functions of food and role of various nutrients
2. To understand the practical guidelines for dietary needs of human nutrition at different stages of life.

Unit I: Introduction to Nutrition

8 hours

- a) Definition of nutrition, Malnutrition and Health.
- b) Functions of food, Food group, Balanced diet.
- c) Meal planning – steps in meal planning.

Unit II : Nutrients

10 hours

Macro and Micro nutrients- classification, Sources, functions and deficiency.

A) Carbohydrates, B) Proteins C) Fats D) Minerals – Calcium, Iron, Iodine.

E) Vitamins – Fat soluble vitamins – A, D, E & K

Water soluble vitamins – vitamin C

Thiamine, Riboflavin, Niacin

F) Energy – Factors effecting BMR.

Unit III: Water and Fibre

8 hours

- a) Water – Functions, sources and water balance
- b) Fiber – Functions and sources.

Unit IV: Methods of cooking

12 hours

Advantages and disadvantages

- a) Water – Boiling, steaming, pressure cooking
- b) Oil/Fat – Shallow frying, deep frying
- c) Air – Baking

Nutrition through life cycle – Nutritional requirement, dietary guidelines: Adulthood, Pregnancy, Lactation, Infancy – Complementary feeding, Pre-school, Adolescence, Old age.

Unit V: Therapeutic Diets

14 hours

- a) Diet therapy – Definition, Routine hospital diets – Clear, full fluid, soft and bland diet.
- b) Etiology, dietary management of: Underweight, Obesity, Diarrhea, constipation.

CONTRACT

THIS CONTRACT is made this 1st day of January 1999 between the undersigned parties.

The first party, the undersigned, hereby agrees to provide the services described in the attached schedule of work for the second party, the undersigned, for a period of twelve (12) months commencing on the date hereof and continuing until the expiration of the term hereof.

The second party, the undersigned, hereby agrees to pay to the first party, the undersigned, the sum of \$10,000.00 (Ten Thousand Dollars) per month for the services described in the attached schedule of work.

The first party, the undersigned, hereby agrees to provide the services described in the attached schedule of work for the second party, the undersigned, for a period of twelve (12) months commencing on the date hereof and continuing until the expiration of the term hereof.

The second party, the undersigned, hereby agrees to pay to the first party, the undersigned, the sum of \$10,000.00 (Ten Thousand Dollars) per month for the services described in the attached schedule of work.

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PRACTICAL

Code: HSFN101P

No.of.Weeks:13

Hours/Week: 03

Total Marks: 50

Practical: 35

Internal Assessment: 15

- | | |
|--|------------------|
| 1. Weights and Measures | 2 classes |
| 2. Methods of Cooking: | 3 classes |
| a. Boiling | |
| b. Pressure Cooking | |
| c. Frying – Shallow / Deep Fat | |
| 3. Identification of Nutrient rich foods | 2 classes |
| 4. Planning of balanced diet for | 3 classes |
| a. Adult man | |
| b. Senior citizen | |
| 5. Planning and preparation of balanced diet for | 3 classes |
| a. Pregnant Woman | |
| b. Pre-School child | |
| c. Adolescent Girl | |

References:

1. Srilakshmi B, (2007), Dietetics. New Age International publishers. New Delhi
2. Srilakshmi B, (2002), Nutrition Science. New Age International publishers. New Delhi
3. Swaminathan M. (2002), Advanced text book on food and Nutrition. Volume I. Bappco.
4. GopalanC., RamaSastry B.V., and S.C.Balasubramanian (2009), Nutritive value of Indian Foods.NIN.ICMR.Hyderabad.
5. Mudambi S R and Rajagopal M V, (2008), Fundamentals of Foods, Nutrition & diet therapy by New Age International Publishers, New Delhi

SEMESTER II
FUNDAMENTALS OF TEXTILES AND CLOTHING

Code: HSTC201
Hours: 52
Instruction hrs/week: 04

Total Marks: 100
Theory: 70
Internal Assessment: 30

Objectives:

1. To acquaint students with different Textile fibres.
2. To understand the weaving operation.
3. To gain knowledge on textile finishes.
4. To acquaint students about traditional textiles
5. To introduce basics of garment construction.

Unit I: Fibres

10 hours

Classification of fibres according to Source
Manufacturing process of cotton, silk and Nylon fibres
Physical and chemical Properties of Cotton, Silk, Polyester fibres
uses of linen, , jute ,wool,glass, acrylic and spandex fibres.

Unit II: Yarn Construction and Weaving

8 hours

Conventional Spinning system ,Yarn Count_ Yarn Twist
Types of yarn_ Simple, Complex, Textured
Weaving_ Parts of a loom_ Functions of the loom
Types of weave - Basic and Decorative weaves

Unit III: Finishes

15 hours

Finishes_ Classification, Basic finishes_ Bleaching, Mercerisation, Calendering and Tentering.
Special Finishes_ Water repellent, Anti microbial
Dyeing_ Classification of dyes, Methods of dyeing
Printing_ Block, Stencil, Roller and Screen printing.

Unit IV: Traditional textiles of India

8 hours

Woven_ Ikkat, Dyed - Bhandani
Embroidery_ Kashida, Chikankari, Kanta, Aari, Phulkari, Kutch, ChambaRoomal, Kasuti.

Unit V: Clothing Construction**11 hours**

- Sewing tools_ Classification and uses
Sewing machine – Parts, maintenance, problems and remedies
Body Measurements, Preparing of fabrics for garment Construction.
Principles of clothing construction_ Drafting, Draping, Flat patterns. .

PRACTICAL

Code: HSTCP201
Number of weeks: 13

Total Marks: 50
Practical: 35
Internal Assessment: 15

- | | |
|---|------------------|
| 1. Identification of fibres-Visual , Burning and Microscopic. | 1 class |
| 2. Identification of Weaves- Basic and Decorative weave samples | 1 class |
| Identification of Finishes- Samples | 1 class |
| Identification of Printing – Samples | 1 class |
| 3. Basic Stitches= Hemming, Seams, Fullness, Plackets, Neck finishes, Fasteners. | 2 classes |
| 4. Traditional Embroidery stitches | 2 classes |
| 5. Garment construction-Basic Bodice Bloc- Adaption- Petticoat,/ Aline frock/, Kurti. | 5 classes |

References:

1. Anna Jacob (1993) 'Art of sewing' UBS, New Delhi
2. Bane A (1974) 'Tailoring', McGraw Hill publication, New York
3. Readers Digest (1992) 'Complete guide to sewing', Association Inc New Delhi.
4. SavitriPandit (1967) 'Manual for children's clothing', orient Longman.
5. Winfred Aldrich (1990) 'Metric Pattern Cutting', Black Well Science, UK
6. Corbman.B.P. (2001): 'Textile fibre to fabric', McGraw Hill, New York.
7. Hollen, N & saddler J (1995): 'Textiles' Latest Edn., Mac Millan & Co., New York.
8. Joseph, M.L. (1976): 'Essentials Of Textiles', Halt Ripen hart of Winston, New York.
9. Joseph, M.L. (1981): 'Introductory Textiles Science', Halt Ripen hart of Winston, New York.
10. Torrona, P.C. (1978): 'Understanding Textiles', Mac Millan & Co., New York.
11. Wingate, I.B. (1976): 'Textiles fabrics and their selection' Englewood Cliffs, Prentice Hall, New Jersey.

SEMESTER III
EARLY CHILDHOOD EDUCATION AND ADMINISTRATION

Code: HSECEA 301

Hours: 52

Instruction Hours/week: 4

Total Marks: 100

Theory: 70

Internal Assessment: 30

Objectives:

1. Recognize the significance of early childhood education.
2. Understand the value of structure and format for working effectively with children
3. Know that children are active learners and are influenced by their social contexts
4. Know the significance of records of children's growth and progress as necessary for mapping developmental patterns

Unit I: Introduction to Early years

10 hours

- a. Awareness of the significance of early childhood from neuro-science perspective and rights perspective and the criticality of early years in the human life cycle.
- b. Appreciate the difference in care and education and recognize the value of developmentally appropriate interactions for optimal development.

Unit II: Methods and approaches in Early education centres:

10 hours

- a. Children as active learners and participants
- b. Balancing between discipline- participation, exploring and mediation, self directed and guided activity
- c. Thematic approach, Play-way method, activity method and project method
- d. Cooperative learning
- e. Equipment, materials and diverse ways of using materials
- f. Types of ECE centres

Unit III: Methods of engaging with children:

10 hours

- a. Music and movement and the appeal of rhythm;
- b. Free conversations, free hand drawing, role play, drama as sources of learning in multiple domains;
- c. Story- telling and its functions in imagination and cultural literacy
- d. Indoor and outdoor play in structured and free situations; play skills
- e. Introducing print media like books, pictures with words and use of audio-visual aids;
- f. Self help skills relating to health, hygiene and personal needs (feeding, dressing, asking for things);
- g. Fostering social skills to promote formal school readiness.

Unit IV: Administration of Early education centres:

10 hours

- a. Infrastructure requirements-location, safety, Importance of Positive Climate; Auxiliary Services (Physical, Health Services, Social Services, Transportation) Space Requirements: (Storage space for materials, equipment)
- b. Budget and Finances
- c. Staffing the centre, teacher to child ratio
- d. Qualities of an Early Childhood Professional, Staff Meetings/Training Sessions, Staff Motivation;
- e. Parent Involvement, Involvement of Volunteers/Community Members;

Unit V: Maintenance of records in ECCE settings

12 hours

- a. Need for maintaining different kinds of records such as child related, teacher related and material related records;
- b. Registers for attendance, admission, fees, teachers and other financial matters;
- c. Records of monitoring and regulating children's growth and development such as health, anecdotal and cumulative records;
- d. Evaluation measures for children's progress.

PRACTICAL

CODE: HSECEAP 301

Number of weeks- 13

Hours per week:03

Total Marks: 50

Practical: 35

Internal Assessment: 15

1. Visit an early childhood Education centre and write a report on the type of program daily schedule, equipment and records maintained. **2 classes**
2. Plan and conduct innovative activities for the following: **8 classes**
 - a. story telling
 - b. role plays
 - c. singing
 - d. physical activities to enhance locomotor skills like jumping, hopping, balancing, climbing, throwing, kicking, catching
 - e. fostering fine motor skills like grasping, and eye-hand coordination.
 - f. Science/environmental science experiences
3. Design a poster on the significance of early childhood years. **1 class**
4. Design a parent handbook/ brochure to provide information about an early childhood education centre. **2 classes**

That the said...
 a...
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That...
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References:

1. Burtonwood, N. (2002). Anthropology, Sociology and the Preparation of Teachers for a culturally Plural Society. *Pedagogy, Culture and Society*. 10(3), 367-387.
2. Clarke, P. (2001). *Teaching & learning: the culture of pedagogy*. New York: Sage
3. Kress, J.S., Norris, J. A., Schoenholz, D. A., Elias, M.J., and Seigle, P. (Nov., 2004). Bringing Together Educational Standards and Social and Emotional Learning: Making the Case for Educators. *American Journal of Education*, 111 (1), pp 66-89
4. Moyles, J. & Hargreaves, L. (1998). *The primary curriculum. Learning from international perspectives*. London: routledge
5. National association for the education of young children, July 1998. Learning to read and Write: developmentally appropriate practices for young children. 53 (4), 30-46.
6. NCERT (2007). Handbook of arts in education
7. Neuman, S., Dwyer, J. & Koh, S. (2007). Child/Home early language and literacy observation. Baltimore: Brookes Publishing House
8. Ramachandran, V. & Bhattacharjea, S. (august 1, 2009) Attend to Primary Schoolteachers! *Economic and political weekly*. vol xliv no 31, 17-20

**IV SEMESTER
INTRODUCTION TO RESOURCE MANAGEMENT**

Paper Code: HSRM 401
Hours: 52
Instructions Hours/Week: 4

Total marks: 100
Theory: 70
Internal Assessment: 30

Objectives:

1. To learn management principles
2. To understand and manage different resources
3. To educate about consumer rights and problems.

Unit I: Fundamentals of Management

8 hours

Definition, Managerial Process - Planning, Organizing, Controlling and Evaluation
Decision Making- Definition, Types, Steps In Decision Making Process.

Unit II: Management of Resources

8 hours

Resources- Definition, Classification, Characteristics and Factors affecting the Use of Resources
Time- Importance, Tools in Time Management
Energy- Fatigue, Types, Mundel's Classes of Change, Work Simplification techniques

Unit III: Money Management

12 hours

Income, Types of Income,
Budget- Importance, Steps In Budgeting.
Savings- Need, saving institution- Bank, Post Office, LIC
Credit- Need, types, Credit Card, Debit Card

UNIT IV: Consumer Education

12 hours

Rights and Responsibility of Consumers, Problems, Consumer Education, Consumer Aids-
Brands, Labels, Trademarks

UNIT V: Housing

10 hours

Importance, Types of Dwelling units, factors considered in selection of site, Principles of House
construction

MEMORANDUM FOR THE RECORD

Reference is made to the report of the Committee on the Administration of the Government, dated 1954, and to the report of the Committee on the Organization of the Government, dated 1955.

The Committee on the Administration of the Government, in its report of 1954, recommended that the President should be elected for a term of four years, and that the Vice President should be elected for a term of four years, and that the President and Vice President should be elected at the same time.

- 1. The Committee on the Administration of the Government, in its report of 1954, recommended that the President should be elected for a term of four years, and that the Vice President should be elected for a term of four years, and that the President and Vice President should be elected at the same time.
- 2. The Committee on the Organization of the Government, in its report of 1955, recommended that the President should be elected for a term of four years, and that the Vice President should be elected for a term of four years, and that the President and Vice President should be elected at the same time.

Very truly yours,

John F. Kennedy

John F. Kennedy, President of the United States of America, and the Vice President of the United States of America, are hereby elected for a term of four years, and the Vice President of the United States of America is hereby elected for a term of four years, and the President and Vice President of the United States of America are hereby elected at the same time.

Very truly yours,

John F. Kennedy

John F. Kennedy, President of the United States of America, and the Vice President of the United States of America, are hereby elected for a term of four years, and the Vice President of the United States of America is hereby elected for a term of four years, and the President and Vice President of the United States of America are hereby elected at the same time.

Very truly yours,

John F. Kennedy

John F. Kennedy, President of the United States of America, and the Vice President of the United States of America, are hereby elected for a term of four years, and the Vice President of the United States of America is hereby elected for a term of four years, and the President and Vice President of the United States of America are hereby elected at the same time.

Very truly yours,

John F. Kennedy

John F. Kennedy, President of the United States of America, and the Vice President of the United States of America, are hereby elected for a term of four years, and the Vice President of the United States of America is hereby elected for a term of four years, and the President and Vice President of the United States of America are hereby elected at the same time.

Very truly yours,

John F. Kennedy

John F. Kennedy, President of the United States of America, and the Vice President of the United States of America, are hereby elected for a term of four years, and the Vice President of the United States of America is hereby elected for a term of four years, and the President and Vice President of the United States of America are hereby elected at the same time.

PRACTICAL

Paper Code: HSRMP401

Classes: 13

Instructions Hours/Week:3

Total marks: 50

Practical:35

Internal Assessment: 15

- | | |
|---|------------------|
| 1. Time and Activity Chart | 3 classes |
| 2. Energy Management- Vertical and Horizontal Reach, Energy Expenditure. | 2 classes |
| 3. Budget Planning | 2 classes |
| 4. Banking Transaction: Open and Cross Cheque, Remit and withdrawal slip,
Demand draft, NEFT | 3 classes |
| 5. Consumers Aids- Brands, Labels, Trademark. | 3 classes |

References:

1. Nickell and Dorsey (2002) Management in family living - 4th edition cbs publishers and distributors.
2. Kothari Rajesh (2010) Financial Services in India - sage publications, New Delhi.
3. Deshpandey R.S (2010) Modern Ideal Homes for India - United Book Corporation, , New Delhi.
4. Sushma Gupta, Neeru Garg, Amita Aggarwal (2008) Family Resource Management - Kalyani Publishers, New Delhi.

TABLE II

Case No.	Year	Age	Sex	Occupation	Duration of Illness (months)	Site of Lesion	Microscopic Findings
1	1951	45	M	Farmer	12	Brain	Granuloma with eosinophilic infiltration
2	1952	38	F	Teacher	8	Brain	Granuloma with eosinophilic infiltration
3	1953	52	M	Engineer	15	Brain	Granuloma with eosinophilic infiltration
4	1954	41	F	Homemaker	10	Brain	Granuloma with eosinophilic infiltration
5	1955	35	M	Student	6	Brain	Granuloma with eosinophilic infiltration
6	1956	48	F	Businesswoman	14	Brain	Granuloma with eosinophilic infiltration
7	1957	30	M	Student	4	Brain	Granuloma with eosinophilic infiltration
8	1958	55	F	Homemaker	18	Brain	Granuloma with eosinophilic infiltration
9	1959	42	M	Engineer	11	Brain	Granuloma with eosinophilic infiltration
10	1960	33	F	Teacher	7	Brain	Granuloma with eosinophilic infiltration

The following table summarizes the clinical and pathological features of the ten cases of eosinophilic granuloma of the brain. The patients were all between the ages of 30 and 55 years, with a mean age of 42 years. The duration of illness ranged from 4 to 18 months. The site of the lesion was the brain in all cases. The microscopic findings were characteristic of eosinophilic granuloma, showing a dense infiltrate of eosinophils and other inflammatory cells, with the formation of granulomas. The clinical features were diverse, but the most common were headache, vomiting, and focal neurological deficits. The patients were treated with corticosteroids, and the majority showed a favorable response to therapy.

V SEMESTER
HUMAN DEVELOPMENT

Code: HSHD 501
Hours: 48
Instruction hrs/week: 03

Total Marks: 100
Theory: 70
Internal Assessment: 30

Objectives:

1. To create awareness about the stages of prenatal development, child birth, postnatal care.
2. To acquaint students with the domains of development across the life span- neonate, infant, childhood, adolescence and adulthood.

Unit I: Introduction

8 hours

- a. Concept and definition of human development
- b. Need to study human development.
- c. Principles of growth and development
- d. Factors influencing growth and development.
- e. Genetic inheritance – heredity, chromosomes, genes, chromosomal abnormalities. Sex determination

Unit II: Prenatal development

10 hours

- a. Pregnancy – Signs and Symptoms, discomforts and complications, prenatal assessment.
- b. Stages of prenatal period – period of the ovum, embryo and foetus.
- c. Prenatal influences – physical care, diet, emotional care and environmental hazards.
- d. Birth process – stages of birth process and types of birth.

Unit III: Infancy

8 hours

- a. **Neonate** – physical & physiological characteristics, sensory capacities and reflexes_ grasping, moro, sucking, palmar tonic neck reflex.
- b. **Infancy** – Characteristics, developmental tasks, physical, motor, social, cognitive and emotional, breast feeding, weaning, supplementary foods, immunization.

Unit IV: Childhood & Adolescence

10 hours

- a. **Early Childhood** –Characteristics, developmental tasks, physical, motor, social, cognitive, emotional and language development.
- b. **Late Childhood** – Characteristics, developmental tasks, physical, motor, social, cognitive, emotional and language development_ Interests, Influence of peer group and media.

PROVISIONS
OF THE ACT

1. The Act shall be deemed to have come into force on the date of its commencement.

2. The provisions of the Act shall apply to all persons who are liable to pay tax under the Act.

3. The Act shall be deemed to have come into force on the date of its commencement.

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2. The provisions of the Act shall apply to all persons who are liable to pay tax under the Act.
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4. The provisions of the Act shall apply to all persons who are liable to pay tax under the Act.

5. The provisions of the Act shall apply to all persons who are liable to pay tax under the Act.

6. The provisions of the Act shall apply to all persons who are liable to pay tax under the Act.

7. The provisions of the Act shall apply to all persons who are liable to pay tax under the Act.

8. The provisions of the Act shall apply to all persons who are liable to pay tax under the Act.

9. The provisions of the Act shall apply to all persons who are liable to pay tax under the Act.

10. The provisions of the Act shall apply to all persons who are liable to pay tax under the Act.

11. The provisions of the Act shall apply to all persons who are liable to pay tax under the Act.

12.

- c. **Adolescence** - Characteristics, developmental tasks, physical changes, puberty, primary and sexual characteristics, social, emotional, cognitive development and identity formation. Interests and problems of adolescents, sexual health education

Unit V: Adulthood

12 hours

- a. **Early Adulthood** –Characteristics and developmental tasks, physical, social, cognitive, emotional and moral development. Marriage – Definition, functions, areas of marital adjustments. Family – Definition, functions and types.
- b. **Middle Adulthood** –Characteristics and developmental tasks, physical, physiological and socio-emotional changes. Adjustments and hazards of middle age. Preparation for retirement.
- c. **Late Adulthood** – Characteristics and developmental tasks, physical, physiological, social and emotional changes; decline in cognitive abilities; Adjustments, problems faced by the elderly; Retirement and enhancing quality of life

PRACTICAL

Code: HSHDP 501
Number of weeks: 13
Hours per week: 03

Total Marks: 50
Practical: 35
Internal Assessment: 15

- | | |
|---|------------------|
| 1. Prepare an album on the stages of prenatal development. | 3 classes |
| 2. Organize a lecture/workshop for parents on importance of the nutrition/ Needs of preschool children. | 2 classes |
| 3. Develop an activity to foster cognitive development in school children | 4 classes |
| 4. Prepare a visual aid to create awareness on any one problem among adolescents. | 3 classes |
| 5. Visit to an old age home. | 1 class |

References:

1. Baradha.G 'Basics of Human Development' Saradalaya Press, Sri Avinashilingam Education Trust Institutions, Coimbatore 2008.
2. Hurlock.B.Elizabeth 'Developmental Psychology – A Life Span Approach' Tata McGraw Hill Publications, New Delhi Latest Edition.
3. Santrock. W. John (2015) 'A topical approach to life span development', Tata McGraw Hill Company, Delhi.
4. Suriakanthi. A. (2015) 'Child Development' Kavitha Publications, Gandhigram, Tamil Nadu.

SEMESTER V
EXTENSION EDUCATION AND COMMUNICATION

Code: HSEEC 502

Hours: 48

Instructions Hrs/Week: 03

Total Marks: 100

Theory: 70

Internal Assessment: 30

Objectives:

1. Understand the concept and principles of Extension Education
2. Familiarize with the teaching learning process
3. Know about the concept of community, Development and Community Development
4. Become aware of the concept, methods and media of communication

Unit I: Concept of extension education

6 hours

- a. Definition, Meaning, Objectives and principles of Extension Education
- b. Formal, Informal and Non-Formal Education
- c. Role and qualities of the extension facilitator
- d. Role of Home Science in Extension Education

Unit II: Teaching learning process

10 hours

- a. Learning – Concept, Principles, Elements
- b. Teaching – Process, Types:- Trainee-dominated method, Trainer dominated method, Co-operative method, Functional method
- c. Qualities of a good teacher
- d. Extension teaching methods – Role play, Workshop, Game stimulation
- e. Role of motivation in teaching and learning – Meaning, Needs which motivate: Organic, Wants, Emotions, Feelings and attitudes, Social motives, Habits, Objective Environment
- f. Motivation in extension – Importance, Intrinsic and Extrinsic values

Unit III: Concept of community development

10 hours

- a. Basic concept of community
- b. Development: Nature, Real development, Core values, Objectives
- c. Community Development: Definition and meaning, Concept, Need, Essential elements, Scope, Objectives, Philosophy, Types
- d. Evolution of Community Development programme in India Since Independence
- e. Programme planning – Principles and steps
- f. Programme building – Plan of work and Calendar of events

EXHIBIT 10-1
STATEMENT OF WORK

Project Name: [Faint text]
Project Number: [Faint text]
Project Manager: [Faint text]

Client Name: [Faint text]
Client Address: [Faint text]
Client Contact: [Faint text]

Date: [Faint text]

1. The client shall provide all necessary information and data for the project.
2. The contractor shall complete the project within the specified timeline.
3. The contractor shall maintain regular communication with the client.
4. The contractor shall provide a detailed report of the project progress.

Project Start Date: [Faint text] Project End Date: [Faint text]

The project shall be completed by [Faint text] and shall include [Faint text]. The project shall be completed within the specified timeline and budget. The contractor shall maintain regular communication with the client and provide a detailed report of the project progress.

The project shall be completed by [Faint text] and shall include [Faint text].

The project shall be completed by [Faint text] and shall include [Faint text]. The project shall be completed within the specified timeline and budget. The contractor shall maintain regular communication with the client and provide a detailed report of the project progress.

The project shall be completed by [Faint text] and shall include [Faint text].

The project shall be completed by [Faint text] and shall include [Faint text]. The project shall be completed within the specified timeline and budget. The contractor shall maintain regular communication with the client and provide a detailed report of the project progress.

The project shall be completed by [Faint text] and shall include [Faint text]. The project shall be completed within the specified timeline and budget. The contractor shall maintain regular communication with the client and provide a detailed report of the project progress.

Unit IV: Communication

8 hours

- a. Definition, Meaning, Concept, Importance
- b. Types, Elements, Functions and Models of communication
- c. Feedback in communication
- d. Communicator – communicate relationships
- e. Barriers to communication

Unit V: Methods and Media of communication

14 hours

- a. Methods: Individual, Group, Mass
- b. Media: Audio, Visual, Audio-Visual
- c. Classification of Audio-Visual aids
- d. Audio Aids – Radio, Tape recorder, Telephone
- e. Visual Aids
 - i. Projected – Overhead projector, Slide projector, Camera
 - ii. Non- Projected – Posters, Charts, Flash Cards, Exhibitions, Printed materials
- f. Audio-Visual Aids
 - i. Projected – Television, Cinema
 - ii. Non-Projected – Puppets, Drama/Street play/Theatre, Dance
- g. Other Traditional media - Folk songs, Folk dances, Folk art, Folk lore
- h. Modern media

PRACTICAL

Code: HSEEC502

Number of weeks: 13

Hours per week: 03

Total marks: 50

Practical: 35

Internal Assessment: 15

- 1. Prepare a plan of work and calendar of events for an educational/awareness activity/programme **2 classes**
- 2. Organise educational/awareness activity using Role play/ Workshop/ Game simulation for a community **4 classes**
- 3. Prepare audio-visual aids for conducting a programme **4 classes**
- 4. Conduct a programme with the help of audio-visual aids using group method of communication. **3 classes**

1/10/2017

1/10/2017

- a. Definition of strategic planning
- b. Types of strategic planning (Corporate, Business, Functional)
- c. Importance of strategic planning
- d. Organizational structure and strategy
- e. Environmental analysis

1/10/2017

1/10/2017

- a. Definition of strategic planning
- b. Types of strategic planning (Corporate, Business, Functional)
- c. Importance of strategic planning
- d. Organizational structure and strategy
- e. Environmental analysis

1/10/2017

1/10/2017

- a. Definition of strategic planning
- b. Types of strategic planning (Corporate, Business, Functional)
- c. Importance of strategic planning
- d. Organizational structure and strategy
- e. Environmental analysis

1/10/2017

1/10/2017

- a. Definition of strategic planning
- b. Types of strategic planning (Corporate, Business, Functional)
- c. Importance of strategic planning
- d. Organizational structure and strategy
- e. Environmental analysis

1/10/2017

1/10/2017

- a. Definition of strategic planning
- b. Types of strategic planning (Corporate, Business, Functional)
- c. Importance of strategic planning
- d. Organizational structure and strategy
- e. Environmental analysis

References:

1. Dahama.O.P and O.P Bhatanagar: Education and Communication for Development, 2nd Edition; Oxford and IBH Publishing Co.Pvt.Ltd, New Delhi, 1985
2. Khan.P.M and L.L. Somani: Fundamentals of Extension Education, Agrotech Publishing Academy, Udaipur, 2009
3. Ray, G.L: Extension Communication and Management, Naya Prakash, Calcutta, 1999
4. Reddy: Extension Education, Bapatia India, Srilakshmi Press, 1987
5. Rodgers, Alan: Teaching methods in Extension Education for development, Westwood Row, Woodmans, 1989

References

1. Johnson, G. and P. M. Scholes. *Business Strategy: A Guide to Successful Growth*. Boston, MA: Harvard Business School Press, 1983.

2. Johnson, G., and P. M. Scholes. *Business Strategy: A Guide to Successful Growth*. Boston, MA: Harvard Business School Press, 1983.

3. Johnson, G., and P. M. Scholes. *Business Strategy: A Guide to Successful Growth*. Boston, MA: Harvard Business School Press, 1983.

4. Johnson, G., and P. M. Scholes. *Business Strategy: A Guide to Successful Growth*. Boston, MA: Harvard Business School Press, 1983.

5. Johnson, G., and P. M. Scholes. *Business Strategy: A Guide to Successful Growth*. Boston, MA: Harvard Business School Press, 1983.

SEMESTER VI
GUIDANCE AND COUNSELLING

Code: HSHD 601

Hours: 48

Instruction hours/week: 03

Total Marks : 100

Theory: 70

Internal Assessment : 30

Objectives:

1. Develop an understanding of basic meaning, need and types of guidance.
2. Get acquainted with the tools and techniques of appraisal of an individual.
3. Develop understanding of meaning, characteristics and types of counselling.
4. Get acquainted with process and techniques of Counselling.

Unit I: Guidance

6 hours

Meaning, definition and scope of guidance, need and principles of guidance, types of guidance.

Unit II: Counselling

10 hours

Meaning, definition of counselling, need, scope and principles of counselling, process of counselling.

Role of counsellor, qualities and skills of a counsellor.

Unit III: Guidance and counselling across life span

10 hours

Counselling needs of children, adolescents, adults, family, and individuals with special needs.

Unit IV: Techniques and counselling

10 hours

Individual counselling, group counselling, purpose, importance types of group counselling techniques of group counselling.

Unit V: Counselling Agencies/Services

10 hours

Guidance and counselling centres for children, adolescents, adults, marriage and family, individuals with special needs, government agencies and NGOs.

REPORT OF THE
COMMISSION ON THE
FUTURE OF THE UNITED STATES

John F. Kennedy
Library
Washington, D.C.

Executive Summary
The Commission on the Future of the United States
was organized by the President in 1961.

Introduction

1. Develop an understanding of the future of the United States.
2. Identify the major issues and problems that will affect the future of the United States.
3. Develop a plan of action to meet the challenges of the future.
4. Present a report to the President and the people of the United States.

1. The Commission

The Commission was organized by the President in 1961 to study the future of the United States.

2. The Commission's Work

The Commission held numerous public hearings and received many suggestions from the people.

3. The Commission's Report

The Commission's report is divided into four main parts: the future of the United States, the future of the world, the future of the economy, and the future of the environment.

4. The Commission's Recommendations

The Commission recommends that the United States should continue to be a leader in the world.

5. The Commission's Conclusions

The Commission concludes that the future of the United States is bright and that the people of the United States should be optimistic.

6. The Commission's Final Thoughts

The Commission believes that the future of the United States is in the hands of the people and that the people should take responsibility for their own future.

PRACTICAL

Code: HSHDP601

No of weeks: 13

Instruction hrs/week: 03

Total Marks: 50

Practical: 35

Internal Assessment: 15

1. Organise a lecture for adolescents to create awareness about the need for guidance and counselling **2 classes**
2. Plan a workshop on the problems faced by adolescents /Compile case studies that call for counselling and guidance and discuss the same. **4 classes**
3. Visit a counselling centre and write a report on the services provided. **1 class**
4. Conduct a panel discussion on the needs of guidance and counselling for children /adolescents /adults/family/marriage **3 classes**
5. Develop a directory on counselling centres working for individuals across lifespan in Bangalore city **3 classes**

References:

1. Anastasia Anne(1982). Psychological testing New York. McMillan
2. Bur nard. P (1999). Counselling skills training. New Delhi. Viva Books company Delhi
3. Gupta S. K Guidance and counselling in Indian Education. Mittal a publication PvtLtd., Delhi.
4. Jones R. N(2002). Basic counselling skills A helpers manual
5. Patterson H. C(1986). Theories of counselling and psychotherapy. New York. Harper
6. Rao S. N Counselling And guidance. Tata Mc Graw Hill. DELHI
7. Santrock W John (2007). "A tropical approach to life span development". Tata McGraw Hill Company, Delhi
8. Shertzer. B & Stone, S. C (1981). Fundamentals of Guidance. Boston. Houghton

PHYSICAL

Total weight 11
Protein 10
Fat 10

1000
1000
1000

1. The first part of the test is a 1000m run. This is a test of aerobic fitness and is done on a flat surface. The time taken to complete the run is recorded and this is used to calculate the runner's speed. The speed is then compared to the runner's weight and this gives a measure of the runner's physical fitness. The runner's speed is then compared to the runner's weight and this gives a measure of the runner's physical fitness.

2. The second part of the test is a 1000m run. This is a test of aerobic fitness and is done on a flat surface. The time taken to complete the run is recorded and this is used to calculate the runner's speed. The speed is then compared to the runner's weight and this gives a measure of the runner's physical fitness. The runner's speed is then compared to the runner's weight and this gives a measure of the runner's physical fitness.

**VI SEMESTER
INTERIOR DECORATION**

Code: HSRM 602

Hours: 48

Instructions Hours/Week: 3

Total marks: 100

Theory: 70

Internal Assessment: 30

Objectives:

1. To Learn about housing and its principles
2. To understand about colour and its application in Interiors
3. To know about furniture, window treatment and accessories in interiors .

Unit I: Design Fundamentals

10 hours

Design- Types of design- Structural and Decorative, Naturalistic, Stylized, Geometric, Abstract
Elements of Art- Line, form, colour, space, texture, Pattern, light.

Principles of design- Harmony, Proportion, Balance, Rhythm, Emphasis

Unit II: Colour

10 Hours

Dimension of colour- Hue, Value, Intensity, Advancing and receding colours, cool and warm colours.

Prang Colour System- Primary, Secondary and Tertiary Colours, Colour Wheel.

Colour Harmonies- Related and Non-Related Colour Harmonies

Unit III: Furniture

8 Hours

Factors to be considered in Selection, Principles of Furniture Arrangement, Furniture Arrangement for different rooms.

Unit IV: Window and window treatment

12 Hours

Windows- Types of windows- casement, bay window, sliding window, awing window, picture window. **Window treatment-** Modes of Hanging Curtains- Café, Tier, Pricilla, Criss Cross, Glass, Pleated

Unit V: Accessories and flower arrangement

8 Hours

Accessories- Classification of accessories.

Flower Arrangement- Styles, Basic Shapes, Care and Conditioning of Flower.

THE UNIVERSITY OF CHICAGO

Department of Chemistry
5700 South Ellis Avenue
Chicago, Illinois 60637

Office of the Dean
5700 South Ellis Avenue
Chicago, Illinois 60637

The following information is provided for your information. The information is provided for your information. The information is provided for your information.

For further information, please contact the Office of the Dean.

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PRACTICAL

Code: HSRMP 602

Classes:13

Instructions Hours/Week: 3

Total marks: 50

Practical:35

Internal Assessment: 15

- | | |
|--|------------------|
| 1. Design- Structural and Decorative design. Elements of Arts and Principles of design | 4 classes |
| 2. Colour wheels, colour harmonies. | 2 classes |
| 3. Furniture arrangement | 3 classes |
| 4. Window treatment | 3 classes |
| 5. Flower arrangement | 2 classes |

References:

1. Prathap Rao (2003) Interior design Principles – Standard Publishers and Distributors, New Delhi.
2. Raja Rao and Subramanya (2003) Planning and Designing Residential Buildings – Standard Publishers and Distributors, New Delhi.
3. Sita Ram Premavathy ,Pannuparveen (2005) Interior Design and Decoration – CBS Publishers, , New Delhi.
4. Premlatha Mullick (2015) Textbook Of Home Science – Kalyani Publishers, New Delhi.

THE TABLE

Page 10
Page 11
Page 12

Page 13
Page 14
Page 15

1. The first part of the document is devoted to a general introduction of the subject matter.
2. The second part of the document is devoted to a detailed description of the various aspects of the subject matter.
3. The third part of the document is devoted to a detailed description of the various aspects of the subject matter.
4. The fourth part of the document is devoted to a detailed description of the various aspects of the subject matter.
5. The fifth part of the document is devoted to a detailed description of the various aspects of the subject matter.

The document is divided into five main parts. The first part is an introduction to the subject matter. The second part is a detailed description of the various aspects of the subject matter. The third part is a detailed description of the various aspects of the subject matter. The fourth part is a detailed description of the various aspects of the subject matter. The fifth part is a detailed description of the various aspects of the subject matter.

**B.Sc. - NUTRITION AND DIETETICS,
CHEMISTRY,
ZOOLOGY (NDCZ)**

THE UNIVERSITY OF CHICAGO
DEPARTMENT OF CHEMISTRY
5301 SOUTH DICKENS STREET

Scheme of Study
3 Year B.Sc. Nutrition and Dietetics, Chemistry, Zoology (NDCZ)
I Semester Nutrition and Dietetics, Chemistry, Zoology

Parts	Subjects	Paper	Instruction Hours/Week	Duration of Exam (Hours)	Marks			Credits	Total Credits
					IA	Exam	Total		
Part 1	2 Languages	2 T	2x4	2x3	2x30	2x70	100	2x2	4
Part 2	Optional 1 Nutrition and Dietetics NDCZ101 Fundamentals of Nutrition	1 T	1x4	1x3	1x30	1x70	100	1x2	2
		1P	1x3	1x3	1x15	1x35	1x50	1x3	1
	Optional 2 Chemistry I	1 T	1x4	1x3	1x30	1x70	100	1x2	2
		1 P	1x3	1x3	1x15	1x35	1x50	1x3	1
	Optional 3 Zoology – I Non – Chordata Part I	1 T	1x4	1x3	1x30	1x70	100	1x2	2
		1P	1x3	1x3	1x15	1x35	1x50	1x3	1
Part 3	Foundation Course/SDC	IT	3	3	30	70	100	2	2
	CC & EC	-	-	-	50	-	50	1	1
Total Credits per Semester Per Program									16

II Semester Nutrition & Dietetics, Chemistry, Zoology

Parts	Subjects	Paper	Instruction Hours/Week	Duration of Exam (Hours)	Marks			Credits	Total Credits
					IA	Exam	Total		
Part 1	2 Languages	2 T	2x4	2x3	2x30	2x70	100	2x2	4
	Optional 1	1 T	1x4	1x3	1x30	1x70	100	1x2	2
	Nutrition and Dietetics NDCZ 201 Family Meal Management	1P	1x3	1x3	1x15	1x35	1x50	1x3	1
Part 2	Optional 2	1 T	1x4	1x3	1x30	1x70	100	1x2	2
	Chemistry – II	1 P	1x3	1x3	1x15	1x35	1x50	1x3	1
	Optional 3	1 T	1x4	1x3	1x30	1x70	100	1x2	2
	Zoology – II Non – Chordata Part II	1P	1x3	1x3	1x15	1x35	1x50	1x3	1
Part 3	Foundation Course/SDC	IT	3	3	30	70	100	2	2
	CC & EC	-	-	-	50	-	50	1	1
Total Credits per Semester Per Program									16

Table 1: Summary of the data used in the study

Year	Country	Population (Millions)	Urban Population (Millions)	Rural Population (Millions)	Total Population (Millions)	Urban %	Rural %
2000	USA	280	220	60	280	78.6	21.4
2000	China	1.2	0.4	0.8	1.2	33.3	66.7
2000	India	1.0	0.2	0.8	1.0	20.0	80.0
2000	Japan	125	120	5	125	96.0	4.0
2000	Germany	80	75	5	80	93.8	6.2
2000	France	60	55	5	60	91.7	8.3
2000	UK	55	50	5	55	90.9	9.1
2000	Italy	55	50	5	55	90.9	9.1
2000	Spain	40	35	5	40	87.5	12.5
2000	Canada	30	25	5	30	83.3	16.7
2000	Australia	20	15	5	20	75.0	25.0
2000	South Africa	40	30	10	40	75.0	25.0
2000	Brazil	160	100	60	160	62.5	37.5
2000	Mexico	100	60	40	100	60.0	40.0
2000	Argentina	35	25	10	35	71.4	28.6
2000	Colombia	40	20	20	40	50.0	50.0
2000	Venezuela	25	15	10	25	60.0	40.0
2000	Peru	25	10	15	25	40.0	60.0
2000	Ecuador	15	5	10	15	33.3	66.7
2000	Chile	15	10	5	15	66.7	33.3
2000	Poland	38	35	3	38	92.1	7.9
2000	Czechia	10	9	1	10	90.0	10.0
2000	Slovakia	5	4	1	5	80.0	20.0
2000	Hungary	10	9	1	10	90.0	10.0
2000	Slovenia	2	1.5	0.5	2	75.0	25.0
2000	Croatia	4.5	3.5	1.0	4.5	77.8	22.2
2000	Serbia	7.5	5.5	2.0	7.5	73.3	26.7
2000	Bulgaria	8	6	2	8	75.0	25.0
2000	Romania	21	15	6	21	71.4	28.6
2000	Greece	11	10	1	11	90.9	9.1
2000	Turkey	65	45	20	65	69.2	30.8
2000	South Korea	40	35	5	40	87.5	12.5
2000	China	1.2	0.4	0.8	1.2	33.3	66.7
2000	India	1.0	0.2	0.8	1.0	20.0	80.0
2000	Japan	125	120	5	125	96.0	4.0
2000	Germany	80	75	5	80	93.8	6.2
2000	France	60	55	5	60	91.7	8.3
2000	UK	55	50	5	55	90.9	9.1
2000	Italy	55	50	5	55	90.9	9.1
2000	Spain	40	35	5	40	87.5	12.5
2000	Canada	30	25	5	30	83.3	16.7
2000	Australia	20	15	5	20	75.0	25.0
2000	South Africa	40	30	10	40	75.0	25.0
2000	Brazil	160	100	60	160	62.5	37.5
2000	Mexico	100	60	40	100	60.0	40.0
2000	Argentina	35	25	10	35	71.4	28.6
2000	Colombia	40	20	20	40	50.0	50.0
2000	Venezuela	25	15	10	25	60.0	40.0
2000	Peru	25	10	15	25	40.0	60.0
2000	Ecuador	15	5	10	15	33.3	66.7
2000	Chile	15	10	5	15	66.7	33.3
2000	Poland	38	35	3	38	92.1	7.9
2000	Czechia	10	9	1	10	90.0	10.0
2000	Slovakia	5	4	1	5	80.0	20.0
2000	Hungary	10	9	1	10	90.0	10.0
2000	Slovenia	2	1.5	0.5	2	75.0	25.0
2000	Croatia	4.5	3.5	1.0	4.5	77.8	22.2
2000	Serbia	7.5	5.5	2.0	7.5	73.3	26.7
2000	Bulgaria	8	6	2	8	75.0	25.0
2000	Romania	21	15	6	21	71.4	28.6
2000	Greece	11	10	1	11	90.9	9.1
2000	Turkey	65	45	20	65	69.2	30.8
2000	China	1.2	0.4	0.8	1.2	33.3	66.7
2000	India	1.0	0.2	0.8	1.0	20.0	80.0
2000	Japan	125	120	5	125	96.0	4.0
2000	Germany	80	75	5	80	93.8	6.2
2000	France	60	55	5	60	91.7	8.3
2000	UK	55	50	5	55	90.9	9.1
2000	Italy	55	50	5	55	90.9	9.1
2000	Spain	40	35	5	40	87.5	12.5
2000	Canada	30	25	5	30	83.3	16.7
2000	Australia	20	15	5	20	75.0	25.0
2000	South Africa	40	30	10	40	75.0	25.0
2000	Brazil	160	100	60	160	62.5	37.5
2000	Mexico	100	60	40	100	60.0	40.0
2000	Argentina	35	25	10	35	71.4	28.6
2000	Colombia	40	20	20	40	50.0	50.0
2000	Venezuela	25	15	10	25	60.0	40.0
2000	Peru	25	10	15	25	40.0	60.0
2000	Ecuador	15	5	10	15	33.3	66.7
2000	Chile	15	10	5	15	66.7	33.3
2000	Poland	38	35	3	38	92.1	7.9
2000	Czechia	10	9	1	10	90.0	10.0
2000	Slovakia	5	4	1	5	80.0	20.0
2000	Hungary	10	9	1	10	90.0	10.0
2000	Slovenia	2	1.5	0.5	2	75.0	25.0
2000	Croatia	4.5	3.5	1.0	4.5	77.8	22.2
2000	Serbia	7.5	5.5	2.0	7.5	73.3	26.7
2000	Bulgaria	8	6	2	8	75.0	25.0
2000	Romania	21	15	6	21	71.4	28.6
2000	Greece	11	10	1	11	90.9	9.1
2000	Turkey	65	45	20	65	69.2	30.8
2000	China	1.2	0.4	0.8	1.2	33.3	66.7
2000	India	1.0	0.2	0.8	1.0	20.0	80.0
2000	Japan	125	120	5	125	96.0	4.0
2000	Germany	80	75	5	80	93.8	6.2
2000	France	60	55	5	60	91.7	8.3
2000	UK	55	50	5	55	90.9	9.1
2000	Italy	55	50	5	55	90.9	9.1
2000	Spain	40	35	5	40	87.5	12.5
2000	Canada	30	25	5	30	83.3	16.7
2000	Australia	20	15	5	20	75.0	25.0
2000	South Africa	40	30	10	40	75.0	25.0
2000	Brazil	160	100	60	160	62.5	37.5
2000	Mexico	100	60	40	100	60.0	40.0
2000	Argentina	35	25	10	35	71.4	28.6
2000	Colombia	40	20	20	40	50.0	50.0
2000	Venezuela	25	15	10	25	60.0	40.0
2000	Peru	25	10	15	25	40.0	60.0
2000	Ecuador	15	5	10	15	33.3	66.7
2000	Chile	15	10	5	15	66.7	33.3
2000	Poland	38	35	3	38	92.1	7.9
2000	Czechia	10	9	1	10	90.0	10.0
2000	Slovakia	5	4	1	5	80.0	20.0
2000	Hungary	10	9	1	10	90.0	10.0
2000	Slovenia	2	1.5	0.5	2	75.0	25.0
2000	Croatia	4.5	3.5	1.0	4.5	77.8	22.2
2000	Serbia	7.5	5.5	2.0	7.5	73.3	26.7
2000	Bulgaria	8	6	2	8	75.0	25.0
2000	Romania	21	15	6	21	71.4	28.6
2000	Greece	11	10	1	11	90.9	9.1
2000	Turkey	65	45	20	65	69.2	30.8
2000	China	1.2	0.4	0.8	1.2	33.3	66.7
2000	India	1.0	0.2	0.8	1.0	20.0	80.0
2000	Japan	125	120	5	125	96.0	4.0
2000	Germany	80	75	5	80	93.8	6.2
2000	France	60	55	5	60	91.7	8.3
2000	UK	55	50	5	55	90.9	9.1
2000	Italy	55	50	5	55	90.9	9.1
2000	Spain	40	35	5	40	87.5	12.5
2000	Canada	30	25	5	30	83.3	16.7
2000	Australia	20	15	5	20	75.0	25.0
2000	South Africa	40	30	10	40	75.0	25.0
2000	Brazil	160	100	60	160	62.5	37.5
2000	Mexico	100	60	40	100	60.0	40.0
2000	Argentina	35	25	10	35	71.4	28.6
2000	Colombia	40	20	20	40	50.0	50.0
2000	Venezuela	25	15	10	25	60.0	40.0
2000	Peru	25	10	15	25	40.0	60.0
2000	Ecuador	15	5	10	15	33.3	66.7
2000	Chile	15	10	5	15	66.7	33.3
2000	Poland	38	35	3	38	92.1	7.9
2000	Czechia	10	9	1	10	90.0	10.0
2000	Slovakia	5	4	1	5	80.0	20.0
2000	Hungary	10	9	1	10	90.0	10.0
2000	Slovenia	2	1.5	0.5	2	75.0	25.0
2000	Croatia	4.5	3.5	1.0	4.5	77.8	22.2
2000	Serbia	7.5	5.5	2.0	7.5	73.3	26.7
2000	Bulgaria	8	6	2	8	75.0	25.0
2000	Romania	21	15	6	21	71.4	28.6
2000	Greece	11	10	1	11	90.9	9.1
2000	Turkey	65	45	20	65	69.2	30.8
2000	China	1.2	0.4	0.8	1.2	33.3	66.7
2000	India	1.0	0.2	0.8	1.0	20.0	80.0
2000	Japan	125	120	5	125	96.0	4.0
2000	Germany	80	75	5	80	93.8	6.2
2000	France	60	55	5	60	91.7	8.3
2000	UK	55	50	5	55	90.9	9.1
2000	Italy	55	50	5	55	90.9	9.1
2000	Spain	40					

III Semester Nutrition & Dietetics, Chemistry, Zoology

Parts	Subjects	Paper	Instruction Hours/Week	Duration of Exam (Hours)	Marks			Credits	Total Credits
					IA	Exam	Total		
Part 1	2 Languages	2 T	2x4	2x3	2x30	2x70	100	2x2	4
Part 2	Optional 1	1 T	1x4	1x3	1x30	1x70	100	1x2	2
	Nutrition and Dietetics	1P	1x3	1x3	1x15	1x35	1x50	1x3	1
	NDCZ 301								
	Human Physiology								
	Optional 2	1 T	1x4	1x3	1x30	1x70	100	1x2	2
	Chemistry - III	1 P	1x3	1x3	1x15	1x35	1x50	1x3	1
Part 2	Optional 3	1 T	1x4	1x3	1x30	1x70	100	1x2	2
	Zoology – III								
	Chordata	1P	1x3	1x3	1x15	1x35	1x50	1x3	1
Part 3	Foundation Course/SDC	IT	3	3	30	70	100	2	2
	CC & EC	-	-	-	50	-	50	1	1
Total Credits per Semester Per Program									16

IV Semester Nutrition & Dietetics, Chemistry, Zoology

Parts	Subjects	Paper	Instruction Hours/Week	Duration of Exam (Hours)	Marks			Credits	Total Credits
					IA	Exam	Total		
Part 1	2 Languages	2 T	2x4	2x3	2x30	2x70	100	2x2	4
Part 2	Optional 1 Nutrition and Dietetics NDCZ 401 Nutritional Biochemistry	1 T	1x4	1x3	1x30	1x70	100	1x2	2
		1P	1x3	1x3	1x15	1x35	1x50	1x3	1
	Optional 2 Chemistry – IV	1 T	1x4	1x3	1x30	1x70	100	1x2	2
		1 P	1x3	1x3	1x15	1x35	1x50	1x3	1
	Optional 3 Zoology – IV Comparative Anatomy, Cell Biology, Immunology and Histology	1 T	1x4	1x3	1x30	1x70	100	1x2	2
		1P	1x3	1x3	1x15	1x35	1x50	1x3	1
Part 3	Foundation Course/SDC	IT	3	3	30	70	100	2	2
	CC & EC	-	-	-	50	-	50	1	1
Total Credits per Semester Per Program									16

15. Semester: Nutrition & Dietetics, Chemistry, Biology

Sl. No.	Subject	Theory Marks	Practical Marks	Semester Total		Grade	Remarks
				Internal	External		
1	Chemistry	50	20	70	70	B	
2	Biology	50	20	70	70	B	
3	Nutrition	50	20	70	70	B	
4	Food Preservation	50	20	70	70	B	
5	Food Quality Control	50	20	70	70	B	
6	Food Safety	50	20	70	70	B	
7	Food Additives	50	20	70	70	B	
8	Food Spoilage	50	20	70	70	B	
9	Food Microbiology	50	20	70	70	B	
10	Food Packaging	50	20	70	70	B	
11	Food Labeling	50	20	70	70	B	
12	Food Inspection	50	20	70	70	B	
13	Food Analysis	50	20	70	70	B	
14	Food Safety Management	50	20	70	70	B	
15	Food Quality Assurance	50	20	70	70	B	
16	Food Safety and Inspection Service	50	20	70	70	B	
17	Food Safety and Inspection Service	50	20	70	70	B	
18	Food Safety and Inspection Service	50	20	70	70	B	
19	Food Safety and Inspection Service	50	20	70	70	B	
20	Food Safety and Inspection Service	50	20	70	70	B	

Total Marks: 1400

V Semester Nutrition & Dietetics, Chemistry, Zoology

Parts	Subjects	Paper	Instruction Hours/Week	Duration of Exam (Hours)	Marks			Credits	Total Credits
					IA	Exam	Total		
Part 2	Optional 1	1 T	1x3	1x3	1x30	1x70	1x100	1x2	2
	Nutrition and Dietetics	1P	1x3	1x3	1x15	1x35	1x50	1x1	1
	NDCZ 501								
	Basics Dietetics								
	NDCZ 502	1 T	1x3	1x3	1x30	1x70	1x100	1x2	2
	Community Nutrition	1P	1x3	1x3	1x15	1x35	1x50	1x1	1
	Optional 2	1 T	1x3	1x3	1x30	1x70	1x100	1x2	2
	Chemistry – V	1 P	1x3	1x3	1x15	1x35	1x50	1x1	1
	Chemistry – VI	1 T	1x3	1x3	1x30	1x70	1x100	1x2	2
		1 P	1x3	1x3	1x15	1x35	1x50	1x1	1
	Optional 3	1 T	1x3	1x3	1x30	1x70	1x100	1x2	2
	Zoology –V	1P	1x3	1x3	1x15	1x35	1x50	1x1	1
Environmental Biology and Ethology									
Zoology - VI	1 T	1x3	1x3	1x30	1x70	1x100	1x2	2	
Developmental Biology and Organic Evolution	1 P	1x3	1x3	1x15	1x35	1x50	1x1	1	
Part 3	ISDC	1 T	1x3	1x3	1x30	1x70	1x100	1x2	2
Total Credits per Semester Per Program									20

Table 1: Summary of the data used in the study

Year	Country	Population (Millions)	GDP (Billion USD)	Urbanization (%)	Healthcare Expenditure (Billion USD)	Life Expectancy (Years)
2010	USA	310	14.5	78	2.5	78.5
2011	USA	312	15.0	79	2.6	78.8
2012	USA	314	15.5	80	2.7	79.1
2013	USA	316	16.0	81	2.8	79.4
2014	USA	318	16.5	82	2.9	79.7
2015	USA	320	17.0	83	3.0	80.0
2016	USA	322	17.5	84	3.1	80.3
2017	USA	324	18.0	85	3.2	80.6
2018	USA	326	18.5	86	3.3	80.9
2019	USA	328	19.0	87	3.4	81.2
2020	USA	330	19.5	88	3.5	81.5
2010	China	1370	5.9	50	0.8	74.7
2011	China	1380	6.2	51	0.9	75.0
2012	China	1390	6.5	52	1.0	75.3
2013	China	1400	6.8	53	1.1	75.6
2014	China	1410	7.1	54	1.2	75.9
2015	China	1420	7.4	55	1.3	76.2
2016	China	1430	7.7	56	1.4	76.5
2017	China	1440	8.0	57	1.5	76.8
2018	China	1450	8.3	58	1.6	77.1
2019	China	1460	8.6	59	1.7	77.4
2020	China	1470	8.9	60	1.8	77.7
2010	India	1100	1.9	30	0.2	67.0
2011	India	1120	2.0	31	0.2	67.5
2012	India	1140	2.1	32	0.3	68.0
2013	India	1160	2.2	33	0.3	68.5
2014	India	1180	2.3	34	0.4	69.0
2015	India	1200	2.4	35	0.4	69.5
2016	India	1220	2.5	36	0.5	70.0
2017	India	1240	2.6	37	0.5	70.5
2018	India	1260	2.7	38	0.6	71.0
2019	India	1280	2.8	39	0.6	71.5
2020	India	1300	2.9	40	0.7	72.0

VI Semester Nutrition & Dietetics, Chemistry, Zoology

Parts	Subjects	Paper	Instruction Hours/Week	Duration of Exam (Hours)	Marks			Credits	Total Credits
					IA	Exam	Total		
Part 2	Optional 1 Nutrition and Dietetics NDCZ 601 Advanced Dietetics NDCZ 602	1 T	1x3	1x3	1x30	1x70	1x100	1x2	2
		1P	1x3	1x3	1x15	1x35	1x50	1x1	1
	Food Science	1 T	1x3	1x3	1x30	1x70	1x100	1x2	2
		1P	1x3	1x3	1x15	1x35	1x50	1x1	1
	Optional 2 Chemistry – VI	1 T	1x3	1x3	1x30	1x70	1x100	1x2	2
		1 P	1x3	1x3	1x15	1x35	1x50	1x1	1
	Chemistry – VII	1 T	1x3	1x3	1x30	1x70	1x100	1x2	2
		1 P	1x3	1x3	1x15	1x35	1x50	1x1	1
	Optional 3 Zoology – VI Genetics and Biotechnology	1 T	1x3	1x3	1x30	1x70	1x100	1x2	2
		1 P	1x3	1x3	1x15	1x35	1x50	1x1	1
	Zoology - VII Animal Physiology and Techniques in Biology	1 T	1x3	1x3	1x30	1x70	1x100	1x2	2
		1 P	1x3	1x3	1x15	1x35	1x50	1x1	1
Part 3	ISDC	1 T	1x3	1x3	1x30	1x70	1x100	1x2	2
Total Credits per Semester Per Program									20

SEMESTER I
Nutrition and Dietetics
Fundamentals of Nutrition

Code: NDCZ 101

Hours: 52

Instruction hours/week: 04

Total Marks: 100

Theory: 70

Internal Assessment: 30

Objectives:

1. To understand the functions of food and role of various nutrients
2. To understand the practical guidelines for dietary needs of human nutrition at different stages of life

Unit I: Introduction to Nutrition

05 hours

1. Terminologies: Nutrition, Nutrients, Nutritional Status, Malnutrition, balanced diet, Functions of Food, Food groups
2. Methods of cooking and preservation of Nutrients
 - a. Water – boiling, steaming, pressure cooking
 - b. Oil – Shallow and deep frying
 - c. Air – Baking

Unit II: Macro Nutrients

12 hours

Classification, Sources, Functions and Deficiency of carbohydrates, proteins and fats.

Unit III: Micro Nutrients - Sources, Functions and Deficiency

20 hours

- a. **Minerals:** Calcium, Phosphorous, Iron, Iodine, Zinc
- b. **Vitamins:** Fat soluble vitamins (Vitamin A, D, E, K)
Water soluble vitamins (B complex vitamins: Thiamine, Riboflavin, Niacin, Folic acid and Vitamin C)

Unit IV: Energy

05 hours

Components of energy requirement, Factors affecting BMR

Unit V: Water and fibre

10 hours

- a. **Water:** Functions, sources and water balance
- b. **Fibre:** Functions and sources

INSTRUCTIONS
FOR THE EXAMINATION
OF THE CANDIDATES

Each candidate will be
allowed 1 hour for the
examination.

Candidates should
bring their own
writing materials.

- Objectives of the examination:
- To assess the candidate's knowledge of the subject.
 - To assess the candidate's ability to apply their knowledge to practical situations.
 - To assess the candidate's ability to communicate their findings.

Part I: Multiple Choice Questions
This part of the examination consists of 20 multiple choice questions. Each question has four possible answers, only one of which is correct. Candidates should mark their answers on the answer sheet provided.

Part II: Short Answer Questions
This part of the examination consists of 5 short answer questions. Candidates should provide brief, concise answers to these questions.

Part III: Long Answer Questions
This part of the examination consists of 2 long answer questions. Candidates should provide detailed, well-structured answers to these questions, supported by relevant evidence and examples.

Part IV: Practical Skills
This part of the examination assesses the candidate's practical skills. Candidates will be required to perform a series of tasks related to the subject.

Part V: Project Work
This part of the examination assesses the candidate's ability to undertake a project. Candidates will be required to plan, execute, and report on a project related to the subject.

PRACTICAL

Code: NDCZ 101 P

No. of weeks: 1

Hours/week: 03

Total Marks: 50

Practical: 35

Internal Assessment: 15

- | | |
|--|---|
| 1. Weights and measures classes | 2 |
| 2. Methods of cooking classes | 5 |
| a. Water – boiling, steaming, pressure cooking | |
| b. Oil- Shallow frying, deep frying | |
| 3. Identification of nutrient rich foods classes | 2 |
| 4. Planning and preparation of macro nutrient rich recipes classes | 2 |
| a. Energy | |
| b. Protein | |
| 5. Planning and preparation of micro nutrient recipes classes | 2 |
| a. Iron | |
| b. Vitamin A | |

References:

1. Raheena Begum., (2009), A Text book of Food, Nutrition & Dietetics, Sterling Publications, New Delhi.
2. Mudambi S R and Rajagopal M V., (2008), Fundamentals of Food, Nutrition and Diet Therapy by New Age International Publishers, New Delhi.
3. Srilakshmi. B., (2009), Human Nutrition, New Age International Publishers, New Delhi.
4. Swaminathan M., (2002), Advanced text book on Food & Nutrition.

LABORATORY

Final Report
Experiment 11
Initial Assessment

Class: CHEM 101
Date: 11/11/2023
Page: 11

1. Weights and balance
classroom

2. Methods of energy
classroom

a. Water - 100 mL, 100 mL, 100 mL
b. Oil - 100 mL, 100 mL, 100 mL

3. Identification of substances
classroom

4. Phases and properties of matter
classroom

a. 100 mL
b. 100 mL

5. The boiling point of water
classroom

a. 100 mL
b. 100 mL

6. Density

1. Return to the lab and repeat the experiment.
2. If the results are still not satisfactory, consult with the instructor.
3. If the results are satisfactory, the experiment is complete.
4. The experiment is complete.

SEMESTER II
Nutrition and Dietetics
FAMILY MEAL MANAGEMENT

Code: NDCZ 201

Hours: 52

Instruction hours/week: 04

Total Marks: 100

Theory: 70

Internal Assessment: 30

Objectives:

1. To understand the principles of meal management
2. To understand the practical guidelines for dietary needs of human nutrition at different stages of life

Unit I : Meal Management **06 hours**

- a. Introduction to meal management – Balanced diet, food guide, basic five food groups
- b. Principles, objectives and steps in meal planning and factors affecting meal planning

Unit II : Nutrition during pregnancy and lactation **12 hours**

- a. Nutrition during pregnancy – physiological stage, nutritional requirement, dietary guidelines, food selection and complications in pregnancy
- b. Nutrition during lactation – physiology, nutritional requirement, dietary guidelines special foods given during lactation, advantage and disadvantages of breast feeding and bottle feeding

Unit III : Nutrition during infancy and preschool **12 hours**

- a. Nutrition during infancy – nutritional requirements and complimentary feeding
- b. Nutrition during pre -school - growth during preschool age, nutrition needs, nutrition related problems, feeding pattern

Unit IV : Nutrition during school age and adolescence **12 hours**

- a. Nutrition of school age children – nutritional requirement, dietary guidelines, importance of snacks and packed lunch
- b. Nutrition during adolescence – growth and nutrition needs, food choices, eating habits, nutrition related problems and disorders

Unit V : Nutrition during adulthood and old age **10 hours**

Nutrition during adulthood and old age – physiological changes, factors affecting food intake, nutritional requirements, dietary guidelines, nutritional problems

STATE OF TEXAS
COUNTY OF []
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PRACTICAL

Code: NDCZ 201 P

No. of weeks: 13

Hours/week: 03

Total Marks: 50

Practical: 35

Internal Assessment: 15

- | | |
|---|-----------|
| 1. Introduction to Recommended Dietary Allowances | 2 classes |
| 2. Balanced Diet and Food Exchange List | 3 classes |
| 3. Planning and preparation of balanced diet for: | 3 classes |
| a. Pregnant woman | |
| b. Lactating woman | |
| c. Adolescent girl | |
| 4. Preparation of complimentary food for infant | 5 classes |
| a. Preparation of a nutrient dense snack for pre-schooler | |
| b. Preparation of packed lunch for school going child | |

References:

1. Srilakshmi. B., (2007), Dietetics, New Age International Publishers, New Delhi.
2. Srilakshmi. B., (2002), Nutrition Science, New Age International Publishers, New Delhi.
3. Swaminathan M., (2002), Advanced text book on Food & Nutrition. Vol 1
4. Gopalan C, Ram Sastry B.V and S.C Subramanian (2009), Nutritive Value of Indian Foods, NIN – ICMR Hyderabad
5. Mudambi S R and Rajagopal M V., (2008), Fundamentals of Food, Nutrition and Diet Therapy by New Age International Publishers, New Delhi.

SEMESTER III
Nutrition and Dietetics
HUMAN PHYSIOLOGY

Code: NDCZ 301

Hours: 52

Instruction hours/week: 04

Total Marks: 100

Theory: 70

Internal Assessment: 30

Objectives:

1. To study the structure and physiological functions of different organs of the body
2. Advance their understanding of some of the relevant issues and topics of human physiology
3. Enable the students to understand the integral function of all body systems

Unit I: Digestive System

08 hours

- a. Organs of the Gastro Intestinal Tract
- b. Physiology of digestion in the mouth, stomach and intestine
- c. Absorption of digested food

Unit II: Cardiovascular System

08 hours

- a. Blood components – Plasma and formed elements, functions of blood
- b. Coagulation and blood groups
- c. Gross anatomy of Human Heart
- d. Mechanism of working of Heart: Cardiac Cycle, Stroke Volume, Cardiac output, complete double circulation

Unit III: Respiratory System and Excretory System

12 hours

A. Respiratory System

- a. Gross anatomy of the human respiratory system
- b. Mechanism of breathing – Inspiration and Expiration
- c. Pulmonary air volumes – Tidal volume, Residual Volume, Inspiratory reserve Volume, Expiratory Reserve volume, Vital Capacity and Total Lung Capacity

B. Excretory System

- a. Gross internal structure of Kidney, Structure of Nephron
- b. Physiology of Urine formation
- c. Urine volume, physical properties and chemical composition

UNIT IV: Nervous System and Sense Organs

12 hours

A. Nervous System

- a. Components – Central Nervous System and Peripheral Nervous System
- b. Structure of Human Brain and functions

THEORY OF THE CASE

1. The defendant is charged with the murder of the victim.

2. The evidence shows that the defendant was present at the scene of the crime.

3. The defendant's actions were a direct result of the victim's provocation.

4. The defendant acted in a moment of passion and was not premeditated.

5. The defendant's actions were a justifiable response to the victim's actions.

6. The defendant is entitled to a verdict of manslaughter.

7. The defendant's actions were a result of a sudden and temporary passion.

8. The defendant's actions were a result of a sudden and temporary passion.

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12. The defendant's actions were a result of a sudden and temporary passion.

c. Human Spinal Cord – Structure and Functions

B. Sense Organs: Structure and functions of eye, ear, nose, skin, tongue

UNIT V: Endocrine System and Reproductive System

12 hours

A. Endocrine System

- a. Functions and types of endocrine glands – Pituitary gland, Thyroid gland, Parathyroid gland, Adrenal gland, and Islet of Langerhans
- b. Effects of hypo and hyper secretion

B. Reproductive System

- a. Male Reproductive System – Structure and functions
- b. Female Reproductive System – Structure and functions

PRACTICAL

Code: NDCZ 301 P

No. of weeks: 13

Hours/week: 03

Total Marks: 50

Practical: 35

Internal Assessment: 15

- | | |
|---|-----------|
| 1. Determination of Bleeding time and Clotting time
Blood Grouping | 4 classes |
| 2. Estimation of Haemoglobin – Sahli's Method | 4 classes |
| 3. Measurement of body temperature – Mouth and Arm pit
Measurement of Blood Pressure | 3 classes |
| 4. Pulse and Respiratory rate at rest and after exercise | 2 classes |

References:

1. Guyton A C (1985), Functions of Human Body, 4th Ed, W B Sanders Company, Philadelphia
2. Jain A K (1992), Textbook of Physiology, Vol I & II, Avichal publishing Co, New Delhi
3. Sherwood L (2008), Principles of Human Physiology
4. Ross and Wilson (2014), Anatomy and Physiology in Health and Illness, Churchill Livingstone London

1. The first part of the report discusses the background and objectives of the study.

2. The second part of the report describes the methodology used in the study.

3. The third part of the report presents the results of the study.

4. The fourth part of the report discusses the conclusions and implications of the study.

REFERENCES

1. Smith, J. (2010). The impact of climate change on the environment. *Journal of Environmental Science*, 12(3), 45-55.

2. Jones, A. (2011). The effects of air pollution on human health. *Environmental Health Perspectives*, 119(1), 10-15.

3. Brown, C. (2012). The role of water in the global water cycle. *Journal of Hydrology*, 145(1), 1-10.

4. White, D. (2013). The impact of deforestation on the environment. *Journal of Environmental Management*, 118(1), 1-10.

APPENDIX

1. Appendix A: Data collected during the study.

2. Appendix B: Detailed description of the study area.

3. Appendix C: Additional information related to the study.

SEMESTER IV
Nutrition and Dietetics
NUTRITIONAL BIOCHEMISTRY

Code: NDCZ 401

Hours: 52

Instruction hours/week: 04

Total Marks: 100

Theory: 70

Internal Assessment: 30

Objectives

1. To understand the fundamentals of biochemistry and metabolism
2. To study the metabolism of micronutrients in human nutrition

Unit I: Bioenergetics

8 hours

- a. Introduction
- b. Thermodynamic principles and laws
- c. Couples medicines

Unit II: High energy compounds

10 hours

- a. Energy flow
- b. Electron transport system(organisation and overview)
- c. Oxidative Phosphorylation

Unit III: Carbohydrate metabolism

12 hours

- a. Glycolysis
- b. TCA cycle
- c. Gluconeogenesis
- d. Pentose phosphate pathway
- e. Disorders of carbohydrate metabolism

Unit IV : Protein metabolism

10 Hours

- a. General reactions
- b. Urea cycle

Unit V : Lipid metabolism

12 Hours

- a. Beta oxidation of fatty acids
- b. Overview of fatty acids biosynthesis
- c. Cholesterol biosynthesis

REPORT IV
Methods and Results
COLLEGE OF BUSINESS ADMINISTRATION

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PRACTICAL

Code: NDCZ 401 P

No. of weeks: 13

Hours/week: 03

Total Marks: 50

Practical: 35

Internal Assessment: 15

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| 1. Preparation of buffer-Phosphate and Citrate and Demonstration of pH of buffers | 4 classes |
| 2. Qualitative tests for Carbohydrates – reducing And non-reducing sugars | 3 classes |
| 3. Qualitative tests for amino acids | 3 classes |
| 4. Estimation of vitamin C in foods | 3 classes |

References:

1. Biochemistry for BSc students, Bangalore University Publications
2. Biochemistry by Satynarayana U
3. Normal and Therapeutic Nutrition by Robinson and Lawler

PRACTICAL

Final Report
Date: 12/12/2023
Page: 1 of 1

Page No: 12
Date: 12/12/2023

1. Preparation of buffer solution and its pH measurement.
2. Estimation of iron in a sample by using spectrophotometry.
3. Estimation of iron in a sample by using gravimetry.
4. Estimation of iron in a sample by using titrimetry.
5. Estimation of iron in a sample by using colorimetry.

The above practical work was carried out in the laboratory of Chemistry, Government College of Engineering, Bangalore. The results obtained are as follows:

SEMESTER V
Nutrition and Dietetics
BASIC DIETETICS

Code: NDCZ 501

Hours: 48

Instruction hours/week: 03

Total Marks: 100

Theory: 70

Internal Assessment: 30

Objectives:

1. To orient students about the basic concepts of Dietetics
2. To help the students to formulate diets in different diseases

Unit I: Introduction to clinical nutrition

03 hours

- a. Role of dietician – hospital and community level
- b. Principles of Nutritional Care

Unit II: Hospital diets

03 hours

- a. Types of hospital diets
- b. Principles of planning a normal diet, objectives of diet therapy
- c. Nutrition support techniques – Enteral feeding and Parenteral feeding

Unit III: Dietary management in common disease conditions

14 hours

- a. Febrile Diseases
Acute – Typhoid
Chronic fever – Tuberculosis
Intermittent – Malaria
- b. Gastro Intestinal Disorders – etiology, symptoms and treatment of Gastritis, Peptic Ulcer, Diarrhoea, Constipation

Unit IV: Diet in Energy Imbalance and Food Intolerance

14 hours

- a. Diet in Energy Imbalance – underweight and Obesity, importance of weight management, physiological complications, Etiology and Dietary Management
- b. Food Intolerance and allergy – Common food allergens, test for allergy – skin test and Elimination diet, Dietary Management

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BUDGET

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1. Total Budget
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Total Budget
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2023-2024

Unit V: Surgery, Burns and Cancer**14 hours**

- a. Surgery – Metabolic consequences, stages of convalescence, Pre and post-operative diets
- b. Burns – Stages, Metabolic changes, Nutritional management during burns
- c. Cancer – Types, etiological factors, clinical manifestations, nutritional management

PRACTICAL**Code: NDCZ 501 P****No. of weeks: 13****Hours/week: 03****Total Marks: 50****Practical: 35****Internal Assessment: 15**

1. a. Introduction to food exchange list and 4 classes
b. Hospital diets: Fluid diet, Soft diet, Bland
2. Planning and preparation of diet during 3 classes
 - a. Typhoid
 - b. Tuberculosis
3. Planning and preparation of diet during 3 classes
 - a. Peptic ulcer
 - b. Constipation
4. Planning and preparation of diet during 3 classes
 - a. Underweight
 - b. Obesity

References:

1. Bamji , M.S., Rao, P.N., Reddy, V (Eds) (1996): Textbook of Human Nutrition, Oxford and IBH publishing Co.Pvt.Ltd., New Delhi.
2. Mahan, L.K. & Ecott-Stumps, S. (2000): Krause's Food, Nutrition and Diet Therapy, 10th Edition, W.B.Saunders Ltd.
3. Shils, M.E.; Olson, J.-, Shike, M. and Roos, C (1998). Modern Nutrition in Health and Disease, 9th edition Willams and Williams. A Beverly Co.London.
4. Indian Council of Medical Research. Nutritive Value of Indian Foods – Latest Publication.

SEMESTER V
Nutrition and Dietetics
COMMUNITY NUTRITION

Code: NDCZ 502

Hours: 48

Instruction hours/week: 03

Total Marks: 100

Theory: 70

Internal Assessment: 30

Objectives:

1. To gain insight to the national nutritional problems and their implementation
2. To familiar the students regarding the prevention and management of nutritional problems

Unit I : Introduction to Community Nutrition **02 hours**

- a. Definition of Nutrition and Health
- b. Nutritional problems confronting the country

Unit II: Nutritional problems in India **12 hours**

Prevalence, Etiology and clinical manifestations, Preventive and Corrective measures for

- a. Malnutrition – PEM
- b. Vitamin A Deficiency
- c. Nutritional Anaemia

Unit III : Assessment of Nutritional Status in community **14 hours**

- a. Anthropometric Assessment: Measurement of body weight, stature, mid upper arm circumference, standards (NCHS –weight for height, weight for age)
- b. Clinical Assessment: clinical signs of nutritional disorders
- c. Dietary Assessment: Family dietary survey, Assessment of dietary intake of individuals

Unit IV: Food and Nutrition Security **05 hours**

- a. Definition of food security, nutrition security; determinants of food security
- b. Food security system in India – PDS

Unit V: Strategies to combat nutritional problems **15 hours**

- a. Diet or food based strategies
- b. Supplementation
- c. Fortification and Enrichment
- d. Nutrition and Health Education

THE HISTORY OF THE CITY OF BOSTON

By JOHN GARDNER
Author of "The History of the
City of Boston"

Published by
GARDNER & CO.,
100 NASSAU ST., N.Y.

THE HISTORY OF THE CITY OF BOSTON, FROM THE FIRST SETTLEMENT TO THE PRESENT TIME. BY JOHN GARDNER. VOL. I.

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THE HISTORY OF THE CITY OF BOSTON, FROM THE FIRST SETTLEMENT TO THE PRESENT TIME. BY JOHN GARDNER. VOL. I.

National and International organizations to combat malnutrition

1. National organizations – ICMR, NIN, CFTRI
2. International organizations – FAO, WHO, UNICEF

PRACTICAL

Code: NDCZ 502 P

No. of weeks: 13

Hours/week: 03

Total Marks: 50

Practical: 35

Internal Assessment: 15

1. Preparation of Audio Visual aids for
a. PEM 4 classes
b. Vitamin A deficiency
c. Anaemia
2. Preparation of Low Cost Recipes for PEM, Vitamin A deficiency and Anaemia 3 classes
3. Anthropometric and dietary assessment 3 classes
4. Lecture and method demonstration on nutrition related topic 3 classes

References:

1. Jelliffe D B 1966, The assessment of Nutritional status of the community – WHO monograph series, Geneva
2. Park and Park, 2000, Preventive and Social medicine 15th Edn, M/s Banarsidas Bhanot publication
3. Mahtab S Bamji, N Prahlad Rao, Vinodini Reddy, 1999, Human Nutrition, Oxford and IBH publishing Co Pvt Ltd
4. Owen A Y and Frackle R T., (1996): Nutrition in the Community. The Art of Delivering Services, 2nd Edition Times Mirror/Mosby

International Journal of Management Science and Business Review

Volume 10, Number 1, 2015
ISSN 1548-7717

CONTENTS

1. The Role of
2. Financial
3. Management & Accounting

4. The Role of
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SEMESTER VI
Nutrition and Dietetics
ADVANCED DIETETICS

Code: NDCZ 601

Hours: 48

Instruction hours/week: 03

Total Marks: 100

Theory: 70

Internal Assessment: 30

Objectives:

1. To understand the different diseases
2. To help students to formulate diets for different diseases.

Unit I: Diseases of Liver, Gall bladder & Pancreas

12 hours

Etiology, symptoms and dietary management of viral hepatitis, Cirrhosis, alcoholic liver disease, hepatic coma, Gall stones, Pancreatitis

Unit II: Metabolic disorder

08 hours

Diabetes mellitus: Types, symptoms, diagnosis, causes and complication.

Unit III: Renal disorders

08 hours

Etiology, symptoms Diagnosis and MNT in: Glomerulonephritis, Nephrosis, Renal Calculi

Unit IV: Cardiovascular disorders

12 hours

Etiology, risk factors, signs and symptoms, nutritional management in: Atherosclerosis, Hypertension, Congestive cardiac failure

Unit V: Drug and Nutrient interaction

08 hours

Drug – drug/ drug – nutrient interaction – effect on ingestion, digestion, absorption and metabolism of nutrients, effect on nutritional status, effect on organ function, drug dosage and efficacy

REPORT OF
THE
COMMISSIONERS OF THE
LAND OFFICE

1880
1881
1882

1883
1884
1885

Summary

The following table shows the amount of land
sold in each year from 1880 to 1885.

Year	Amount of land sold (acres)
1880	11,000
1881	12,000
1882	13,000
1883	14,000
1884	15,000
1885	16,000

SEMESTER VI
Nutrition and Dietetics
ADVANCED DIETETICS

Code: NDCZ 601

Hours: 48

Instruction hours/week: 03

Total Marks: 100

Theory: 70

Internal Assessment: 30

Objectives:

1. To understand the different diseases
2. To help students to formulate diets for different diseases.

Unit I: Diseases of Liver, Gall bladder & Pancreas

12 hours

Etiology, symptoms and dietary management of viral hepatitis, Cirrhosis, alcoholic liver disease, hepatic coma, Gall stones, Pancreatitis

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08 hours

Diabetes mellitus: Types, symptoms, diagnosis, causes and complication.

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Unit V: Drug and Nutrient interaction

08 hours

Drug – drug/ drug – nutrient interaction – effect on ingestion, digestion, absorption and metabolism of nutrients, effect on nutritional status, effect on organ function, drug dosage and efficacy

STATEMENT OF WORK
FOR THE
PROJECT

Project Number: 100
Version: 1.0
Internal Approved: [Signature]

Project Name: [Name]
Project ID: [ID]
Project Manager: [Name]

Objectives

- 1. To ensure that the project is completed on time and within budget.
- 2. To ensure that the project meets the requirements of the client.

The project manager will be responsible for the overall management of the project, including the development of the project plan, the identification of resources, and the monitoring of progress. The project manager will also be responsible for the communication of project status to the client and the project sponsor.

The project manager will be supported by a project team consisting of the following roles:

- Project Sponsor: [Name]
- Project Manager: [Name]
- Project Team Lead: [Name]
- Project Team Members: [List of names]

The project will be managed using the following methodology:

- Project Management Methodology: [Name]
- Project Management Tools: [List of tools]

The project will be completed by the following date:

- Project Completion Date: [Date]

The project will be subject to the following terms and conditions:

- Project Terms and Conditions: [List of terms]

PRACTICAL

Code: NDCZ 601 P

No. of weeks: 13

Hours/week: 03

Total Marks: 50

Practical: 35

Internal Assessment: 15

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|--|------------------|
| 1. Planning and preparation of diet during | 3 classes |
| a. Viral Hepatitis | |
| b. Cirrhosis(only planning) | |
| 2.Planning a diet for IDDM and NIDDM patients | 3 classes |
| (Preparation for NIDDM only) | |
| 3.Planning and preparation of diet during | 4 classes |
| a. Glomerular nephritis (preparation) | |
| b. Nephrosis | |
| c. Kidney stones (calcium oxalate) | |
| 4.Planning and preparation of diet during | 4 classes |
| a. Atherosclerosis | |
| b. Hypertension | |
| c. Congestive cardiac failure | |

References:

1. Srilakshmi B, (2007), Dietetics. New Age International publishers. New Delhi.
2. Mahan, L.K. & Ecott- Stump, S (2000): Krause's Food, Nutrition and Diet Therapy, 12th Edition, W. B. Saunders Ltd.
3. Whitney, E.N. & Rolfes, S.R. (1999): Understanding Nutrition and Diet Therapy, 8th Edition, West Wadsworth, An International Thompson Publishing Co.
4. Helen M Baker, 2002, Nutrition and Dietetics for health care, 10th edition, Churchill Living stone.
5. Susuan A Lanham, I A Macdonald and Helen M Roche, Nutrition and metabolism, 2011, The nutrition Society Textbook series, 2nd edition, Wiley – Blackwell
6. Marinos Elia, olleLjung Quist, Rebecca J Stittor and Susuan A Lanham, New Clinical Nutrition, 2nd edition, 2013, Wiley – Blackwell

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Final Answer: 12

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SEMESTER VI
Nutrition and Dietetics
FOOD SCIENCE

Code: NDCZ 602

Hours: 48

Instruction hours/week: 03

Total Marks: 100

Theory: 70

Internal Assessment: 30

Objectives:

1. To study the basic properties of foods
2. To understand methods of food preservation, storage and retaining quality of foods
3. To observe and study reaction of foods based on their composition

Unit I: Introduction to Food Science

07 hours

- a. Properties of food, definitions of
 - Boiling, melting and freezing points
 - pH value, Osmosis and Osmotic pressure
 - Bound and Free water
 - Colloid, sols, gels, emulsions and foams
- b. Beverages: Classification and Composition
 - Non alcoholic beverages – carbonated and non carbonated
 - Alcoholic beverages – Wines, beer, distilled spirits

Unit II: Cereals and Pulses

10 hours

- a. Cereals
 - Grain products – composition of wheat, Rice, Ragi and Minor millets
 - Processing – Malting and cooking of cereals
 - Breakfast Cereals – Types
- b. Pulses
 - Composition, toxic constituents and cooking of pulses
- c. Methods of processing to retain and enhance nutritional quality of foods
 - Germination, fermentation

Unit III: Fruits, Vegetables, Milk, Egg, Meat, Fish and Poultry

13 hours

- a. Fruits and vegetables – Composition, pigment and flavouring constituents, changes during cooking, Enzymatic browning
- b. Milk and Milk products
 - Composition
 - Processing of milk
 - Types of processing milk
 - Milk products – Butter, ghee, Fermented – Cheese, yogurt; Unfermented – ice cream
- c. Egg, Meat, Fish, Poultry – Composition, methods of cooking and storage

Unit IV: Sweeteners, Fats and oils

10 hours

- a. Natural Sweetening agents
 - Sugar, Jaggery, Honey and Molasses
 - Behaviour of syrups at different temperatures – Cold water test
 - Crystallization and Caramelization
- b. Artificial sweeteners – sugar substitutes
- c. Fats and Oils
 - Composition and Types
 - Changes during heating (smoking point)
 - Hydrogenated fats
 - Rancidity

Unit V: Food preservation

08 hours

- a. Causes of food spoilage and methods of food preservation
- b. Food additives – Types
 - Food adulteration and detection
 - Food standards

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PRACTICAL

Code: NDCZ 602 P

No. of weeks: 13

Hours/week: 03

Total Marks: 50

Practical: 35

Internal Assessment: 15

1. Starch Cookery 3 classes
 - a. Gelatinization of starches – Rice, wheat, Ragi, corn flour
 - b. Preparation of fermented product – Idli

2. A) Pulse cookery 3 classes
 - a. Whole grains – Effect of soaking, Germination
 - b. Dhals – Effect of acid, alkali on cooking time
B) Vegetables and Fruits
 - a. Effect of methods of cooking and added substances on pigments
 - b. Enzymatic browning in fruits and its prevention

3. a. Milk Cookery – Casein formation (Paneer), curd setting 3 classes
b. Egg cookery – Boiled egg (Soft and hard), prevention of ferrous sulphide formation

4. a. Sugar and Jaggery – Stages of sugar cookery, Crystallization 2 classes
Preparation of groundnut toffee

5. Fats and oils 2 classes
 - a. Shallow frying – Vegetable cutlet
 - b. Deep fat frying – Papad

References:

1. Srilakshmi. B. (2010), Food Science, 5th ed, New Age International Publishers
2. ShakuntalaManay N and ShadaksharaSwamy, (2008), Foods: Facts and Principles, New Age International Publishers
3. MudambiSumati R, RaoShalini M, Rajagopal M V (2006), Food Science, 2nd Ed, New Age International Publishers
4. Subbulakshmi G, UdipiShobha A, (2006), Food Processing and Preservation, 1st Ed, New Age International Publishers
5. Swaminathan M, (1990), Fppd Science – Chemistry and Experimental Foods, 2nd Ed, The Bangalore Printing and Publishing Co. Ltd. Bangalore

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EXHIBIT

Exhibit 1
Page 1 of 1
Date: 11/11/2011

Case No. 11-117
Page 1 of 1
Date: 11/11/2011

1. The first part of the document is a list of items that are to be included in the exhibit. The items are listed in a numbered format and include:

2. The second part of the document is a list of items that are to be excluded from the exhibit. The items are listed in a numbered format and include:

3. The third part of the document is a list of items that are to be included in the exhibit. The items are listed in a numbered format and include:

4. The fourth part of the document is a list of items that are to be excluded from the exhibit. The items are listed in a numbered format and include:

5. The fifth part of the document is a list of items that are to be included in the exhibit. The items are listed in a numbered format and include:

6. The sixth part of the document is a list of items that are to be excluded from the exhibit. The items are listed in a numbered format and include:

7. The seventh part of the document is a list of items that are to be included in the exhibit. The items are listed in a numbered format and include:

8. The eighth part of the document is a list of items that are to be excluded from the exhibit. The items are listed in a numbered format and include:

9. The ninth part of the document is a list of items that are to be included in the exhibit. The items are listed in a numbered format and include:

10. The tenth part of the document is a list of items that are to be excluded from the exhibit. The items are listed in a numbered format and include: