ST. TERESA'S COLLEGE, ERNAKULAM

(AUTONOMOUS)

Affiliated to Mahatma Gandhi University, Kottayam

CURRICULUM FOR
BACHELOR'S PROGRAMME
IN HOME SCIENCE

Under Choice Based Credit & Semester System
& Outcome Based Education

(2018 Admissions)

BHSC - B.Sc. HOME SCIENCE

PROGRAM SPECIFIC OUTCOMES

PSO1: Interpret the significance of multidisciplinarity of Home Science and the related fields of Chemistry and Zoology

PSO2: Explain the domains of child development and relate the physiological basis of nutrition through life cycle and therapeutic nutrition.

PSO3: Integrate scientific knowledge and soft skills to design in the area of fashion, interior space planning and resource management and enhance entrepreneurial and career skills

PSO4: Design extension programmes on environmental communication and sustainable development

PSO5: Apply practical skills with respect to all related aspects of Home Science.

SEMESTER I

Course Code	Course Title	Credits	Course Type
EN1A01B18	Fine-Tune Your English	4	Common Course I
EN1A02B18	Pearls From The Deep	3	Common Course I
FR1A01B18	French Language And Communicative Skills -I	4	Common Course II
HN1A01B18	Kahaani Aur Upanyas	4	
MA1A01B18	Kathasahithyam	4	
CH1C01B18	Basic Theoretical And Analytical Chemistry	2	Complementary Course I
ZY1C01B18	Non Chordate	2	Complementary Course II
HS1B01B18	Methodology Of Home Science And Food Science	2	Core Course

SEMESTER I

COMMON COURSE I

EN1A01B18– FINE-TUNE YOUR ENGLISH

Credits: 4

Total Lecture Hours: 90

Course Outcomes:

CO1: Recognize the basics of English grammar

CO2: Choose the appropriate word classes

CO3: Identify common errors in the use of English language in various contexts

CO4: Apply the rules of grammar to comprehend, speak, and write grammatically correct English

CO5: Compose materials for business communication

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO1	1	1	2	2	2
CO2	1	1	2	2	2
CO3	1	1	2	2	2
CO4	1	1	2	2	2
CO5	1	1	3	3	2

Syllabus Content:

Module I **(18 Hours)**

The Sentence and its Structure

How to Write Effective Sentences – Phrases: What are They? – The Noun Clauses – The Adverb Clause – "If All the Trees Were Bread and Cheese" – The Relative Clause – How Clauses are Conjoined

Module II **(18 Hours)**

Word-Classes and Related Topics

Understanding the Verb – Understanding Auxiliary Verbs – Understanding Adverbs – Understanding Pronouns – The Reflexive Pronoun – The Articles I – The Articles II – The Adjective – Phrasal Verbs – Mind your Prepositions

Module III **(18 Hours)**

To Err is Human

Concord – Errors – Common and Uncommon

Spelling and Pronunciation

Pronunciation: Some Tips – More Tips on Pronunciation – An awesome Mess? – Spelling Part II

Module IV **(18 Hours)**

Tense and Related Topics

'Presentness' and Present Tenses – The 'Presentness' of a Past Action – Futurity in English – Passivation

Interrogatives and Negatives

Negatives – How to Frame Questions – What's What? – The Question Tag

Module V **(18 Hours)**

Conversational English

Some time expressions – Is John There Please?

Miscellaneous and General Topics

Reading

Letter Writing **In addition there will be an essay question on a general topic.**

SEMESTER I

COMMON COURSE I

EN1A02B18 - PEARLS FROM THE DEEP

Credits: 3

Total Lecture Hours: 72

Course Outcomes:

CO1: Name prominent literary figures and recognize various literary devices

CO2: Analyze inherent themes and motives

CO3: Identify the nuances of the age in which the literary work was written

CO4: Examine the different aspects of theatre

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO1	1	1	1	1	1
CO2	1	1	2	2	3
CO3	1	1	1	2	1
CO4	1	1	2	2	2

Syllabus Content

Module I (Fiction) **(18hours)**

Ernest Hemingway: The Old Man and the Sea

Module II (One Act Plays) **(18hours)**

Susan Glaspell: Trifles

Asif Currimbhoy: The Refugee

A.A Milne: The Boy Comes Home

Module III (Short Stories) **(18hours)**

Guy De Maupassant: Two Friends

O. Henry: The Gift of Magi

K.A Abbas: Sparrows

Flora Annie Steel: Valiant Vicky, the Brave Weaver

Module IV (Poems) **(18hours)**

Rumi: The Chance of Humming

Walter Scott: Lochinvar

John Keats: La Belle Dame Sans Mercy

Robert Frost: After Apple Picking

Chinua Achebe: Refugee Mother and Child

Kamala Das: My Grandmother's House

Ted Hughes: Jaguar

Pablo Neruda: Tonight I can Write the Saddest Lines

P.P Ramachandran: How Simple It Is!

SEMESTER I

COMMON COURSE II

FR1A01B18 – FRENCH LANGUAGE AND COMMUNICATIVE SKILLS -I

Credits: 4

Total Lecture Hours: 72

Course Outcomes:

CO1: Describe topics such as family, professions, time, place, likes and dislikes, daily life situations.

CO2: Develop language, vocabulary and grammar skills.

CO3: Articulate various speech sounds and their determined combinations.

CO4: Prepare conversations based on scenarios which helps while traveling

CO5: Articulate the concepts to express one's opinion in a specific situation.

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO1	2	1	2	2	1
CO2	1	1	2	2	2
CO3	1	1	2	1	2
CO4	1	1	2	2	1
CO5	1	1	2	3	2

Syllabus Content:

Module I **(25 hours)**

La population L‟alphabet – Les chiffres – Identité – Se présenter – Poser des questions – Les professions – Les nationalités

Module II **(23 hours)**

La banlieue Demander une information, un prix – l‟heure – la ville

Module III **(24 hours)**

Quartier de Paris Décrire un lieu – Indiquer un prix, un itinéraire.

SEMESTER I

COMMON COURSE II

HN1A01B18 - KAHAANI AUR UPANYAS

Credits: 4

Total Lecture Hours: 72

Course Outcomes:

CO1: Discuss story content and structure in depth.

CO2: Analyse characterisation and comment on the development of the characters as the story/ novel unfolds.

CO3: Analyse short stories and novels on the basis of literary elements like plot, theme, metaphor, and image.

CO4: Compare treatments of theme, character and subject matter of different short stories

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO1	1	1	1	2	1
CO2	1	1	2	2	1
CO3	1	1	2	3	2
CO4	1	1	2	3	1

Syllabus Content:

Module I **(16hours)**

Syllabus- Anthim Saakshya –Chandrakaanta Chapters 1 ,2

Eidgaah- Premchand

Module II **(20 hours)**

Syllabus-Anthim Saakshya –Chandrakaanta Chapters 3, 4, 5 Jangal Ka Daah- Swayam Prakash ChchuttiKa Din- UshaPriyamvada

Module- III **(20 hours)**

Syllabus- Anthim Saakshya –Chandrakaanta Chapters 6,7,8MaaRasoi Mei Rehti Hai – Kumar Ambuj Kheer – Madhavi Kutty

Module IV **(16 hours)**

Syllabus- Anthim Saakshya –Chandrakaanta Chapters 9, 10 Heelibon Ki Baththakhe- Agyey

SEMESTER I

COMMON COURSE II

MA1A01B18 - KATHASAHITHYAM

Credits: 4

Total Lecture Hours: 72

Course Outcomes:

CO1: ചെറുകഥ, നോവൽ പഠനത്തിലൂടെ വായനാശേഷിയും ആസ്വാദനപ്രാപ്തിയും കൈവരിക്കൽ.

CO2: ചെറുകഥയുടെയും നോവലിന്റെയും കാലാനുസൃതമായ ഭാവുകത്വപരിണാമം തിരിച്ചറിയൽ.

CO3: നിലവിലുള്ള സാമൂഹ്യജീവിത യാഥാർഥ്യങ്ങളെ അഭിമുഖീകരിക്കാൻ പ്രാപ്തരാക്കൽ.

CO4: ആശയവിനിമയം, ഭാഷാവിഷ്കരണം എന്നീ ശേഷികൾ കൈവരിക്കുന്നു

CO5: കഥ,നോവൽ എന്നിവയുടെ വ്യതിരിക്ത സവിശേഷതകൾ തിരിച്ചറിയുന്നു.

CO6: പുതുകാലജീവിതാനുഭവങ്ങൾ വിലയിരുത്താൻ പര്യാപ്തരാകുന്നു

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO1	1	1	2	2	2
CO2	1	1	2	1	1
CO3	1	1	2	3	2
CO4	1	1	2	3	1
CO5	1	1	2	2	2
CO6	1	1	2	3	2

ഖണ്ഡം ഒന്ന് **10 മണിക്കൂർ**

1.പൂവമ്പഴം -കാരൂർ

2.ഭൂമിയുടെ അവകാശികൾ -വൈക്കം മുഹമ്മദ്ബഷീർ

ഖണ്ഡം രണ്ട് **15മണിക്കൂർ**

1.കടൽ -ടി .പദ്മനാഭൻ

2.പെരുമഴയുടെ പിറ്റേന്ന് -എം. ടി. വാസുദേവൻ നായർ

3.മാനാഞ്ചിറടെസ്റ്റ് -വി .കെ.എൻ

4.തരിശു നിലം –മാധവിക്കുട്ടി

ഖണ്ഡം മൂന്ന് **15മണിക്കൂർ**

1.ആർക്കറിയാം -സക്കറിയ

2.ഓരോഎഴുത്തുകാരിയുടെഉള്ളിലും -സാറാജോസഫ്

3.തിരുത്ത് -എൻ .എസ് .മാധവൻ

4.മോഹമഞ്ഞ -കെ .ആർ .മീര

ഖണ്ഡം നാല് **10 മണിക്കൂർ**

1.അഗ്നി -സിതാര.എസ്

2.ബിരിയാണി –സന്തോഷ് എച്ചിക്കാനം

3.മോദസ്ഥിരനായി അങ്ങ്വസിപ്പൂമല പോലെ -എസ്. ഹരീഷ്

4.സ്നേഹബഹുമാനപെട്ട അന്നാമ്മയ്ക്ക്ഗീതാലക്ഷ്മി എഴുതുന്ന കത്ത് –പ്രിയ എ .എസ്

5.ചിലസ്വപ്നങ്ങളിൽ .....സീതാലക്ഷ്മിയുടെ കറുത്ത മുടിയിഴ -ഇന്ദുമേനോൻ

ഖണ്ഡം അഞ്ച് **22മണിക്കൂർ**

ആടുജീവിതം -ബന്യാമിൻ

SEMESTER I

COMPLEMENTARY COURSE I

CH1C01B18 - BASIC THEORETICAL AND ANALYTICAL CHEMISTRY

Credits: 2

Total Lecture Hours: 36

Course Outcomes:

CO1: Describe the Bohr atom model, types of bonds, Valence bond and VSEPR theories and Hybridization.

CO2: Explain the periodic properties of elements and concepts of chemical equilibrium.

CO3: Identify methods for separating a given organic compound from a reaction mixture and quantification of inorganic metal ions using titrimetric and gravimetric analysis

CO4: Differentiate between column chromatography, PC, TLC, GC, IEC and HPLC techniques

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO1	3	1	1	1	1
CO2	3	1	1	1	1
CO3	3	1	1	1	2
CO4	3	1	1	1	2

Syllabus Content

Module 1 : Atomic Structure and Chemical Bonding (12 hours)

Atomic Structure: Bohr atom model and its limitations, Dual nature of matter and radiation.Photoelectric effect, de Broglie equation, Heisenberg's uncertainty principle, Concept of orbital, Quantum numbers, shapes of orbitals (*s, p, d*), Electronic configuration of atoms - Aufbau principle, Hund's rule of maximum multiplicity, Pauli's exclusion principle.

Chemical Bonding: Introduction – Type of bonds. Ionic bond: Factors favouring theformation of ionic bonds. Covalent bond: Valence bond theory – Coordinate bond. VSEPR theory and examples. Hybridisation: - sp^3, sp^2 and *sp* (ethane, ethene, ethyne). Intermolecular forces - Hydrogen bonding in H_2O - Dipole-dipole interactions.

Module II : Fundamental Concepts in Chemistry (9 hours)

Periodic Properties: Modern periodic law – Long form of periodic table. Periodicity inproperties: Atomic radii, ionic radii, ionization enthalpy, electron affinity (electron gain enthalpy) and electronegativity (Pauling scale). Atomic mass - Molecular mass - Mole concept – Molar volume - Oxidation and reduction – Oxidation number and valency - Equivalent mass.

Concept of Equilibrium: Acids and Bases - Arrhenius, Lowry-Bronsted and Lewis theories.Ionic product of water - pH and pOH, Strengths of acids and bases - K_a and K_b, pK_a and pK_b. Buffer solution. Solubility, solubility product, common ion effect and their applications.

Module III : Basic Principles of Analytical Chemistry (9 hours)

Methods of Analysis: Volumetric method of analysis - General principles. Primary and secondary standards, criteria for primary standards, preparation of standard solutions, standardization of solutions, end point. Acid base, redox and complexometric titrations and corresponding indicators. Double burette method of titration: Principle and advantages. Microanalysis and its advantages. Gravimetric method of analysis: General principles.

Reporting of Analytical Data: Precision and accuracy – Types of errors – Ways of expressing precision – Methods to reduce systematic errors.

Separation and Purification Techniques: Recrystallisation, use of drying agents, sublimation. General principles of distillation, fractional distillation, distillation under reduced pressure. Solvent extraction.

Module 1V: Chromatographic Techniques (6 hours)

Chromatography - Principle of differential migration. Classification of chromatographic methods. Basic principle and uses of Thin layer chromatography (TLC), Paper chromatography (PC), R_f value, Column chromatography, Gas chromatography(GC), High performance Liquid chromatography (HPLC), Ion Exchange chromatography (IEC).

SEMESTER I

COMPLEMENTARY COURSE II

ZY1C01B18- NON CHORDATE DIVERSITY

Credits: 2

Total Lecture Hours: 36

Course Outcomes:

CO 1: Classify Non chordates up to the level of class

CO 2: Differentiate beneficial and harmful non chordates.

CO 3: Describe the ecological importance of Corals and Coral reefs.

CO 4: Describe the physiological and morphological distinctiveness of Non chordates.

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO1	3	1	1	1	1
CO2	3	2	1	1	1
CO3	3	1	1	1	1
CO4	3	3	1	1	1

Syllabus Content:

Module I **(10 hours)**

Introduction: Five kingdom classification

Kingdom Protista: Salient features (any five important salient features) of each phylum with one example each (detailed account of example is not necessary).

Phylum Rhizopoda	(eg: Amoeba)
Phylum Actinopoda	(eg: Actinophrys)
Phylum Dinoflagellata	(eg: Noctiluca)
Phylum Parabasalia	(eg: Trichonympha)
Phylum Metamonda	(eg: Giardia)
Phylum Kinetoplasta	(eg: Trypanosoma)
Phylum Euglenophyta	(eg: Euglena)
Phylum Cryptophyta	(eg: Cryptomonas)
Phylum Opalinata	(eg: Opalina)
Phylum Bacillariophyta	(eg: Diatoms)
Phylum Chlorophyta	(eg: Volvox)
Phylum Choanoflagellata	(eg: Proterospongia)
Phylum Ciliophora	(eg: Paramecium)
Phylum Sporozoa	(eg: Plasmodium)
Phylum Microsporidia	(eg: Nosema)
Phylum Rhodophyta	(eg: Red algae)

General Topic: Pathogenic Protists – Plasmodium, Entamoeba

Module II **(3 hours)**

Phylum Porifera: Salient features (eg: Leucosolenia)

Phylum Coelenterata: Salient features and classification upto class.

Class 1: Hydrozoa (eg: Physalia)

Class 2: Schyphozoa (eg: Aurelia)

Class 3: Anthozoa (eg: Adamsia)

General Topic: Corals and Coral reefs.

Module III **(6 hours)**

Phylum Platyhelminthes: Salient features and classification up to class.

Class 1: Turbelleria (eg: Planaria)

Class 2: Trematoda (eg: Fasciola)

Class 3: Cestoda (eg: Taenia solium)

Phylum Nematoda: Salient features and classification up to class.

Class 1: Phasmida (eg: Wuchereria)

Class 2: Aphasmida (eg: Trichinella)

Phylum Annelida: Salient features and classification up to class.

Class 1: Archiannelida (eg: Polygordius)

Class 2: Polychaeta (eg: Nereis)

Class 3: Oligochaeta (eg: Pheretima)

Class 4: Hirudinomorpha (eg: Hirudinaria)

Module IV **(11 hours)**

Phylum Arthropoda: Salient features. Type study – Fennero penaeus (Penaeus) - habitat, morphology, appendages, sexual dimorphism, digestive system, respiratory system, circulatory system, excretory system, nervous system, sense organs, reproductive system and larval stages. Classification up to class with one example each

Subphylum Trilobitomorpha

Class 1: Trilobita (Extinct) (eg: Dalmanites)

Subphylum: Chelicerata

Class 1: Merostoma (eg: Limulus)

Class 2: Arachnida (eg: Spider)

Class 3: Pycnogonida (eg: Nymphon)

Subphylum Mandibulata

Class 1: Crustacea (eg: Daphnia)

Class 2: Chilopoda (eg: Centipede)

Class 3: Symphyla (eg: Scutigerella)

Class 4: Diplopoda (eg: Millipede)

Class 5: Pauropoda (eg: Pauropus)

Class 6: Insecta (eg: Butterfly)

Module V **(6 hours)**

Phylum Mollusca: Salient features and classification up to class

Class 1: Aplacophora (eg: Neomenia)

Class 2: Monoplacophora (eg: Neopilina)

Class 3: Polyplacophora (eg: Chiton)

Class 4: Bivalvia (eg: Perna)

Class 5: Gastropoda (eg: Xancus)

Class 6: Cephalopoda (eg: Sepia)

Class 7: Scaphopoda (eg: Dentalium)

Phylum Echinodermata: Salient features and classification up to class.

Class 1: Asteroidea (eg: Astropecten)

Class 2: Ophiuroidea (eg: Ophiothrix)

Class 3: Echinoidea (eg: Echinus)

Class 4: Holothuroidea (eg: Holothuria)

Class 5: Crinoidea (eg: Antedon)

Phylum Hemichordata: Salient features (eg: Balanoglossus.)

SEMESTER I

CORE COURSE

HS1B01B18 - METHODOLOGY OF HOME SCIENCE AND FOOD SCIENCE

Credits: 2

Total Lecture Hours: 36

Course outcome

CO1: Explain the interdisciplinary approach of Home Science and relevance in national development

CO2: Describe the concepts of food groups, balanced diet and methods of food preparation

CO3: Differentiate the nutritional significance of food commodities for improving human nutrition and health.

CO4: Summarize the emerging technologies in processing, packaging and labelling of foods.

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO1	3	1	1	2	1
CO2	3	1	2	2	1
CO3	3	1	2	2	1
CO4	3	1	2	2	2

Syllabus Content

Module I: Overview of Home Science (2hours)

History of Home Science, Disciplines of Home Science and their Scope (Educational and Vocational), Careers Opportunities, Interdisciplinary approach of Home Science, Role of Home Science in National Development.

Module II: Food Groups and Food Preparation Methods (6 hours)

Food groups: Functions of foods, food groups (Basic food group system – (ICMR)

Food preparation: Objectives, Methods - moist heat, dry heat, microwave cooking, merits and demerits of various methods.

Emerging trends in foods: Convenience foods, genetically modified foods, organic foods, functional foods, pre and probiotics.

Module III: Study of Plant Foods (10 hours)

Cereals- Basic structure of a cereal grain, composition and nutritive value, common cereals and millets in India, processing -parboiling - merits and demerits. Cereal cookery- cereal protein - gluten formation, cereal starch -structure, effect of cooking – dry and moist heat.

Pulses–Composition and nutritive value, digestibility, processing, germination and fermentation, advantages, Anti-nutritional factors (trypsin inhibitors, lathyrism), Common pulses used in India.

Fruits and Vegetables

Vegetables - Classification, nutritive value, selection, vegetable cookery- loss of nutrients during cooking, conservation of nutrients, pigments, effect of acid and alkali, Enzymatic browning- methods of prevention

Fruits – Nutritive and antioxidant value, pigments, flavour components, changes in fruits during ripening, storage of fruits.

Nuts and oil seeds - Nutritive value, types, rancidity in oils - types, factors leading to rancidity, prevention, hydrogenation of fats.

Sugars and related products - Stages of sugar cookery and its applications, artificial sweeteners.

Spices and condiments - Major spices and condiments of India, Health benefits.

Module IV: Study of Animal Foods (10hours)

Milk and milk products - Composition and nutritive value, pasteurization and homogenization – advantages, types of milk and milk products.

Eggs - Structure and nutritive value, evaluation of egg quality, deterioration in egg quality during storage, egg white foam -stages, factors affecting foam, culinary role of eggs, designer eggs.

Meat - Structure, composition and nutritive value, post mortem changes - rigor mortis, effect of cooking on meat, types of meat and products.

Fish - Classification, nutritive value, selection, fish spoilage and preservation

Module V: Food preservation, Packaging and Labelling (8 hours)

Principles, objectives and methods of food preservation- low temperature, high temperature, preservatives, dehydration, irradiation. Functions of packaging, materials used, Food labelling, Requisites for labelling.

SEMESTER II

Course Code	Course Title	Credits	Course Type
EN2A03B18	English 3 - Issues that Matter	4	Common Course I
EN2A04B18	English 4 - Savouring the Classics	3	Common Course I
FR2A03B18	French - French Language and communicative skills-II	4	Common Course II
MA2A03B18	Malayalam – Kavitha	4	
HN2A03B18	Hindi - Kavita Vyakaran Aur Anuvad	4	
CH2C01B18	Basic Organic Chemistry	2	Complementary Course I
CH2CP01B18	Volumetric Analysis	2	Complementary Course I Practical
ZY2C01B18	Chordate Diversity	2	Complementary Course II
ZY2CP01B18	Non Chordate And Chordate Diversity	2	Complementary Course II Practical
HS2BO2B18	Human Physiology And Microbiology	2	Core Course
HS2BP01B18	Food Science, Physiology And Microbiology Practical	2	Core Practical

SEMESTER II

COMMON COURSE I

EN2A03B18– ISSUES THAT MATTER

Credits: 4

Total Lecture Hours: 90

Course Outcomes:

CO1. Identify the major issues of contemporary significance (Remember level)

CO2. Discuss the consequences of war and refugee crisis with respect to the psychological dimension (Understand level)

CO3. Employ theoretical learning in classrooms to current developments in the world (Apply level)

CO4. Critique the diverse experiences both historical and contemporary to create a more informed vision of the future (Evaluate level)

CO5. Develop oneself as a conscious, concerned, conscientious human being (Create level)

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO1	2	1	1	1	2
CO2	1	1	1	1	2
CO3	2	2	2	2	2
CO4	1	1	1	1	1
CO5	1	1	1	2	2

Syllabus Content:

Module 1 **(18 hours)**

"The Unsurrendered People" – Kenzaburo Oe

"The Old Prison" – Judith Wright

"War" – Luigi Pirandello

Module 2 **(18 hours)**

Persuasions on the Power of the Word:

"On Censorship" – Salman Rushdie

"Peril" – Toni Morrison

"The Burning of the Books" – Bertolt Brecht

"The Censors" – Luisa Valenzuela

Module 3 **(18 hours)**

"The Poisoned Bread" – Bandhu Madhav

"A Trip Westward" – Zitkala-Sa

"The Pot Maker" – Temsula Ao

Module 4 **(18 hours)**

"Does it Matter?" – Richard Leakey

"On Killing a Tree" – Gieve Patel

"Hagar: A Story of a Woman and Water" (Gift in Green (chapter 2)) – Sarah Joseph

Module 5 **(18 hours)**

"Understanding Refugeeism: An Introduction to Tibetan Refugees in India" – Mallica Mishra

"Refugee Blues" – W.H Auden

"The Child Goes to the Camp" (from Palestine's Children) – Ghassan Kanafani

SEMESTER II

COMMON COURSE I

EN2A04B18 - SAVOURING THE CLASSICS

Credits: 3

Total Lecture Hours: 72

Course Outcomes:

CO1: Recognise the time-tested literary masterpieces from diverse cultures (Remember)

CO2: Identify the representative authors from various genres (poetry, drama, novel, short fiction) (Understand)

CO3: Recite celebrated lines from Classic works (Remember)

CO4: Discuss the 'universals' of human condition (Understand)

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO1	1	1	1	1	1
CO2	1	1	1	1	1
CO3	1	1	1	1	1
CO4	1	1	1	1	1

Syllabus Content

Module 1 (Poems) **(18hours)**

Homer: "Father and Son" (Odyssey Book 16: 113-189) (Translated by Robert Fagles)

Kalidasa: "Lovely is Youth" (Translated by J.G Jennings)

Omar Khayyam: Rubaiyat (quatrains: 25-28) (Translated by Edward Fitzgerald)

Dante: Dante meets Virgil (Inferno Canto 1: 49-102) (Translated by J.G Nichols)

John Milton: "On his Blindness"

Module 2 (Shakespeare Excerpts) **(18hours)**

Romeo and Juliet: Act II, Scene ii

The Merchant of Venice: Act IV, Scene i

Module 3 (Novel Excerpts) **(18hours)**

Miguel de Cervantes: Don Quixote (Chapter 8) (Translated by Edith Grossman)

Jane Austen: Pride and Prejudice (Chapters 1-6)

Victor Hugo: Les Miserables (Part 1- Fantine, Book II, Chapters 9-13) (Translated by Christine Donougher)

Module 4 (Short Fiction) **(18hours)**

Charles Dickens: The Black Veil

Leo Tolstoy: How Much Land Does a Man Need? (Translated by Louise & Aulmer Maude)

Rabindranath Tagore: Kabuliwala (Translated by Mohammad A Quayum)

Jorge Louis Borges: The Shape of the Sword (Translated by Andrew Hurley)

SEMESTER II

COMMON COURSE II

FR2A03B18 – FRENCH LANGUAGE AND COMMUNICATIVE SKILLS-II

Credits: 4

Total Lecture Hours: 72

Course Outcomes:

CO1: Identify familiar everyday expressions and basic phrases. (Understand)

CO2: Ask questions to get meaningful responses in effective communication. (Understand)

CO3: Develop language, vocabulary and grammar skills. (Apply)

CO4: Prepare conversations based on various situations (Apply)

CO5: Articulate the concepts to express one's opinion in a specific situation. (Apply)

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO1	1	1	1	1	1
CO2	1	1	1	1	1
CO3	1	1	1	1	1
CO4	1	1	1	1	1
CO5	1	1	1	1	1

Syllabus Content

Module I **(25 hours)**

Chambre pour étudiants Localiser des objets – l'habitat – les meubles – l'appréciation

Module II **(23 hours)**

Petits boulots Téléphoner – Raconter – l'emploi

Module III **(24 hours)**

Le resto U Exprimer une opinion – Poser des questions – la nourriture

SEMESTER II

COMMON COURSE II

HN2AO3B18 - KAVITA , VYAKARAN AUR ANUVAD

Credits : 4

Total Lecture Hours: 72

Course Outcomes:

CO1: Contextualize and Summarise the poems of different genres in Hindi.(Understand)

CO2: Evaluate the Poets contribution to Hindi literature.(Evaluate)

CO3: Demonstrate linguistic ability for translation of texts between Hindi & English(Apply)

CO4: Classify Parts of Speech.(Understand)

CO5: Illustrate greater fluency in Hindi by applying theoretical knowledge of Grammar(Apply)

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO1	1	1	1	1	1
CO2	1	1	1	1	1
CO3	1	1	1	1	1
CO4	1	1	1	1	1
CO5	1	1	1	1	1

Syllabus Contents

Module I **(18 Hours)**

Vyaakaran

Module II **(20 Hours)**

Tulasidas

Kabir

Ve Muskathe Phool Nahi- Mahadevi Verma

Cheenane Aaye Hain Ve – Sarweshvar Dayal Saxena

Dilli Darwaaza – Kumar Vimal

Jungle Ke Ujaad Mei – Vinod Kumar Shukla

Aazadi Urf Gulaami – Gyanendrapathi

Module III **(20 Hours)**

Meera

Bazaar- Mangalesh Dabraal

Beesvi Sadi Ke Antim Dino Ka Aashcharya- Rajesh Joshi

Do Haathiyon Ki Ladaai- Uda Pakash

Thande Paani Ki Machine – Ekant Srivastav

Saboot – Arun Kamal

Tumhe Kuch Karna Chahiye – Chanrakanth Devthale

Module IV **(14 Hours)**

Anuvaad

SEMESTER II

COMMON COURSE II

MA2A03B18-കവിത

ക്രെഡിറ്റ് : **4**

പഠനസമയം : **72 മണിക്കൂർ**

കോഴ്സ് ഔട്ട്കം (Course Outcome)

CO1.പത്തൊൻപത് കവിതകളുടെ പഠനത്തിലൂടെ വായനാശേഷിയും ആസ്വാദന പ്രാപ്തിയും കൈവരിക്കൽ. (Understand)

CO2.മലയാളകവിതകളിലെ കാലാനുസൃതമായ ഭാവുകത്വപരിണാമം തിരിച്ചറിയ. (Apply)

CO3.നിലവിലുള്ള സാമൂഹ്യജീവിതയാഥാർഥ്യങ്ങളെ അഭിമുഖീകരിക്കാൻ പ്രാപ്തരാക്കൽ. (Analyse)

CO4.പരിസ്ഥിതിസൗന്ദര്യശാസ്ത്രത്തെയും ചില സാമൂഹ്യചരിത്ര പശ്ചാത്തലങ്ങളെയും കുറിച്ച് ഗ്രഹിക്കൽ. (Evaluate)

CO5.വിദ്യാർത്ഥികളുടെ സർഗ്ഗാത്മകശേഷി വികസിക്കൽ .(Apply)

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO1	1	1	1	1	1
CO2	1	1	1	1	1
CO3	1	1	1	1	1
CO4	1	1	1	1	1
CO5	1	1	1	1	1

ഖണ്ഡം ഒന്ന്- **20 മണിക്കൂർ**

1. മാംസനിബദ്ധമല്ല രാഗം -കുമാരനാശാൻ (ലീലയിലെ 47 മുതൽ 74 വരെയുള്ള 28 ശ്ലോകങ്ങൾ)

2.സ്നേഹസുന്ദരപാതയിലൂടെ -വൈലോപ്പിള്ളി ('കുടിയൊഴിക്കലി'ലെ അവസാന ഖണ്ഡം)

ഖണ്ഡം രണ്ട് **15 മണിക്കൂർ**

1 .ഒറ്റയ്ക്കിരിക്കാൻ പഠിച്ചുകഴിഞ്ഞൂ ഞാൻ -സുഗതകുമാരി

2 .കോഴി -കടമ്മനിട്ടരാമകൃഷ്ണപിള്ള

3 .പഴഞ്ചൊല്ലുകൾ -സച്ചിദാനന്ദൻ

4 .മുള്ളൻപന്നി -കെ.ജി.ശങ്കരപ്പിള്ള

ഖണ്ഡം മൂന്ന് **15 മണിക്കൂർ**

1.തിരുത്ത്-പി .പി.രാമചന്ദ്രൻ

2.പിറക്കാത്ത മകന് -ബാലചന്ദ്രൻ ചുള്ളിക്കാട്

3.മൃഗശിക്ഷകൻ -വിജയലക്ഷ്മി

4.കുന്നിമണികൾ-കുഞ്ഞുണ്ണി

ഖണ്ഡം നാല് **22 മണിക്കൂർ**

1 .ആടിയാടില അലഞ്ഞ മരങ്ങളേ -അൻവർ അലി

2 .കൽവീട് -വി.എം.ഗിരിജ

3 . ആഴങ്ങൾ അടച്ചിട്ട പുഴ -എസ് .ജോസഫ്

4 .സ്മാരകം -വീരാൻകുട്ടി

5 .കുട്ടമ്മാൻ -എം.ർ.രേണുകുമാർ

6 .നാഷണൽ ജ്യോഗ്രഫി -എസ് .കണ്ണൻ

7 .വാഴക്കുല -കെ .ആർ.ടോണി

8 .പഴയ ചിലത് -പി.രാമൻ

9 .ഗോതമ്പുശില്പം -കവിത ബാലകൃഷ്ണൻ

SEMESTER II

COMPLEMENTARY COURSE I

CH2C01B18 BASIC ORGANIC CHEMISTRY

Credits: 2

Total Lecture Hours: 36

Course Outcomes:

CO1: Apply the IUPAC nomenclature to name and write the structure of organic compounds including stereoisomers. **(apply)**

CO2: Explain the types of reagents, reactive intermediates, reaction mechanisms and the corresponding influencing factors in organic chemistry. **(apply)**

CO3: Explain stereoisomerism in organic chemistry. **(understand)**

CO4: Explain the classification, structure, properties, methods of preparation, uses and environmental toxicity of polymers. **(understand)**

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO1	3	2	1	1	1
CO2	3	2	1	1	1
CO3	3	1	1	1	1
CO4	3	2	2	2	2

Syllabus Content

Module 1: Fundamental Concepts of Organic Chemistry (9 hrs)

Introduction: Origin of organic chemistry – Uniqueness of carbon – Homologous series. IUPAC nomenclature of alkyl halides, alcohols, aldehydes, ketones, carboxylic acids and amines. Structural isomerism: Chain isomerism, position isomerism, functional isomerism, metamerism and tautomerism. Bond fission - homolytic and heterolytic fission. Types of reagents - Electrophiles and nucleophiles. Polarity of bonds. Reaction Intermediates: Carbocations,

carbanions and free radicals (Structure and stability). Types of organic reactions: Addition, Elimination, Substitution and Rearrangement (definition and one example each).

Module II: Mechanisms of Organic Reactions (9 hrs)

Meaning of reaction mechanism. Polarity of bonds. Electron Displacement Effects: Inductive effect - Definition - Examples - +I and -I groups. Applications: Explanation of substituent effect on the acidity of aliphatic carboxylic acids. Mesomeric effect: Definition – Characteristics - +M and -M groups, Applications. Hyperconjugation: Definition – Characteristics. Applications: Baker-Nathan effect, Comparison of stability of 2-methyl-1-butene & 2-methyl-2-butene. Steric effect (causes and simple examples).

Substitution reactions: nucleophilic substitution of alkyl halides- S_N1 and S_N2 mechanisms. Electrophilic substitutions in benzene.

Addition reactions: Electrophilic addition to alkene - Markwonikoff's rule, Peroxide effect. *Elimination reactions:* E1 and E2 mechanisms. (General mechanism is only needed)

Module III: Stereochemistry of Organic Compounds (9 hrs)

Stereosiomerism – definition, classification.

Geometrical Isomerism: Definition – Condition – Geometrical isomerism in but-2-ene and but-2-ene-1,4-dioic acid. cis and trans, *E* and *Z* configurations. Methods of distinguishing and interconversion of geometrical isomers.

Conformations: Newman projection, Saw-horse projection. Conformations of ethane.

Optical Isomerism: Optical activity – Chirality – Enantiomers - Meso compounds - Diastereoisomers – Optical isomerism in lactic acid and tartaric acid - Racemisation and resolution (elementary idea only).

Module IV: Natural and Synthetic Polymers (9 hrs)

Introduction. Classification of polymers: Natural, synthetic; linear, cross-linked and network; plastics, elastomers, fibres; homopolymers and copolymers. Polymerization reactions. Typical examples: Polyethylene, polypropylene, PVC, phenol-formaldehyde and melamine-formaldehyde

resins, polyamides (nylons) and polyesters. Natural rubber: structure, latex processing methods, vulcanization and uses. Synthetic rubbers: SBR, nitrile rubber and neoprene. Biodegradability of polymers, environmental hazards.

SEMESTER I and II

COMPLEMENTARY COURSE I (PRACTICAL)

CH2CP01B18: VOLUMETRIC ANALYSIS

Credits – 2

Total Hours: 72

Course Outcomes:

CO1: Prepare standard solutions for microscale volumetric analysis. (Apply)

CO2: Record the molarity of the given intermediate solution by standardizing it. (Apply)

CO3: Calculate the mass of the analyte in a given solution by microscale volumetric analysis. (Apply)

CO4: Administer microscale analysis of solutions by different types of volumetry like acidimetry, alkalimetry, permanganometry, dichrometry, iodometry and iodimetry. (Apply)

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	3	3	1	2
CO2	2	3	3	1	2
CO3	2	3	3	1	2
CO4	2	3	3	1	2

Syllabus Content

Standard solution must be prepared by the student.

1. Acidimetry and Alkalimetry

1. Standardization of HCl with standard Na_2CO_3 solution
2. Standardization of NaOH with standard oxalic acid solution
3. Estimation of any acid using standard NaOH
4. Estimation of any alkali using standard HCl.

2. Permanganometry

1. Standardization of $KMnO_4$ using (i) oxalic acid (ii) Mohr's salt
2. Estimation of Fe^{2+} in Mohr's salt and crystalline Ferrous Sulphate using standard $KMnO_4$.

3. Dichrometry

1. Estimation of Ferrous ions (external indicator)
2. Estimation of Ferrous ions (internal indicator)
3. Estimation of $FeSO_4$. 7 H_2O (external indicator)

4. Iodimetry and Iodometry

1. Standardization of Iodine solution
2. Standardization of Sodium thiosulphate
3. Estimation of $KMnO_4$
4. Estimation of Copper

SEMESTER II

COMPLEMENTARY COURSE II

ZY2C01B18: CHORDATE DIVERSITY

Credits : 2

Total Lecture Hours: 36

Course Outcome

CO1: Explain the classification of the higher groups of animal kingdom (Understand)

CO2: Differentiate the characteristics, systems and identify the chordate phyla. (Apply)

CO3: Distinguish the economically important vertebrates. (Analyse)

CO4: Summarize the adaptations in various classes of chordates. (Understand)

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO1	3	1	1	1	1
CO2	3	1	1	1	1
CO3	3	1	1	1	1
CO4	3	1	1	1	1

Syllabus Content

Module I **(4 Hrs)**

Phylum Chordata: Fundamental characters and outline classification upto class.

Sub phylum Urochordata:

General characters, Classification:

Class 1: Larvacea (eg: Oikopleura)

Class 2: Ascidiacea (eg: Ascidia), Retrogressive metamorphosis.

Class 3: Thaliacea (eg: Salpa)

Sub phylum Cephalochordata: Salient features (eg: Branchiostoma)

Module II **(6 Hrs)**

Sub phylum Vertebrata: Salient features

Division Agnatha: salient features and classification

Class 1: Cyclostoma (eg: Petromyzon)

Class 2: Class Ostracodermi (eg: Cephalapsis)

Division Gnathostomata: Salient features Super class Pisces

Super class Tetrapoda.

Super class Pisces: Salient features and classification

Class 1: Chondrichthyes (eg: Narcine)

Class 2: Osteichthyes (eg: Latimeria)

General Topic: Accessory respiratory organs in fishes.

Module III **(14 Hrs)**

Super class Tetrapoda: Salient features

Class 1: Amphibia: Salient features. Type study: Euphlyctis hexadactyla - Habitat, morphology, sexual dimorphism, coelom and viscera, skeletal system, digestive system, respiratory system, circulatory system, excretory system, nervous system, sense organs, reproductive system, development.

Classification up to order:

Order 1: Urodela (eg: Amblystoma)

Order 2: Anura (eg: Bufo)

Order 3: Apoda (eg: Icthyophis)

Module IV **(6 Hrs)**

Class Reptilia: Salient features and classification up to subclass

Sub class 1: Anapsida (eg: Chelone)

Sub class 2: Diapsida (eg: Chamaeleon)

Sub class 3: Parapsida (eg: Icthyosaurus)

Sub class 4: Synapsida (eg: Cynognathus)

General Topics: Poisonous and non poisonous snakes of Kerala.

Class Aves: Salient features and classification up to subclass

Sub class Archeornithes (eg: Archaeopteryx)

Sub class Neornithes (eg: Struthio)

General Topics: Flight adaptation of birds

Module V **(6 Hrs)**

Class Mammalia: Salient features and classification up to subclass

Sub class 1: Protheria (eg: Echidna)

Sub class 2: Metatheria (eg: Macropus)

Sub class 3: Eutheria (eg: Elephas)

General Topic: General adaptation of aquatic mammals with example.

SEMESTER II

COMPLEMENTARY COURSE (PRACTICAL)

ZY2CP01B18: NON CHORDATE AND CHORDATE DIVERSITY

Credits : 2

No. of Hours: 72

Course Outcome

CO1: Dissect the prawn and cockroach nervous system and distinguish the body parts of non-chordates and chordates (Understand)

CO2: Distinguish the characteristics and identify the non-chordates and chordates. (Apply)

CO3: Classify the various non-chordate and chordate phyla (Analyze)

CO4: Illustrate the non-chordates (Apply)

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO1	3	1	1	1	1
CO2	3	1	1	1	1
CO3	3	1	1	1	1
CO4	3	1	1	1	1

SEMESTER I

COMPLEMENTARY COURSE– PRACTICAL 1

NON CHORDATE DIVERSITY

Syllabus Content

1. Scientific drawing - 5 specimens
2. Simple identification - 10 invertebrates, out of which 5 by their scientific names
3. T.S - Earthworm, T.S Fasciola
4. Dissection - Nervous system of Prawn
5. Dissection - Nervous system of Cockroach
6. Mounting - Prawn Appendages

SEMESTER II

COMPLEMENTARY COURSE – PRACTICAL 2

CHORDATE DIVERSITY

Syllabus Content

1. Simple identification of 10 chordates, out of which 5 by their scientific names
2. Osteology - Vertebrae and girdles of Frog
3. Snake identification - 3 poisonous and 3 non poisonous snakes with key
4. Mounting of placoid scales of shark
5. Dissections: Frog: Photographs/Diagrams/ models may be used for the study.

1. Frog - Viscera
2. Frog - Digestive System
3. Frog - Arterial System
4. Frog – Brain

SEMESTER II

CORE COURSE

HS2B02B18: HUMAN PHYSIOLOGY AND MICROBIOLOGY

Credits : 2
Total Lecture Hours : 36
Course outcome

CO1: Understand the fundamental concepts in Physiology (Understand)

CO2: Describe the integrated functions of the various systems of the human body. (Understand)

CO3: Identify the morphology of microorganisms, their economic importance and factors controlling their growth and multiplication. (Understand).

CO4: Relate the sources of microbial infections to defense mechanisms of the body and immunity (Apply)

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO1	3	3	1	1	2
CO2	3	2	1	2	2
CO3	3	1	1	2	2
CO4	3	2	1	3	2

Syllabus Contents

Module 1: Basic aspects of Physiology and Blood (5 hours)

Cell as a unit of the body, Cell organelles and their functions, Blood-Composition and functions, Haemoglobin, Coagulation of blood and Blood groups.

Module 2: Cardiovascular and Respiratory System (7 hours)

Structure of heart and blood vessels, Special junctional tissues of the heart, Systemic, pulmonary, coronary and portal circulation, Properties of cardiac muscles, cardiac cycle, cardiac output, blood pressure and hypertension, Structure of the respiratory system, Functions of the organs of respiratory system, Physiology of transport and exchange of oxygen and carbon dioxide, lung volumes and capacities, regulation of respiration.

Module 3: Digestive, Excretory and Reproductive System (8 hours)

Structure and function of major organs of the digestive system, digestion and absorption of food. Structure and functions of kidney and nephron, formation of urine, composition of urine, role of kidneys in homeostasis. Structure and functions of male and female reproductive system, menarche, physiology of pregnancy and lactation, menopause.

Module 4: Basic Concepts of Microbiology (8 hours)

Classification of micro-organisms, important micro-organisms, structure and economic importance of micro-organism bacteria, moulds (Rhizopus nigricans, Yeast, virus {any animal virus})

Definition and methods:

Sterilization- heat, light, radiation, desiccation, filtration. Disinfection acid and alkalies, salts, halogens, phenols, dyes, oxidising agents, alcohols. Factors affecting the growth of micro-organisms, growth characteristics, spore formation, gram positive and gram negative micro-organisms.

Module 5: Infection, Resistance and Immunity (8 hours)

Sources of micro-organisms, transmission of infection, bacterial infections in man-Typhoid, Pneumonia, Viral infections – Hepatitis, AIDS.

Natural defenses of the body—primary and secondary defense mechanisms. Immunity types, Immunization followed for various diseases.

Contamination of food, factors affecting Food spoilage, food poisoning (bacterial) -Salmonella food poisoning, Staphylococcal food poisoning, Botulism.

SEMESTER II

I & II SEMESTER - CORE COURSE PRACTICAL

HS2BP01B18 : FOOD SCIENCE, PHYSIOLOGY AND MICROBIOLOGY PRACTICAL

Credit : 2

Total contact hours : 72

Course Outcome

CO1: Identify the composition and properties of foods, the physical and chemical changes of the food components and its application in food preparation (Understand)

CO2: Apply the principles and techniques of food preservation.(Apply)

CO3: Interpret various aspects of blood physiology (Understand)

CO4: Identify and differentiate the morphological characteristics of the various micro - organisms (Analyse)

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	1	3	3
CO2	2	3	1	3	3
CO3	1	2	1	1	2
CO4	3	2	1	2	2

Syllabus Content

Food Science **(36 hours)**

1. Grouping of foods
2. Stages of sugar cookery
3. Evaluation of gluten content in a flour
4. Components of an egg by weight
5. Stages of egg white foam
6. Changes of meat during cooking

7. Effect of cooking on vegetable pigments
8. Methods to prevent enzymatic browning in fruits
9. Non enzymatic browning
10. Food preservation techniques

Physiology and Microbiology **(36 hours)**

1. Estimating haemoglobin content of blood (Using Haemocytometer)
2. Determination of blood pressure using Sphygmomanometer.
3. Determination of Blood Group and Rh factor
4. Identification of micro organisms in fermented foods.
5. Identification of spoilage microbes in food.
6. Identification of micro organisms by gram staining.

SEMESTER III

Course Code	Course Title	Credits	Course Type
EN3A05B18	Literature And/As Identity	4	Common Course I
FR3A05B18	An Advanced Course in French –I	4	Common Course II
HN3A05B18	Naatak Aur Lambi Kavita		
MA3A05B18	Drishyakalasahityam		
CH3C01B18	Inorganic and Organic Chemistry	3	Complementary Course I
ZY3C01B18	Physiology and Immunology	3	Complementary Course II

HS3B03B18	Human Development	3	Core Course

SEMESTER III

COMMON COURSE

EN3A05B18 – LITERATURE AND/AS IDENTITY

Credits: 4

Total Lecture Hours: 90

Course Outcomes:

CO1. Explain how literature problematizes identity. (Understand)

CO2. Analyze the quest for identity in the Indian diaspora. (Analyze)

CO3. Illustrate the effects of partition and communal violence in South Asian Literature. (Analyze)

CO4. Critique the social construction of identity. (Evaluate)

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5

CO1	1	1	2	1	1
CO2	1	2	2	1	1
CO3	1	1	2	2	1
CO4	1	1	2	2	1

Syllabus Content

Module 1 (Diasporic Identities) (18 hours)

Agha Shahid Ali: Postcard from Kashmir
Amy Tan: Mother Tongue
Imtiaz Dharker: At the Lahore Karhai
Chitra Banerjee Divakaruni: Indian Movie, New Jersey

Module 2 (South Asian Identities) (18 hours)

Sadat Hassan Manto: The Dog of Tetwal
Intizar Hussain: A Chronicle of Peacocks
Selina Hossain: Fugitive Colours
Punakante Wijenaike: That Deep Silence

Module 3 (Life Writings) (18 hours)

Malcolm X: ―Nightmare, excerpt from *The Autobiography of Malcolm X*.
Sashi Deshpande: Learning to be a Mother in *Janani– Mothers, Daughters, Motherhood*, (Ed.) Rinki Bhattacharya.

Module 4 (Indigenous Identities (18 hours)

Leslie Marmon Silko: Lullaby
Garhwali Songs in *Painted Words- An Anthology of Tribal Literature* – Edited by G.N. Devy
Mamang Dai: Pinyar the Widow (Excerpt from Legends of Pensam)

Module 5 (Alter Identities) (18 hours)

Nathaniel Hawthorne: The Birth Mark
Girish Karnad: Hayavadana (Excerpt)
Ruskin Bond: The Girl on the Train

SEMESTER III

COMMON COURSE II

FR3A05B18- AN ADVANCED COURSE IN FRENCH - I

Credits: 4

Total Lecture Hours: 90

Course Outcomes:

CO1: Describe topics such as physical appearance of a person, sports and entertainments. (Understand)

CO2: Articulate the concepts to express ones opinion in a specific situation. (Apply)

CO3: Compose conversations based on scenarios which help while shopping. (Create)

CO4: Articulate the concepts to give advice and instructions and to invite a person in a specific situation. (Apply)

CO5: Construct conversations based on scenarios which help during medical and health consultations. (Create)

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	2	1	1
CO2	1	1	2	1	2
CO3	1	1	2	2	2
CO4	1	1	2	1	1
CO5	1	1	2	2	2

Syllabus Content

Module I **(30 hours)**

Jeunes artistes: Décrire une personne - Exprimer une opinion - La description physique - Les spectacles

Module II **(30 hours)**

Tenue de soirée : Inviter - Les vêtements - Les chaussures - Les couleurs - Les matières

Module III **(30 hours)**

Faites du sport ! : Donner des conseils - Les parties du corps - Les mouvements - Les sports

SEMESTER III
COMMON COURSE
HN3AO5B18 - NAATAK AUR LAMBI KAVITHA

Credits – 4

Total Lecturer Hours - 90

Course Outcomes:

CO1: Summarise the poems and Illustrate the socio-political and cultural concerns of the Author (Apply)

CO2: Discuss the Authors contribution to Hindi Literature (Understand)

CO3: Analyse the characterisation of the Drama Konark (Analyse)

CO4: Critique excerpts of the poems and Drama (Analyse)

CO5: Communicate in oral and written form of Hindi with competence. (Apply)

Mapping of Course Outcomes with Program Specific Outcome

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	2	1	1

CO2	**1**	**1**	**2**	**1**	**1**
CO3	**1**	**1**	**2**	**2**	**2**
CO4	**1**	**1**	**2**	**1**	**1**
CO5	**1**	**1**	**3**	**1**	**1**

Syllabus content

Module- I **22 Hours**

Syllabus- Konark Introduction & Act 1 (Jagdishchandra Mathur)

Module- II **24 Hours**

Syllabus- - Konark Act 2 & 3(Jagdishchandra Mathur)

Module- III **22 Hours**

Syllabus-

Nagayi Mahura (Thrilochan)

Shahenshah Ki Neend (Umashankar Chaudhary)

Dhaaba- Nilesh Raghuvanshi

Module- IV **22 Hours**

Syllabus-

Ithni Door Mat Bhyahna Baba- Nirmala Putul

Jawahar Tunnel – Agnishekhar

സെമസ്റ്റർ : മൂന്ന്

കോമൺ കോഴ്സ് മലയാളം

MA3A05B18- ദൃശ്യകലാസാഹിത്യം

Credits: 4

Total Lecture hours: 90

പഠനനേട്ടങ്ങൾ (Course Outcomes)

CO1:കേരളീയരംഗകലാപാരമ്പര്യവും സംസ്കാരപരിണാമവും ചർച്ചചെയ്യുക (Understand)
CO2:ദൃശ്യകലാപഠനത്തിലൂടെ കേരളീയസംസ്കാരപരിണാമം, ചരിത്രം എന്നിവ അപഗ്രഥിക്കുക (Analyze)
CO3:കഥാപാത്രപഠനത്തിലൂടെ സമകാലികവിഷയങ്ങളെ വിലയിരുത്തുക (Evaluate)
CO4: ഇതിവൃത്ത പഠനത്തിലൂടെ കഥാപാത്രങ്ങളെ വിമർശനാത്മകമായി നിരൂപണം ചെയ്യുക (Apply)
CO5:സമകാലികസംഭവങ്ങളെ അടിസ്ഥാനമാക്കി നാടകം, ഹ്യസ്വചിത്രം എന്നിവ തയാറാക്കുക. (Create)

Mapping of Course Outcomes with Program Specific Outcome

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	**1**	**1**	**2**	**1**	**1**
CO2	**1**	**1**	**2**	**1**	**1**
CO3	**1**	**1**	**2**	**2**	**2**
CO4	**1**	**1**	**2**	**1**	**1**
CO5	**1**	**1**	**3**	**1**	**1**

പാഠഭാഗങ്ങൾ

ഖണ്ഡം ഒന്ന് - സംസ്കൃത നാടകം 20 മണിക്കൂർ.

മലയാളശാകുന്തളം നാലാമങ്കം - എ. ആർ രാജ രാജ വർമ

ഖണ്ഡം രണ്ട് - ആട്ടക്കഥ 15 മണിക്കൂർ

നളചരിതം (ഒന്നാം ദിവസം) - ഉണ്ണായി വാര്യർ (തുടക്കം മുതൽ ഹംസം നളനിലുള്ള പ്രണയം ഉറപ്പിക്കുന്നത് വരെ)

ഖണ്ഡം മൂന്ന് - തുള്ളൽ 15 മണിക്കൂർ

കല്യാണസൗഗന്ധികം (ശീതങ്കൻ തുള്ളൽ) - കുഞ്ചൻ നമ്പ്യാർ - (ഭീമൻറെ കദളീവന പ്രവേശം മുതൽ ശ്രീരാമ ദാസൻറെ വംശേ ജനിക്കയാൽ പാരം നിനക്കു മഹംഭാവമിങ്ങനെ' വരെ ഭാഗങ്ങൾ

ഖണ്ഡം നാല് - മലയാള നാടകം 20 മണിക്കൂർ

1128 ൽ ക്രൈം 27 - സി. ജെ. തോമസ്

ഖണ്ഡം അഞ്ച്- സിനിമ 20 മണിക്കൂർ

നിർമാല്യം തിരക്കഥ - എം. ടി . വാസുദേവൻ നായർ

SEMESTER III

COMPLEMENTARY COURSE I

CH3C01B18 INORGANIC AND ORGANIC CHEMISTRY

Credits: 3

Total lecture hours - 54 hrs

Course Outcomes:

CO1: Explain the nuclear stability, fission and fusion processes and applications of radioactive isotopes. (Apply)

CO2: Summarize the biochemical reactions taking place during photosynthesis and respiration and the role of metal ions in biological processes. (Understand)

CO3: Explain the classification, uses and toxic effects of drugs, cosmetics, food additives, fertilizers and pesticides. (Understand)

CO4: Illustrate the preparation, properties, structure and aromaticity of furan, pyrrole and pyridine. (Apply)

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	1	1	1	1
CO2	3	1	1	1	1
CO3	2	1	2	1	1
CO4	2	1	1	1	1

Syllabus Content:

Module I : Nuclear Chemistry (12 Hrs)

Nuclear Stability - Mass defect, Binding energy, Nuclear forces, Magic number, Packing fraction, n/p ratio. Natural and induced radioactivity, radioactivity – detection, Units of radioactivity. Modes of decay – Group displacement law. Isotopes, isobars and isotones with examples. Nuclear fission - Atom bomb – Nuclear fusion – Hydrogen bomb - Nuclear reactors - Nuclear reactors in India. Application of radioactive isotopes – ^{14}C dating – Rock dating – Isotopes as tracers – Radio diagnosis and radiotherapy.

Module II: Bioinorganic Chemistry and Agricultural Chemistry (18 Hrs)

Bioinorganic Chemistry: Thermodynamics of Living cell- Exergonic and endergonic reactions. Metal ions in biological systems - Biochemistry of iron – Metalloporphyrins - Haemoglobin and myoglobin, pH of blood, cytochromes, Ferredoxine - Mechanism of O_2 and CO_2 transportation - Chlorophyll and photosynthesis (mechanism not expected) elementary idea of photophosphorylation. Photosynthesis and respiration – comparison. – Elementary idea of structure and mechanism of action of sodium potassium pump. Biochemistry of zinc and cobalt.

Chemistry and Agriculture: Fertilizers - NPK, superphosphates, triple super phosphate, uses of mixed fertilizers, micronutrients and their role, bio-fertilizers, plant growth hormones.

Pesticides - Classifications with simple examples, Biopesticides. Insecticides – stomach poisons,

contact insecticides, fumigants. Method of preparation and use of DDT. Herbicides - function of 2, 4,-D and 2,4,5 –T, Fungicides - inorganic and organic- Bordeaux mixture. Excessive use of pesticides – environmental hazards.

Module III : Heterocyclic Compounds (8 Hrs)

Aromaticity – Huckel's rule, preparation (any one method), properties, structure and aromaticity of furan, pyrrole and pyridine.

Module IV: Drugs (8 Hrs)

Classification of drugs. Structure, therapeutic uses and mode of action (synthesis not required) of Antibiotics: Ampicillin, Sulpha drugs: Sulphanilamide, Antipyretics: Paracetamol, Analgesics: Aspirin, Antacids: Ranitidine, Antimalarials: Chloroquine and Anti-cancer drugs: Chlorambucil. Psychotropic drugs: Tranquilizers, antidepressants and stimulants with examples. Drug addiction and abuse. Prevention and treatment.

Module V: Food Additives and Cosmetics (8 Hrs)

Food Additives: Food preservatives, artificial sweeteners, flavours, emulsifying agents, antioxidants, leavening agents and flavour enhancers (definition and examples, structures not required) – Structure of BHT, BHA and MSG - Commonly used permitted and non-permitted food colours (structures not required) - Fast foods and junk foods & their health effects – Soft drinks and their health effects.

Cosmetics: Introduction. Dental cosmetics, Shampoos, Hair dyes, Skin products, Shaving cream, Talcum powder, Perfumes and Deodorants (health effects).

SEMESTER III

COMPLEMENTARY COURSE II

ZY3C01B18: PHYSIOLOGY AND IMMUNOLOGY

Credits – 3

Total Lecture Hours: 54

Course Outcomes:

CO1: Illustrate the basic concepts and disorders of nutrition, circulation, respiration. (Analyze)

CO2: Compare the physiology and disorders of excretory, muscular and nervous system. (Analyze)

CO3: Summarize the role of endocrine system in maintaining homeostasis. (Evaluate)

CO4: Distinguish immunological concepts, Immune disorders and application of antigen antibody reactions (Evaluate)

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO1	3	3	1	1	2
CO2	3	2	1	1	2
CO3	3	2	1	1	2
CO4	3	2	1	1	2

Syllabus Content

Module I (14 Hrs)

Nutrition: Types of nutrition – autotrophy, heterotrophy. Nutritional requirements – carbohydrates, proteins, lipids, minerals (Ca, Fe, I), vitamins (sources and deficiency disorders), nutritional disorders

Respiration: Transport of respiratory gases in blood - transport of oxygen, transport of carbon dioxide, chloride shift. Respiratory disturbances – Hypoxia, Hypercapnia, Asphyxia, physiological effect of smoking, carbon monoxide poisoning.

Circulation: Composition and functions of blood. Plasma and formed elements - WBC, RBC and platelets, Mechanism of blood coagulation – clotting factors, intrinsic and extrinsic pathways, anticoagulants. ECG, Blood pressure, Arteriosclerosis, Heamophilia, cerebral and pulmonary thrombosis.

Module II (14 hrs)

Excretion: Structure of a nephron. Urine formation – glomerular filteration, tubular reabsorption, tubular secretion. Urine concentration – counter current mechanism. Composition of urine –normal and abnormal constituents. Hormonal regulation of kidney function. Kidney stone, dialysis.

Neuro physiology: Structure of a neuron. Myelinated and non myelinated nerve fibre, nerve impulse production (resting membrane potential, action potential), Impulse propagation, All or none law, saltatory conduction, synaptic transmission. Neurotransmitters (acetyl choline, adrenalin, dopamine), brain waves, EEG. Neural disorders - Parkinson's disease, Alzheimer's disease.

Muscle physiology: Types of muscles: striated, non striated and cardiac. Ultra structure of striated muscle, Mechanism of muscle contraction, Cori cycle and muscle relaxation. Muscle fatigue, oxygen debt, Rigor mortis.

Module III (8 hrs)

Endocrinology: Introduction to Endocrine system. Mechanism of hormone action, Endocrine glands - hypothalamus, pituitary gland, pineal gland, thyroid gland, parathyroid gland, endocrine pancreas, adrenal gland, thymus gland, testis and ovary. Physiological role of hormones, Hormonal disorders.

Module IV (12 Hrs)

Immunology: Introduction to immunology, types of immunity – innate, acquired, passive, active, mechanism of innate immunity (barriers, inflammation, phagocytosis). Types of antigens. Basic structure of immunoglobulins, Classes of immunoglobulins and functions. Antigen antibody reactions, Precipitation test, agglutination test, WIDAL, VDRL, HIV test (ELISA)

Module V (6 Hrs)

Immune response system: (Brief accounts of the followings)Primary and secondary lymphoid organs, Cells of Immune system - T&B lymphocytes, natural killer cells, macrophages, plasma cells , memory cells, Monoclonal antibodies, Hybridoma technology.

Immune disorders: Hypersensitivity, Auto immunity (rheumatoid arthritis) & Immunodeficiency (AIDS), Vaccines - BCG, DPT, Polio vaccine.

SEMESTER III

CORE COURSE

HS3BO3B18 – HUMAN DEVELOPMENT

Credits: 3

Total Lecture Hours: 72

Course Outcomes:

CO1: Interpret the stages of growth and development of children using different methods of child study

CO2:. Guide prospective parents on prenatal stimulation and assess the sensory capacities and reflexes in a newborn.

CO3: Identify developmental delays, learning disability and develop strategies for early stimulation and intervention to deal with delayed developments in children.

CO4: Critically examine the problems faced by children in distress.

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	**3**	**3**	**2**	**2**	**3**
CO2	**3**	**3**	**2**	**2**	**3**
CO3	**3**	**3**	**2**	**2**	**3**
CO4	**3**	**3**	**2**	**2**	**3**

Syllabus Content:

Module I:(12 Hrs) Introduction to Child Development (12 hours)

• Definition, Significance of Child Development, Scope of Child Development in contemporary India.

• Domains, Stages of Child Development

• Principles of Growth and Development

• Factors influencing development: Nature versus Nurture

• Methods of Child Study: Longitudinal and Cross- sectional Methods

• Methods of data collection: Interviews, Observations, Experimental research,

• Surveys, Case studies, Projective Techniques

Module II: Prenatal development and Neonate (12 hours)

• Prenatal development: Stages, Prenatal care, Prenatal stimulation

• Neonate: Definition, Care of new born- feeding and immunization

• Adjustments of the new born, Sensory capacities and reflexes of the new born.

• Assessment of the new born: (Apgar scale, Phenylketonuria test, hearing test)

Module III:Development of Infant and Toddler/baby (12 hours)

• Brain development and physiology (neurons, synapsis, pruning)

• Low birth weight babies, Pre-term babies

• Early Stimulation: Importance and impact, the role of parents

• Attachment and Bonding

• Physical and motor development

• Cognitive development (Piaget Sensory motor development stage)

• Language development

• Emotions and temperament

• Developmental delays, importance of early detection and intervention

Module IV:Development during arly Childhood/Pre-school years (12 hours)

• Importance of early childhood and early childhood education

• Importance of play, types and functions

• Physical and Motor Development

• Cognitive Development (Piaget's Pre-operational and Concrete operational stage)

• Language Development

• Communication disorders and Learning disability

• Behaviour disorders

• Parenting styles: Democratic/Authoritative, Authoritarian, Permissive

ModuleV:Child Protection Issues (6 hours)

- Basic rights of Children: right to Survival, Protection, Development, Participation.
- Children in need of care and protection: Street children, Orphaned and institutionalised
- children, Children of migrant workers, Children with special needs, Children with HIV Aids,
- Sexually abused children, Substance abused children.

SEMESTER IV

Course Code	Course Title	Credits	Course type
EN4A06B18	Illuminations	4	Common Course I
MA4A06B18	Malayala Gadhyarachanakal	4	Common Course II
HN4A06B18	Gadya Aur Ekanki		
FR4A06B18	An Advanced Course in French –II		
CH4C01B18	Advanced Bio-Organic Chemistry	3	Complementary Course I
CH4CP01B18	Organic Chemistry Practical	2	Complementary course I Practical
ZY4C01B18	Applied Zoology	3	Complementary course II
ZY4CP01B18	Physiology, Immunology and Applied Zoology Practical	2	Complementary course II Practical
HS4B04B18	Family Dynamics	3	Core Course
HS4BP02B18	Human Development and Family Dynamics Practical	2	Core Practical

SEMESTER IV

COMMON COURSE

EN4A06B18 – Illuminations

Credits: 4
Total Lecture Hours: 90

Course Outcomes:

CO1. Discover life lessons through the study of life sketches.

CO2. Explain multiple perspectives of life from the viewpoint of great minds.

CO3. Apply the language skills acquired in academic and non-academic contexts.

CO4. Analyze creative texts with a special focus on human emotions and the spirit of survival.

CO5. Critique the conventional notions of happiness, courage and failure.

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO1	1	1	3	1	2
CO2	1	1	3	1	2
CO3	1	1	3	1	3
CO4	1	1	3	2	2
CO5	1	1	3	1	2

Syllabus Content

Module 1- Life Sketches (18 hours)

Helen Keller: Three Days to See
Jesse Owens: My Greatest Olympic Prize
Thus Spoke Sudarshan: An Interview with God's Own Physicist Compiled from E C G Sudarshan's interviews

Module 2- Essays (18 hours)

Stephen Leacock: Are the Rich Happy?
A.G. Gardiner: On Courage

Module 3- Speeches (18 hours)
Lafcadio Hearn: On Reading
J.K. Rowling: The fringe benefits of failure and the importance of imagination
Chimamanda Ngozi Adichie: An Ode to Makeup

Module 4- Short Stories (18 hours)
Oscar Wilde: The Nightingale and the Rose
George Orwell: Roucolle, the Miser
John Galsworthy: Quality
Alice Walker: Everyday Use

Module 5- Poems (18 hours)
William Ernest Henley: Invictus
Robert Frost: The Road Not Taken
Kahlil Gibran: Of Good and Evil
Maya Angelou: Still I Rise

SEMESTER IV

COMMON COURSE II

MA4A06B18 - മലയാള ഗദ്യരചനകൾ

Credits: 4
Total Lecture Hours: 90
Course Outcomes:

CO1: മലയാള ഗദ്യസാഹിത്യത്തിലെ സമകാലിക വിഷയങ്ങൾ ചർച്ച ചെയ്യുക

CO2: കേരളീയസംസ്കാര - കലാപരിണാമം , ചരിത്രം, ആത്മകഥ എന്നിവ അപഗ്രഥിക്കുക

CO3: ഗദ്യപാഠങ്ങളിലൂടെ സമകാലികവിഷയങ്ങളെ വിലയിരുത്തുക

CO4: സമകാലിക സാമൂഹിക വിഷയങ്ങളെ വിമർശനാത്മകമായി നിരൂപണംചെയ്യുക

CO5: വിവിധ വിഷയങ്ങളെ ആസ്പദമാക്കി ലേഖനങ്ങൾ തയാറാക്കുക. സ്വാനുഭവങ്ങൾ വിവിധ ആഖ്യാന രൂപങ്ങളിലൂടെ ആവിഷ്കരിക്കുക.

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO1	1	1	3	1	2
CO2	1	1	3	1	2
CO3	1	1	3	3	2
CO4	1	1	3	3	2
CO5	1	1	3	1	2

SEMESTER IV

COMMON COURSE II

HN4AO6B18 - GADYA AUR EKAANKI

Credits: 4
Total Lecture Hours: 90
Course Outcomes:

CO1: Discuss the authors contribution to Hindi Literature
CO2: Summarise the central theme and other relevant details of all literary works.

CO3: Illustrate the socio-political and cultural concerns of the Author
CO4: Critique excerpts of the Prose and One Act Plays

CO5: Communicate in oral and written form of Hindi with competence.

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	2	1	1
CO2	1	1	2	1	1
CO3	1	1	2	3	1
CO4	1	1	3	1	1
CO5	1	1	3	3	1

Syllabus Content:

Module- I **(22hrs)**

1. Aaiye hum vriksh devta ki aaradhana karen- Dr. Kishorilal vyas
2. Raajniti ka batvaara- Harishankar parsai
3. Deep daan – Ramkumar verma

Module- II **(24hrs)**

4. Himachadit uttung shikhar aur dhuli hariyali – Vijay kumar sandesh
5. Kaphan chor ka beta – Ushabaala
6. Bahu ki vida- Vinod rastogi

Module- III **(22hr)**

7. Jab mai fail hua- Ramkumar Verma
8. Jaan se pyare – Mamta Kaaliya
9. Sati – G.K. Harjeeth

Module- IV **(22hrs)**

10. Jab intizar hussain apni janmabhoomi laute – Azhar vajahat
11. Hari ghaas par ghante bhar – Surendra verma

SEMESTER IV

COMMON COURSE II

FR4A06B18 AN ADVANCED COURSE IN FRENCH II

Credits: 4

Total Lecture Hours: 90 hours

Course Outcomes:

CO1: Develop language, vocabulary and grammar skills.

CO2: Prepare conversations based on various situations and speak about them.

CO3: Articulate the concepts to express one's opinion in a specific situation.

CO4: Ask questions to get meaningful responses in effective communication.

CO5: Describe events or topics based on various daily life situations such as persons, family, time schedules, visiting countries

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1 A	1	1	3	1	1
CO2 A	1	1	3	1	1
CO3 A	1	1	3	1	1
CO4 U	1	1	3	1	1
CO5 U	1	1	3	1	1

Syllabus Content:

Module I : En voiture Proposer – Accepter – Refuser – Faire des projets- Les routes – La voiture **(30 Hours)**

Module II : Sur la route Exprimer l'obligation/ L'interdiction – La météo– Le temps **(30 Hours)**

Module III : Raconter un emploi du temps Se justifier – Le tourisme - Les pays et les continents **(30 Hours)**

SEMESTER IV

COMPLEMENTARY COURSE

CH4C01B18: ADVANCED BIO-ORGANIC CHEMISTRY

[Common for students who have opted Botany, Zoology, Family & Community Science (Home science)]

Credits: 3

Total lecture hours - 54 hrs

Course Outcomes:

CO1: Summarize the classification, isolation and properties of essential oils, alkaloids and lipids.

CO2: Explain the structure, classification and biological functions of Amino acids, proteins, enzymes, nucleic acids, vitamins, steroids and hormones

CO3: Summarize the preparation, properties and configuration of glucose, fructose, sucrose, starch and cellulose.

CO4: Explain the classification, cleaning action and environmental effects of soaps and detergents.

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	1	1	1
CO2	3	1	1	1	1
CO3	3	1	1	1	1
CO4	3	1	1	3	1

Syllabus Content:

Module I : Natural Products **(12 Hrs)**

Terpenoids: Classification with examples – Isoprene rule – Isolation of essential oils by steam distillation – Uses of lemongrass oil, eucalyptus oil and sandalwood oil - Source, structure and uses of citral and geraniol.

Alkaloids: Classification – Isolation, general properties. Source, structure and physiological activity of nicotine, coniine and piperine.

Lipids: Classification – Oils, fats and waxes (definition, structure, biological functions and examples). Hydrogenation and Rancidity - Acid value, Saponification value and Iodine value –. Biological functions of phospholipids and glycolipids

Soaps and Detergents: Soaps – Types of soaps. Cleansing action of soaps. Synthetic detergents - Classification. Comparison between soaps and detergents. Environmental aspects.

Module II: Amino Acids and Proteins (12 Hrs)

Amino acids: Classification – Zwitter ion formation and isoelectric point- Synthesis of glycine, alanine, and phenyl alanine (any one method). Peptides: Peptide bond. Synthesis of peptides (upto dipeptides). Proteins: Classification of proteins – Primary, secondary and tertiary structure of proteins -– Denaturation of proteins – Tests for proteins.

Module III : Enzymes and Nucleic Acids (9 Hrs)

Enzymes: Nomenclature, classification and characteristics. Mechanism of enzyme action. Theory of enzyme catalysis – Michaelis-Menten theory. Cofactors and coenzymes. Enzyme inhibitors. Uses of enzymes.

Nucleic acids: Structure of pentose sugar, nitrogenous base, nucleoside and nucleotide – Double-helical structure of DNA – Differences between DNA and RNA. Biological Functions – Replication and protein biosynthesis. Transcription and Translation. Genetic code.

Energy rich molecules: Elementary structure of ATP, ADP and AMP.

Module IV : Carbohydrates (12 Hrs)

Classification with examples. Preparation and properties of glucose, fructose and sucrose. Cyclic structures and Haworth projections of glucose, fructose, maltose and sucrose (ring size determination not expected). – Mutarotation. Conversion of glucose to fructose and vice versa. – Structure of starch and cellulose (structure elucidation not expected). Industrial applications of cellulose.

Module V: Vitamins, Steroids and Hormones (9 Hrs)

Vitamins: Classification. Structure, biological functions and deficiency diseases of vitamins A, B_1, B_2, B_3, B_5, B_6, B_{12} (structure not required), C and D.

Steroids: Introduction. Structure and functions of cholesterol. Elementary idea of HDL and LDL. Bile acids.

Hormones: (only examples and biological functions needed. Structures are not needed.) Introduction. Steroid hormones, peptide hormones and amine hormones (examples, endocrine gland and biological functions, structure not required). Artificial hormones (elementary study only).

SEMESTER IV

COMPLEMENTARY COURSE - PRACTICAL

CH4CP01B18: ORGANIC CHEMISTRY PRACTICALS

Credit – 2

Total Hours: 72 Hrs

Course Outcomes:

CO1: Determine the heteroatoms present in an organic compound.
CO2: Identify the functional groups present in an organic compound.
CO3: Recall method of preparation of solid derivative of the analyzed organic compound.

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	1	1	3
CO2	3	1	1	1	3
CO3	3	1	1	1	3

Syllabus Content:

1. Tests for elements: Nitrogen, Halogen and Sulphur
2. Determination of physical constants
3. Study of reactions of common functional groups.
4. Qualitative analysis with a view to characterization of functional groups and identification of the following compounds: Naphthalene, anthracene, chlorobenzene, benzyl chloride, p-dichlorobenzene, benzyl alcohol, phenol, o-, m- and p- cresols, α-naphthol, β-naphthol, resorcinol, benzaldehyde, acetophenone, benzophenone: benzoic acid, phthalic acid, cinnamic acid, salicylic acid, ethyl benzoate, methyl salicylate, benzamide, urea, aniline, o-, m- and p- toluidines, dimethyl aniline, nitrobenzene, o-nitrotoluene, m-dinitrobenzene and glucose. (minimum of ten compounds to be analysed).
5. Organic preparation involving halogenation, nitration, oxidation, reduction, acetylation, benozylation, hydrolysis, diazotization. (non- evaluative)
6. Isolation of an organic compound from a natural source. (non- evaluative)

COMPLEMENTARY COURSE -
ZY4C01B18: APPLIED ZOOLOGY

Credits: 3

Total Lecture Hours: 54

Course Outcomes:

CO1: Develop skills in fish breeding techniques and various aquaculture practices.

CO2: Analyse the life history and rearing techniques of silkworm

CO3: Practice earthworm rearing techniques and methods of vermicomposting

CO4: Illustrate social life in honey bees and management of an apiary in relation with entrepreneurship development.

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	1	1	1
CO2	3	1	1	1	1
CO3	3	1	1	1	1
CO4	3	1	3	3	1

Module I: Aquaculture 24 Hrs

Advantages of aquaculture, Traditional methods of aquaculture, Biotic and abiotic factors in water, Pond culture – construction and maintenance. Types of aquaculture, composite fish culture, integrated fish culture, induced breeding of carp & prawn, Importance of algae in aquaculture. Aquarium management - Setting up of an aquarium, biological filter and aeration. Common cultivable fishes of Kerala. Fish diseases, Prawn culture, mussel culture, pearl culture, Fish processing and preservation.

Module II: Sericulture 12 Hrs

Four species of silkworms, life history of silkworm, silk worm rearing techniques, Mounting of silkworm - Chandrika, defective cocoons, harvesting and stifling of coccons. Silkworm diseases and pest, preventive and control measures.

Module III: Vermiculture 6 Hrs

Species of earthworms, ecological classification of earthworms, life cycle and reproduction of earthworm. Physical & chemical effects of earthworms on soil, Vermicomposting – site selection, preparation of pit, maintenance, monitoring and harvesting of vermicompost.

Module IV: Apiculture **12 Hrs**

Species of honey bees, organization of honey bee colony. Bee keeping methods and equipments. Apiary management and maintenance. Bee pasturage, byproducts of honey bees and their uses. Diseases, pests of honey bees and control measures.

SEMESTER IV
COMPLEMENTARY COURSE PRACTICAL

ZY4CP01B18: PHYSIOLOGY, IMMUNOLOGY AND APPLIED ZOOLOGY
Credits – 2

Total Hours: 72

Course Outcomes:

CO1: Analyse the presence of reducing sugar, protein and lipid

CO2: Identify human blood groups and leucocytes and estimate haemoglobin

CO3: Explain the action of salivary amylase, principle and use of sphygmomanometer and stethoscope.

CO4: Compare economic importance and morphology of culturable fishes, earthworms, honey bees and silkworm.

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	1	1	3
CO2	1	1	1	1	3
CO3	1	1	1	1	2
CO4	1	1	1	1	2
CO5	1	1	1	1	2

PHYSIOLOGY AND IMMUNOLOGY

1. Preparation of Human Blood smear & Identification of leucocytes.
2. Qualitative analysis of Reducing Sugar, Protein and Lipid.
3. Action of Salivary amylase on Starch (Demonstration Only).
4. Estimation of Haemoglobin (Demonstration only).
5. Identification of human blood groups, A, AB, B and O, Rh factor.
6. Instruments (Principle & uses) -Sphygmomanometer, Stethoscope.

APPLIED ZOOLOGY

General identification, economic importance, morphology, scientific names and common names of the following

1. Economic importance and morphology of culturable fishes (Catla, Rohu, Grass carp, Common carp, Silver carp, Etroplus, Tilapia)
2. Two species of earthworms used in Vermiculture
3. Two species of honey bees
4. Silkworm. Cocoon/Adult
5. Castes of honey bees
6. Bee keeping equipments - Bee hive, Smoker, honey extractor
7. Identification and uses - Bee wax, Honey, Silk, Vermicompost
8. Chandrika / Natrika used in sericulture

SEMESTER IV

CORE COURSE

HS4B04B18: FAMILY DYNAMICS

Credits: 3

Total Lecture Hours: 72

Course Outcomes:

CO1: Observe, identify and interpret the stages of growth and development of adolescent.

CO 2: Map the milestones in the different domains like physical, psychological, cognitive and moral development during adolescence.

CO3. Track the current issues confronting adolescents and derive preventive and remedial measures to be taken to resolve the same.

CO4: Critically examine the problems and care mechanisms available for the elderly and undertake studies on the various critical situations confronting families.

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	**PSO1 U**	**PSO2 U**	**PSO3 C**	**PSO4 C**	**PSO5 A**
CO1 U	1	3	1	1	2
CO2 A	1	3	1	2	3
CO3 A	1	3	1	2	3
CO4 A	1	3	1	2	3

Syllabus Content:

Module 1: Adolescent Development (12 hours)

- Definition and Significance of Adolescence
- Stages of Adolescence: Early (Ages 11-14), Middle (15-17 years) and Late (17-19 years)
- Physical changes: Primary and secondary sex characteristics; Psychological response to puberty

- Adolescent population in India and their significance.

Module 2: Developments: Social, Emotional, Cognitive, And Moral (12 hours)

- Parent-adolescent relationships, changing social networks: Peers (cliques and crowds), Social media; Emotional Intelligence, Sexual/romantic relationships.
- Identity formation including Gender Identity
- Reasoning, Moral reasoning and judgement; Piaget's Formal operational period, Changes in moral concepts, religious beliefs and attitudes.

Module 3: Issues and concerns in Adolescence (13 hours)

Health Issues: Obesity, Underweight, Anaemia in girls, Sexually Transmitted Diseases; Reproductive health issues; Mental Health Issues: Anxiety, Depression, Suicide, Eating disorders (Anorexia Nervosa, Bulimia), Substance abuse; Social Issues: Academic Pressure, Bullying, Sexual abuse, Delinquency; Anti-social Behaviour, Adolescent labour, Teen Marriage, Adolescent Trafficking.

Module 4: Issues during Ageing (5 hours)

Demographic profile, Needs and Problems of the Elderly, Care of the Aged.

Module 5: Contemporary Issues Affecting Family **(12 hours)**

Family – Definition and Types.

- Urbanization and globalization, single lone parenthood, blended families, influence of electronic media, Live-in relationships
- Infidelity, desertion, divorce, alcoholism, death, suicide, disabilities, financial crisis and its effect on family. Need for guidance and counselling.

III & IV SEMESTER
CORE PRACTICAL
HS4BP02B18 : HUMAN DEVELOPMENT AND FAMILY DYNAMICS PRACTICAL

Credits – 2
Total Hours: 72
Course Outcomes:

CO1: Prepare educational aids for classroom application

CO2: Map the milestones in the different domains like physical, psychological, cognitive and moral development during childhood and adolescence

CO3: Design prototype of indigenous toys for preschool children

CO4: Conduct research related to ageing, adolescence and children and document

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1 U	PSO2 U	PSO3 C	PSO4 C	PSO5 A
CO1 A	1	3	2	2	3
CO2 A	1	3	1	1	3
CO3 C	1	3	2	3	3
CO4 A	1	3	2	2	3

Credits : 2
No. of hours : 72
Syllabus Content
Human Development : (36 hours)

1. Document and map milestones of development in a preschool child – Physical, motor, intellectual, emotional, language and social developments.
2. Plan and develop activities to facilitate development in different domains. Preparation of material for parents of children (poster, toys etc).
3. Prepare a poster/video displaying (i) the importance of early childhood years.

4. Design a prototype of an educational/indigenous toy for pre schoolers and evaluate it- (self, peer, teacher evaluation)
5. Visit to any one of the following places: (i) Home for the aged (ii) SOS village (iii) Orphanage (iv) Institutions for children with special needs. Report it in the form of a case study/interview.
6. Survey of selected resources for family and children in the community and market to impart readiness skills (reading, writing, arithmetic).
7. Document audio and video sources of studying prenatal development, infancy, early childhood and middle childhood period.
8. Compile stories, folk songs, toys and games from diverse ethnic groups.
9. Collect evidences on media portrayals of women and children in the current scenario.

Family Dynamics: (36 hours)

1. Study the cognitive development and creativity during adolescence.
2. Case profile of an adolescent – including study of self, family relationships and peer relationships
3. Understanding self as an adolescent: exercise on self-reflection.
4. Workshop on managing emotions, promotion of well-being – yoga, self-development resources etc.
5. Study the main issues facing today's adolescents and document
6. Plan a survey using questionnaire on any issue facing the elderly.
7. Conduct a survey using the above constructed questionnaire and report.
8. Prepare a PowerPoint presentation highlighting any issues facing adolescents today
9. Visit any institution catering to the needs of adolescents and evaluate
10. Make a report on the counselling facilities available in Ernakulam.

Semester V

Course Type	Course Code	Course Title	Credits
Core	HS5B05B18	Environmental Communication And Human Rights	3
	HS5B06B18	Human Nutrition	3
	HS5B07B18	Textile Science	3
	HS5B08B18	Interior Decoration	3
Open Course	HS5D01aB18	Life Skill Strategies and Techniques	3
	HS5D01bB18	Interior Decoration and Related Arts	3
	HS5D01cB18	Nutrition for Wellness	3
	HS5D01dB18	Self-Empowerment Skills	3

SEMESTER V

CORE COURSE

HS5B05B18 ENVIRONMENTAL COMMUNICATION AND HUMAN RIGHTS

Credits: 3

Total Lecture Hours: 54

Course Outcomes:

CO1: Observe, identify and interpret the significance of environmental science

CO2: Track the current issues of depletion of natural resources and pollution

CO3: Develop environmental communication aids by critically examining the problems

CO4: Create programs on advocacy for human rights and environmental protection.

- **Mapping of Course Outcomes with Program Specific Outcomes**

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	1	3	3
CO2	1	1	2	3	3
CO3	1	1	2	3	3
CO4	2	2	2	3	3

Syllabus Content:

Module 1: Multidisciplinary nature of environmental studies (10 hours)

- Definition, scope, and importance need for public awareness. Natural Resources-Renewable and non-renewable resources: Natural resources and associated problems.
- Forest resources: Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forest and tribal people.
- Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits, and problems.

- Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies. Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.

- Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources. Case studies.

- Land resources: Land as a resource, land degradation, man-induced soil erosion, and desertification. Role of an individual in conservation of natural resources. Equitable use of resources for sustainable lifestyles.

- Ecosystems: Concept of an ecosystem. Structure and function of an ecosystem. Producers, consumers, and decomposers. Energy flow in the ecosystem. Ecological succession. Food chains, food webs, and ecological pyramids. Introduction, types, characteristic features, structure, and function of the following ecosystem: -Forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystems (ponds, streams, lakes, rivers, oceans estuaries)

Module 2: Social Issues and the Environment (10 hours)

- Biodiversity and its conservation: Definition, Bio geographical India. Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic, and option values. India as a mega-diversity nation. Hot-sports of biodiversity, Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts. Endangered and endemic species of India

- Environmental Pollution Definition. Cause, effects, and control measures of - Air pollution, Water pollution, Soil pollution, Marine pollution, Noise pollution, Thermal pollution, nuclear hazards Solid industrial wastes. Role of an individual in prevention of pollution. Pollution case studies. Disaster management: floods, earthquakes, cyclones, and landslides. Waste Management: Causes, effects, and control measures of urban and industrial waste

- From Unsustainable to Sustainable development. Urban problems related to energy, Water conservation, rainwater harvesting, and watershed management. Resettlement and rehabilitation of people; its problems and concerns.

- Case Studies. Environmental ethics: Issues and possible solutions. Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents, and the holocaust.
- Case Studies. Consumerism and waste products. Environment Protection Act. Air (Prevention and Control of Pollution) Act. Water (Prevention and Control of Pollution) Act. Wildlife Protection Act Forest Conservation Act. Issues involved in the enforcement of environmental legislation. Public awareness.

Module 3: Process of Communication (15 hours)

- Definition, Functions, elements, and process of communication, Four levels of communication- Intrapersonal, interpersonal level, Group level, and Communication with mass audiences.
- Functions of mass communication and its relevance to society especially in communicating environment-related messages. Mass communication through different Modes-Print media - newspaper, books, magazines, leaflets, and pamphlets. Electronic Media-Radio, television, video, films, computer-based email, internet, blogs, message boards (Basic or electronic), podcasts, video sharing, and mobiles.
- Role of information technology in communication (internet, video conferencing, e-mail etc.) Outdoor, mass media- exhibitions, fairs, street drama. Writing for the media: Article for a newspaper and other print media, Scriptwriting for TV and radio programs and presentations, Techniques for preparation of effective advertisements.

Module 4: Environmental Communication (12 hours)

- Public health impacts and environmental factors related to the entire food system. Using an Environmental Nutrition Approach to Define Healthy Food. The Environmental Footprint of Industrial Food Production.
- The Role of Social Justice in Environmental Nutrition.
- Rethinking Diet and Disease from an Environmental Nutrition Perspective. Creating a Healthier, Sustainable Food System.

Module 5: Human Rights (7 hours)

- Human Rights– An Introduction to Human Rights, Meaning, concept, and development,

Three Generations of Human Rights (Civil and Political Rights; Economic, Social and Cultural Rights)

- Human Rights and United Nations – contributions, main human rights-related organizations -UNESCO, UNICEF, WHO, ILO, Declarations for women and children, Universal Declaration of Human Rights.
- Human Rights in India – Fundamental rights and Indian Constitution, Rights for children and women, Scheduled Castes, Scheduled Tribes, Other Backward Castes, and Minorities.
- Environment and Human Rights - Right to Clean Environment and Public Safety: Issues of Industrial Pollution, Prevention, Rehabilitation and Safety Aspect of New Technologies such as Chemical and Nuclear
- Technologies, Issues of Waste Disposal, Protection of Environment Conservation of natural resources and human rights: Reports, Case studies, and policy formulation.
- Conservation issues of Western Ghats- mention Gadgil committee report, Kasthurirengan report. Overexploitation of groundwater resources, marine fisheries, sand mining etc.

SEMESTER V

CORE COURSE

HS5B06B18 HUMAN NUTRITION

Credits **3**

Total Lecture Hours **54**

Course Outcomes:

CO1: Describe the functions, sources and role of nutrients in the maintenance of good health

CO2: Explain the biological processes and systems as applicable to human nutrition

CO3: Summarize how dietary components, macronutrients (carbohydrates, proteins and fats) and micronutrients (vitamins and minerals), influence health and disease at the whole organism, organ, cellular and molecular level

CO4: Describe the basis of human nutritional requirements and recommendations through the life cycle

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	**1**	**2**	**1**	**2**	**2**
CO2	**1**	**1**	**1**	**2**	**2**
CO3	**1**	**3**	**1**	**2**	**2**
CO4	**2**	**3**	**1**	**2**	**2**

Module 1: Introduction to Human Nutrition and Energy (4 hours)

Nutrition Scenario in India, Food guide pyramid, model food plate, Dietary guidelines for Indians. Recommended Dietary Allowances (RDA)-Definition, Factors affecting nutrient intake of various age groups, Indian reference man and woman.

Energy –Units of energy, determining energy content of foods using Bomb Calorimeter, Gross Calorific Value, Physiological Fuel value of Foods. Total energy expenditure-measurement and components. Direct and Indirect calorimetry. Basal metabolism - definition, factors affecting BMR, measurement, thermic effect of activity, thermic effect of food, adaptive thermogenesis, Energy requirement for different age groups.

Module 2: Macro Nutrients (15 hours)

Carbohydrates– Composition, classification, functions and food sources. Metabolic pathways of carbohydrates. Dietary and functional fiber and potential health benefits.

Proteins-Amino Acids – Essential and Non Essential, Structure, classification and functions of proteins, metabolism (Deamination, Transamination and Decarboxylation, Urea cycle), Requirements and sources. Methods of evaluating protein quality of foods (BV,PER,NPU).

Lipids-Types of fatty acids, Composition, functions, classification, fat metabolism (Beta oxidation), ketone body formation, Food sources and requirements.

Water- Distribution and functions in human body. Water balance from intake and out put. Water deficiency (Dehydration) and Intoxication(oedema)

Module 3: Micronutrients (15 hours)

a) Vitamins- Functions, food sources, requirements and deficiency.

Fat soluble vitamins- A,D,E and K

Water soluble vitamins–Thiamine, Riboflavin, Niacin, Pyridoxine, Folic acid, B_{12} and C

b) Minerals-Calcium, Phosphorous, Iron, Iodine, Selenium And Zinc

Module 4: Nutrition in Childhood (10 hours**)**

Planning balanced diets, Factors considering for planning of menu for various age groups, steps in meal planning.

Nutrition in Infancy- Growth and development, Composition of breast milk, advantages of breast feeding, weaning and supplementary foods.

Nutrition for Preschool Children-Growth pattern, nutritional requirements, need for developing good food habits.

Nutrition for School Going Children - Growth pattern, nutritional requirements, development of good food habits, packed lunch, Nutritional programmes and policies for children.

Module 5: Nutrition during Adolescence and Adulthood (10 hours)

Nutrition in Adolescence - Growth and development, nutritional requirements, factors affecting eating habits , Eating disorders.

Nutrition in Adulthood – Classification of activities, Nutritional requirements and health problems of adults.

Nutrition in Pregnancy - Physiological changes during pregnancy, Effect of mal nutrition pregnancy outcome, nutritional requirements, problems during pregnancy.

Nutrition in Lactation - Physiology of lactation, Nutritional requirements, galactogogues

Nutrition in Old age – Physiological changes during old age, nutritional requirements, dietary modifications, nutrition related problems of elderly.

SEMESTER V
CORE COURSE
HS5B07B18 TEXTILE SCIENCE

Credits : 3

Total Lecture Hours : 54

Course Outcomes

CO1: Describe the various types of fibres, their processing, properties and manufacturing of yarns and fabrics

CO2: Apply various fibres, yarns and weaves for different end uses

CO3: Explain the basics of printing, dyeing and new methods of fabric finishing

CO4: Comprehend modern methods of fabric creation and ornamentation**.**

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	**1**	**1**	**2**	**1**	**2**
CO2	**1**	**1**	**3**	**2**	**3**
CO3	**1**	**1**	**2**	**2**	**2**
CO4	**1**	**1**	**3**	**2**	**3**

Module 1: Study of Fibres (20 hours)

Definition, Classification of Textile fibres**,**Manufacture, Properties and uses of Textile Fibres- Cotton , Linen, Wool, Silk, Rayon, Nylon and Polyester. Methods of identification of textile fibres.

Module 2: Study of Yarns(6 hours)

Process of making Fibre into yarn, (Cotton and Woollen Systems)Mechanical- Ring and open end spinning, and Chemical. Classification of Yarn- type, count, twist, number of parts, novelty yarns.

Module 3: Fabric Structure (10 hours)

Weaving: Loom- parts and its operations. Weaves- Basic weaves – twill, plain, satin and its variations: Fancy weaves- pile, dobby, jacquard, leno, lappet, clip spot, double cloth and crepe.

Other methods of making fabrics- knitting- types of knits, felting, braiding, netting, lace making and bonding.

Module 4: Dyeing, Printing and finishes (15 hours)

Dyes and dyeing – classification of dyes- natural, artificial- acid, basic, direct, sulphur, naphthol, disperse and mordants, Stages of dyeing- fibre, yarn and fabric.

Printing – Direct – block, roller and screen, discharge, resist, tie and dyeing and batik

Finishes – definition, purpose , classification and types- singeing, scouring, bleaching, sanforizing, calendaring, tentering, sizing, weighting, brushing, napping, functional finishes, stain resistant and antimicrobial finishes.

Module 5: Modern Textiles(3hours)

New trends in Textiles : a brief introduction to spandex, geo – textiles, nano fabrics, medicinal fabrics and eco friendly textiles – organic cotton, jute, bamboo fibre.

SEMESTER V

CORE COURSE

HS5B08B18 INTERIOR DECORATION

Credits : 3

Total Lecture Hours : 54

Course Outcome:

CO1: Describe various elements and principles of design, role of elements and principles of design in creating good interior design

CO2: Apply the elements and principles of design, application of colour harmonies in interior designing

CO3: Select suitable lighting, furniture, furnishings and accessories for interior

CO4: Create decorations for special occasions

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	**1**	**1**	**2**	**1**	**2**
CO2	**1**	**1**	**3**	**1**	**3**
CO3	**1**	**1**	**3**	**1**	**3**
CO4	**1**	**1**	**3**	**1**	**3**

Module 1: Design Basics (13 hours)

Introduction to Interior Designing, Importance of Good Taste, Concept and Objectives of Interior Decoration, Definition, Types of Design Elements of Design: Line, Shape, Texture, Colour, Light and Space. Motifs and Patterns Principles of Design- Proportion, Balance, Rhythm, Emphasis, Harmony, Design Applications with different principles of design

Module 2: Colour and Lighting in Homes (12 hours)

Colour in homes: Qualities of Colour, Prang Colour System, Colour Harmonies and Schemes;

Use and Effects of various Colours, Colour Schemes for various Rooms in a house. Home Lighting: Importance of Home Lighting, Sources of Lighting- Natural and Artificial, Types of Lamps and Types of Lighting: General, Task, Spot and Decorative; Direct, Indirect, Semi Direct and Semi Indirect. Types of lighting and lighting requirement for various rooms; Physical and Psychological Aspects of Lighting

Module 3: Furniture, Furnishing and Accessories (12 hours)

Interior Surfaces: Traditional and Modern Surface Finishes – Types and Uses, Wall Finishes, Floor Finishes& Ceiling Finishes for various rooms. Furniture Requirement for various Rooms, Guidelines for Selection and Arrangement of Furniture, Types of Furniture, Upholstered Furniture, Materials for Furniture Making. Furnishings: Classification and Selection of Soft Furnishings, Types of Windows, Window Treatments –Classification- Hard and Soft; Curtain Styles, Top Dressing, Selection of Rugs and Carpets. Accessories - Classification and Role in Interiors, Flower Arrangement - Principles, Different Styles, Types and Basic Shapes, Drying Techniques and Dry Flower Arrangement, Indoor Plants and latest trends in gardening such as

Kitchen garden, Roof top garden, Aquaculture, Xeriscaping, Dish garden, Terrarium, Vertical garden etc.

Module 4: Interior Space Organization and Decorations (12 hours)

Housing: Basics of House Planning Principles, Reading House Plans. Space Requirement for Various Activities in Different Rooms; Storage for Living, Dining and Bed Rooms, Points to be considered in Space Planning; Space Saving Techniques Kitchen: Types of Kitchen and its layout, Modular Kitchen, Work Spaces, Work Triangle

Module 5: Home Decorations and Care (5 hours)

Decorations for Special Occasions: Theme setting of Rooms, Stage Decorations, Stage Decoration for Party and celebrations. Napkin folding, Demonstration on Table setting for Parties Care and Maintenance of Interiors: Cleaning methods and agents for various surfaces- Fabric, Metal, Leather, Glass, Wood, Curtains and carpets, Selection and use for different surface, the Cleaning procedure and care of different articles, Cleaning Equipment- selection, care and maintenance, Types of common pests and effective methods to control.

SEMESTER V

OPEN COURSE

(For students of other Programmes)

HS5D01aB18 : LIFE SKILL STRATEGIES AND TECHNIQUES

Credits : 3

Total Lecture Hours : 54

Course Outcomes

CO1: Explain the concepts of Food, nutrients, food groups, balanced diet, and life style diseases

CO2: Describe the significance of resource management and interior design

CO3: Explain the importance of personality enhancement and communications in daily life

CO4: Identify entrepreneurial avenues and create entrepreneurial ventures

Syllabus Content

Module 1: Health and Nutrition Strategies (20 hours)

Nutrients, Food groups, Balanced diet, Food Guide pyramid, Principles of Dietary planning, Dietary guidelines for Indians (NIN), Indian reference Man and Woman, Nutrition Transition, Prevalence of life style diseases and risk factors, Food labelling and Food additives.

Module 2: Resource Management and Interior Design (15 hours)

Time Management- Significance and Techniques, Work Simplification for Energy Management, Income Management – Budgeting, Supplementation of Income and savings.

Principles and Elements of Design, Accessories for Home Décor, Adding life to Interiors by Plant and Floral decorations

Module 3: Enhancing Personality through Clothing and Grooming (14 hours)

Essentials in good grooming, Elements and Principles of design applied to clothing, Selection of suitable costume for different figure types, for various occasions-interview, formal and informal; Care of Fabrics

Module 4: Development of Self, Interpersonal relationships, Career skills (14 hours)

Coping and Self-Management skills: Self-esteem, Intra personal communication, Conflict and Stress management; Interpersonal/Communication skills: Verbal and non-verbal communication (Body language), Active listening. Goal setting, Interview skills, leadership skills, Team Work

Module 5: Developing Entrepreneurial Skills (9 hours)

Baking: Role of ingredients in baking, mixing methods.

OR

Flower arrangement: Basic principles in flower arrangement, Types of flower arrangements

OR

Arts and Craft making: Technique and supplies needed.

OR

Designs on Fabrics: Techniques and supplies needed for Fabric painting, / Bathik designs, /Screen printing, /Block printing.

OR

Table Setting and Table etiquettes

SEMESTER V

OPEN COURSE

(For students of other Programmes)

HS5D01bB18: INTERIOR DECORATION & RELATED ARTS

Credits : 3

Total Lecture Hours : 54

Course Outcomes

CO1 Describe basic elements and principles of design and its role in creating good interior design

CO2 Apply basics of design and colour harmonies in interior designing

CO3 Select suitable lighting for interior by calculating lighting requirements for different rooms

CO4: Comprehend furniture, furnishings and accessories requirement for interior

CO5: Use basic hand stitches and other ornamentation techniques in furnishing

Syllabus content

Module 1: Concept of interior decoration (2 hours)

Introduction to foundation of art, importance of good taste in interior decoration

Module 2: Design (25 hours)

Definition and types: structural and decorative Elements of design-line form, shape, texture, space pattern, light. Principles of design-proportion, balance, harmony, emphasis, rhythm Colour-Importance of colour in interiors, Prang colour system, colour harmonies, application of colour.

Module 3: .Housing (12 hours)

Family's housing needs, factors influencing selection and purchase of site, reading house plans, principles of planning a house. Illumination-Importance of lighting for interiors, Types of lighting-natural and artificial, design of fixtures, arrangement and lighting for various purposes **Module 4: Furniture (23 hours)**

Selection and arrangement of furniture, types-dual purpose, built in, furniture requirements for various rooms. Soft furnishings- Selection, classification, curtain styles, hanging of curtainspelmets, swags, valences and their effect, planning curtain styles for different types

of windows. Accessories - Types and their role in interiors. Indoor gardening-Types and suitability of plants, care Flower arrangement-Different styles, principles of flower arrangement, basic shapes.

Module 5: Surface ornamentation (10 hours)

Basic hand stitches-classification, decorative stitches fabric painting

SEMESTER V

OPEN COURSE

(For students of other Programmes)

HS5D01cB18 NUTRITION FOR WELLNESS

Credits : 3

Total Lecture Hours : 54

Course Outcomes

CO1: Describe the concepts of food groups, balanced diet and relation between food and health

CO2: Explain the methods of assessment of nutritional status

CO3: Summarize how dietary components, macronutrients (carbohydrates, proteins and fats) and micronutrients (vitamins and minerals), influence health and disease at the whole organism, organ, cellular and molecular level

CO4: Describe phytochemicals and their health benefits and anti-nutritional factors in foods

Syllabus Content

Module 1: Introduction to Nutrition: (6 hours)

Introduction, Classification of foods (based on origin, chemical composition predominant function, nutritive value, ICMR Food Groups) Relation of food and health, food and its functions, Digestion, absorption and utilization of food.

Nutrients and their function: Energy, Proteins, fats, Vitamins, Minerals and Trace elements:- sources, functions, Recommended dietary allowances, deficiency, prevention and treatment, Functional foods and its role.

Module 2: Menu Planning (24 hours)

Factors affecting meal planning, balanced diet, steps in planning balanced diet, Life cycle nutrition : Nutritional requirements and planning diets during pregnancy, lactation ,Infancy, preschool ,school age, adolescents, adults and old age.

Module 3: Therapeutic Diets (18 hours)

Introduction- Purpose of diet therapy, classification of modified diets, Diets for selected

disorders: Diabetes Mellitus, Typhoid fever, cardiovascular diseases-Atherosclerosis, hypertension; Peptic ulcer, Cirrhosis of liver, glomerulonephritis.

Weight Management: Introduction, etiology, assessment, principles of dietary management, dietary guidelines

Module 4: Assessment of Nutritional Status: (12 hours)

The methods of assessment of nutritional status

Direct Methods: - Anthropometry, Biochemical changes,

Clinical examination of signs, Dietary Analysis

Indirect Methods: - Vital health statistics

Module 5: Phyto chemicals and Anti nutritional factors in foods (12 hours)

Types of phytochemicals, health benefits, Sources and Disease Preventing Properties of Phytochemicals. Anti-nutritional factors, Trypsin inhibitors, phytates, Tannins, Oxalates, goitrogens, other toxic agents in food, other xenobiotics and dietary fibre.

SEMESTER V

OPEN COURSE

(For students of other Programmes)

HS5D01dB18 SELF EMPOWERMENT SKILLS

Credits : 3

Total Lecture Hours : 54

Course Outcomes

CO1: Explain the concepts of personality development and resource management

CO2: Identify the importance of interpersonal skills

CO3: Explain the importance social skills

CO4: Develop strategies to manage family life using appropriate soft skills

CO5: Develop aesthetic and income generating skills

Syllabus Content

Module 1: Personality Development and Resource Management (20 hours)

Definition, Determinants, values to cherish, Steps to build Positive self-esteem, Tips to develop a positive personality. Resources – definition, Types Management- definition, Steps in management process, Decision making Time management- Time Schedule, Tools in Time management Money Management – Steps in making Budget, Record keeping. Energy management – Types of fatigue, Causes of fatigue, Work simplification.

Module 2: Communication and Learning Skills (22 hours)

Intelligent Listening, Effective speaking, Impressive writing skills- letters, note taking. Presentation skills – Making word file in computer, preparation of OHP & Power Point Slides, Facing Interviews, Participating in group discussions. Importance of interpersonal skills in

relationships (Husband- Wife, Parent –Child, Teacher – student and sibling relationships). Intelligence – Definition, areas of intelligence, Types of learning, Memory techniques Scientific learning, Tips for writing examinations.

Module 3: Social skills. (10 hours)

Different social skills, Steps in fostering right attitudes, Qualities that make a person successful.

Module 4: Family life skills. (10 hours)

Marriage – definition, Areas of Marital adjustment, Factors influencing adjustment . Parenting skills, Reproductive health – diet, personal hygiene. Stress management, Life skills for psycho – social development

Module 5: Aesthetic & Income generating skills. (10 hours)

Interior decoration- Types, Elements & principles of design, colour combinations Flower Arrangement, Meal planning, Food preservation, Waste management, Wealth from waste.

SEMESTER VI

Course Code	Course Title	Credits	Course type
HS6B09B18	Dynamics of Extension	3	Core Course
HS6B10B18	Dietetics	3	Core Course
HS6B11B18	Fashion Designing and Apparel Production	3	Core Course
HS6B12B18	Family Resource Management	3	Core Course
HS6B13aB18	Women Empowerment	3	Choice based Core
HS6B13bB18	Surface Ornamentation Techniques	3	Choice based Core
HS6B13cB18	Early Childhood Care and Intervention	3	Choice based Core
HS6BP03B18	Environmental Communication and Extension Education Practical	2	Core Practical
HS6BP04B18	Human Nutrition And Dietetics Practical	2	Core Practical
HS6BP05B18	Textile Science, Fashion designing and Apparel Production Practical	2	Core Practical
HS6BP06B18	Interior Decoration and Resource Management Practical	2	Core Practical
HS6BPRB18	PROJECT	2	Project

SEMESTER VI

CORE COURSE

HS6B09B18 DYNAMICS OF EXTENSION

Credits : 3

Total Lecture hours: 54

Course Outcomes:

CO1: Observe, identify and interpret the significance of Extension education

CO2: Use extension communication techniques.

CO3: Develop audio visual aids and extension programmes by critically examining the problems

CO4: Plan, implement and evaluate an extension programme.

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	1	2	2
CO2	1	1	1	2	2
CO3	1	1	1	3	3
CO4	1	1	1	3	3

Syllabus Content:

Module1: Extension (10 hours)

Extension-Meaning, principles, concepts, scope and objectives of extension education in India. Role of an extension worker, Qualities of an extension worker. Steps in extension teaching process, criteria for effective extension teaching and learning, Home Science Extension Education, vocationalization of Home Science in India, self-employment and Entrepreneurship

through Home Science.

Module 2: Community development in India (15 hours)

Community development- Objectives and principles of community development and extension programme in India. Community development set up-at the national, state, district, block and village levels.

Types of communities and its special features- Rural and Urban, and Tribal. Basic rural Institutions- school, panchayat, co-operatives; other institutions mahila mandals, youth clubs, farmers organizations. Some of the Women and child development programmes implemented by the Government of India-, Support to Training and Employment. Programme for Women (STEP), Swarna Jayanti Gram Swarojgar Yojana (SGSY), Integrated Child Development Service (ICDS).

Leadership- Concept and definitions, types of community leaders-Professional leader and lay leaders; autocratic, democratic and laissez-faire leaders. Methods of identifying community leaders. Importance of rural Leadership for community development.

Module 3: Programme planning, implementation and evaluation in Extension (5 hours)

Objectives, principles and steps involved. Plan of work-components, developing a plan of work, factors to be considered. Implementation and evaluation

Module 4: Communication and methods of approaching people (15 hours)

Definition and importance, elements of communication- leagen's model, problems in communication, motivation- methods of motivating people.

Classification of extension teaching methods/ methods of approaching people - individual, group and mass methods.

Individual methods- personal visits, letters.

Group methods-meetings, discussions, demonstrations, folk songs, drama, role play, seminar, field trips, exhibitions. Mass methods- Print and electronic media. Modern methods-computer based technologies- email, blogs, podcast, video sharing, Teleconferencing, social networking. Scope, advantages and limitations of methods. Factors guiding the selection and use of methods.

Module 5: Audio-Visual Aids (9 hours)

Definition, Importance of audio-visual aids in communication, Classification of audio-visual aids- audio, visual and audio-visual aids cone of experience, factors to be considered in selection, preparation and use of audio-visual aids their merits and demerits.

SEMESTER VI

CORE COURSE

HS6B10B18 DIETETICS

Credits : 3

Total Lecture Hours : 54

COURSE OUTCOMES

CO1: Identify the clinical, biochemical changes and dietary management of various disease conditions

CO2: Create awareness on planning and preparation of therapeutic diets

CO3: Evaluate appropriate dietary modification for various disease conditions

CO4: Develop capacity and aptitude for taking up dietetics as a profession

CO5: Assess nutritional status and appraise Public health nutrition strategies

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	3	1	1	1
CO2	1	3	1	1	1
CO3	1	3	1	1	1
CO4	1	3	1	1	3
CO5	1	1	1	3	3

Syllabus Content

Module 1 : Introduction to Dietetics (5 hours)

Meaning and scope of dietetics, Dietician: Classification, responsibilities. Nutrition care

process, medical assessment

Therapeutic adaptation of normal diets, principles and classification of therapeutic diets Diet therapy, diet counselling

a) Routine hospital diet- Clear fluid, full fluid, soft and normal diets **b)**

Special feeding methods-oral, enteral and parenteral feeding.

Module2: Fevers and GI disorders (14 hours)

Fevers - Classification and etiology of acute and chronic fevers. Medical Nutrition therapy in Typhoid, Tuberculosis, HIV/AIDS

Gastrointestinal disorders- Diarrhoea, Constipation, Peptic Ulcer. **Liver disorders**: **Etiology**, Risk factors, Clinical symptoms and Dietary Management of Hepatitis, Cirrhosis and Hepatic Coma

Module 3: Lifestyle Diseases / Non Communicable Diseases (17 hours)

Weight Management: Classification, Etiology, Clinical manifestations, Consequences- Dietary Management of Obesity, Underweight

Diabetes Mellitus- Prevalence, classification and etiology, symptoms, diagnosis and complications. Glycemic Index, Dietary Management of Diabetes, food exchange list ●

Coronary Heart Diseases

(a) **Atherosclerosis** - Phases, Etiology, Symptoms, Complications, Nutritional Management.

(b) **Hypertension**- **Classification** of BP, Hypertension Stages, etiology, dietary management, DASH diet.

Cancer- Etiology, Risk factors – Dietary and Non dietary, Nutritional requirements for Cancer patients. Dietary management in cancer**.**

Module 4: Kidney Disorders (6 hours) Etiology, Clinical symptoms and Dietary Management of common renal disorders: Nephritis, Nephrotic Syndrome, Acute and chronic renal failure and

urolithiasis

Module 5: Public Health Nutrition (12 hours) Assessment of Nutritional Status.

Prevalence, causes, consequences, prevention and control:-

- Protein Energy Malnutrition (PEM)
- Anaemia
- Vitamin A deficiency
- Iodine Deficiency Disorders

SEMESTER VI

CORE COURSE

HS6B11B18 FASHION DESIGNING AND APPAREL PRODUCTION

Credits: 3

Total Lecture Hours: 54

Course Outcomes

CO1: Explain the various terminologies used in fashion, ways in which fashion is adopted by the consumers and methods of illustrating fashion.

CO2: Forecast fashion trends using the knowledge of consumer behavior and the social and economic changes

CO3: Comprehend traditional and contemporary methods of fabric creation and ornamentation and apply color and design to create appropriate styles for various figure types

CO4: Distinguish between various methods of pattern making, drafting, pattern alteration and construction of garments.

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	**1**	**1**	**2**	**1**	**2**
CO2	**1**	**1**	**2**	**1**	**3**
CO3	**1**	**1**	**2**	**1**	**3**
CO4	**1**	**1**	**2**	**1**	**3**

Module 1: Fashion Introduction and Interpretation (10 hours)

Definition, terminologies- style, fad, classic, fashion trend, haute couture, fashion life cycle. Consumer groups in fashion cycle, Adoption of fashion – trickle down, trickle up and trickle

across theory, fashion forecasting and present day fashion.

Fashion Illustration, Basic 8 head theory, ten head illustration, garment designing- Creation of Mood board. Factors considered in designing, basic shapes, the proportion of figures – unusual figures (problems and remedies- for tall figure, short figure, stout figure and thin figure.

Module 2: Structural and applied design in Fashion (10 hours)

Elements and principles of design as applied to apparel designing, principles and factors influencing fashion.

Fashion and retro Fashion – Traditional textiles and embroideries in present day fashion Brocades, Jamdanis, Kalamkari, Bandhani, Ikat, Baluchars, Embroideries- Kanthas, Kasuthi, Phulkari, Chikankari, Kasidha. New trends in applied design.

Module 3: Introduction to Body measurements and pattern making (10 hours)

Body measurements – importance and methods of taking body measurements. Pattern making – Methods of pattern making- Drafting, Pattern Alteration.

Module 4: Garment Construction (12 hours)

Tools and equipment used for garment construction. Sewing machine – parts, functions, care, maintenance common problems, reasons and remedies, Steps in preparing fabric for construction, layouts, marking, cutting, stitching, and finishing of garments.

Module 5: Apparel marketing and merchandising (12 hours)

Marketing – definition, marketing Mix – 4 P's, Merchandising –Definition, roles and responsibilities- brief outline of various departments in the apparel industry, retail outlet and visual merchandising.

SEMESTER VI

CORE COURSE

HS6B12B18 FAMILY RESOURCE MANAGEMENT

Credits : 3

Total Lecture Hours : 54

Course Outcomes:

CO1: Explain the principles of management and its application in the individual and family context

CO2: Analyse management in the family and relationship between other systems in the society.

CO3: Use scientific skills in the management of personal, familial and Community resources for successful living.

CO4: Develop actions needed for protection and preservation of resources**.**

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	1	2	2
CO2	1	1	2	2	2
CO3	1	1	2	1	3
CO4	1	1	2	3	3

Syllabus content

Module 1: Introduction to Management (10 hours)

Management Basics: Introduction to Management, Steps Involved in the Process of Management– Planning, Organising, Controlling and Coordinating the Plan in Action and Evaluating Decision Making– Role of Decision Making in Management, Steps in Decision

Making and Methods of Resolving Conflicts in Group Interactions. Management in family – role and importance, Qualities of a Good Manager.

Module 2: Concepts and Factors influencing Management (8 hours)

Concepts of Management– Values, Goals and Standards, Factors Motivating/Influencing Management, Family Characteristics, Stages of Life Cycle, Types and Composition of Family. Resource Constraints during various Life Cycle Stages.

Module 3: Management of Human Resource (14 hours)

Family Resources: Meaning and Classification, Characteristics of Resources, Factors Influencing Resource Management, Means to Optimize Satisfaction in Resource Management.

Management of Time: Time as a Human Resource, Significance of Time Management, Tools and Aids in Time Management such as time norm, time cost, peak load, work curve, Time Schedule – Preparation and Evaluation, Practical Strategies- Time Management Matrix, Leisure time and its utilization.

Management of Energy: Energy as Resource, Significance of Energy Management, Energy Requirements for Various Household Activities. Fatigue– Classification, Causative Factors and Alleviating Techniques, Human factors and Ergonomics, Work

Simplification–Meaning and Techniques, Mundell's Classes Of Changes. Importance of Labour Saving Devices.

Module 4: Management of Material Resources (14 hours)

Management of Money: Family Income as a Resource –Types of Income, Income Profiles; Methods of handling income, Family Expenditure, Family Budget– Types of Budget, Steps in Making Family Budget, Engel's Laws of Consumption; Financial Records–Types, Purpose and Advantages; Savings and Investments– Meaning, Saving Institutions and Schemes, supplementing Family Income, Family Credit–Types, Sources, Use and Misuse.

Management of Natural resources: Household fuel, Water, Waste: Importance and significance, Classification, Conservation, Devices / techniques for conservation, Green Protocol, familiarization with newer technologies: Solar devices, Water harvesting, Integrated Waste Management.

Module 5: Consumer Education (8 hours)

Consumer Education – Meaning, Consumer Problems and Malpractices in Marketing, Rights and Responsibilities of a Consumer, Consumer Aids, Consumer Protection, Consumer Redressal Procedure, Smart Consumerism and Better Buying Practices.

SEMESTER VI

CHOICE BASED CORE COURSE

HS6B13aB18 WOMEN EMPOWERMENT

Credits: 3

Total Lecture Hours: 54

Course Outcomes

CO1: Recall the transition of women from ancient to modern millennium establishing the significance of women empowerment

CO2: Summarize the methods to improve the current status of women and girl children from a regional, national and global perspective

CO3: Critically examine women's entrepreneurship and key entrepreneurial skills.

CO4: Develop awareness among youth regarding the constitutional and legal aids and create programs on advocacy for women's legal and fundamental rights

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	1	1	1
CO2	1	1	1	2	2
CO3	1	1	1	3	2
CO4	1	1	1	3	3

Syllabus Content

Module 1: Women in India - Demography, Issues and Problems (10 hours) Demography, Concept, significance and need for Women empowerment, Social aspects of Women empowerment. Transition of women towards the new millennium, National Committees and Commissions for Women, Organizations for Women, Department of Women and Child

Development. Multiple Roles of Women- Role conflict and Role changes, Issues Related to Female children-Female foeticide, Female Infanticide, child marriage. Issues Related to Women-Dowry, Divorce, Widowhood, Domestic violence, problems of elderly and single women.

Module 2: Women and Law (12 hours) Indian constitution and provisions relating to women, Need for legal literacy, Laws pertaining to Marriage, Divorce, Dowry, Succession/Property rights, Sexual abuse, Immoral Traffic, and Abortion, Indecent Representation of Women Act 1986, Family courts, Enforcement machinery – Police and Judiciary. Human Rights as Women's Rights.

Module 3: Women in the workforce (10 hours) Women in organized and unorganized sectors, Special problems and needs of women in work force, Gender division of work, NGOs and women development. Globalization and impact on women's employment, role of SHGs.

Module 4: Entrepreneurship (10 hours) Definition, concept and characteristics. Role of entrepreneur, Personal Effectiveness-factors affecting entrepreneur's role and skills-effective communication skill, interpersonal skills, achievement, motivation, goal orientation, creativity, assertiveness and quick response, Psychological barriers to self-employment.

Module 5: Procedures to be an entrepreneur (12 hours) Product identification, generation of new product ideas, sources of ideas. Product formulation, feasibility analysis, Project planning, Project proposal for fund from bank/other funding agencies, significance, cost analysis. List of documents to be submitted for registration and licence, Principles of marketing and basics of accounting. Agencies for development of entrepreneurship (SSI, KITCO, KIED, KSWDC). Banks and other voluntary organizations/ Institutions assisting entrepreneurs)

Related Experiences

a) Visits: Visit to small scale industries. Visit to Agencies that finance SSI. b) Preparation of Articles based on the following- Bakery / confectionary / bouquet-making / flower arrangement /Dyeing/ printing/ embroidery / Garment manufacturing.

Minimum two articles from the above are to be prepared and organize an exhibition-cum-sale of the prepared products.

SEMESTER VI

CHOICE BASED COURSE

HS6B13bB18 SURFACE ORNAMENTATION TECHNIQUES

Credits : 3

Total Lecture Hours : 54

Course Outcomes

CO1 Explain the various terminologies used in surface ornamentation and the ways in which it can be adopted by the consumers**.**

CO2: Apply basic traditional embroidery, tools and techniques in garments.

CO3: Comprehend contemporary methods of ornamentation and special techniques.

CO4: Apply different methods of printing and dyeing

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	2	1	2
CO2	1	1	2	1	3
CO3	1	1	2	1	2
CO4	1	1	2	1	3

Syllabus Content

Module 1: Embroidery (10 hours)

Embroidery tools and techniques, embroidery threads and their classification, selection of

threads, needle and cloth, tracing techniques, ironing and finishing of embroidered articles.

Module 2: Basic Hand Embroidery (12 hours)

Two variations of running stitch, back stitch, stem stitch , chain stitch, lazy daisy stitch, buttonhole stitch, feather stitch, herringbone stitch , knot stitch, satin stitch and cross stitch.

Module 3: Traditional Embroidery (10 hours) Origin, application and colours.Kantha,

Chikan, Kasuthi, Zardosi, Kutch and Mirror work.

Module 4: Special embellishment techniques (12 hours)

Ribbon work, Applique, quilting, Patch work, Smocking, Honey comb, gathered with embroidery, Fabric Painting, Hand Stencil, Dabbing and Spraying.

Module 5: Dyeing, printing, Trimming and decorations (10 hours)

Advanced Tie & Dye techniques, Batik and Block printing, Laces, tassels, Tucks, Show buttons, Eyelet and Cord, Bead work, Cut work and Crocheting.

SEMESTER VI

CHOICE BASED COURSES

HS6B13cB18 EARLY CHILDHOOD CARE AND INTERVENTION

Credits: 3

Total Lecture Hours :54

Course Outcomes

CO1: Identify developmental delays, mode and importance of early stimulation

CO2: Identify the tools, techniques and methods of assessment of visual & hearing impairment.

CO3: Explain early stimulation programmes and their significance.

CO4: Plan activities in early childhood centres and deal with challenged children to the optimum level possible

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	3	1	1	3
CO2	1	3	1	1	2
CO3	1	3	1	1	2
CO4	1	3	2	2	3

Syllabus Content

Module 1: Developmental milestones and Developmental Delay (10 hours)

Definition, Different developmental milestones of children from 0 to 6 year, Definition, Child development & Home environment

Module 2: Developmental assessment (12 hours)

Definition, purpose of assessment, Assessment below two years, Tools & techniques used for assessment- TDSC, DASII, DDST, DOC, Neurological evaluation, assessment of visual & hearing impairment.

Module 3: Early Developmental Stimulation (12 hours)

Definition, Aims, importance, Role of parents, Newborn stimulation in NICU & at Home, sensory training, early stimulation programmes, Early intervention forth developmental delay.

Module 4: Pre-School programme (10 hours)

Definition, principles of programme planning, Short & long term planning. Daily programme, Pre–school organisation-physical arrangement, equipment needed, maintenance of records, preschool personnel, home–school relationships.

Module 5: Intervention programmes for Children with challenges (10 hours)

Visual & Hearing Impairment-Signs & Symptoms, Intervention programmes, Characteristics, identification & intervention programmes for the Gifted, Learning disabled, Autistic & Attention Deficit Hyperactivity Disorder (ADHD) children

Related Experience

1. Observation of milestones in a child (0to6Yrs) and the identification of developmental status.
2. Visit to a centre for developmental assessment OR to a Centre to know about the Intervention programmes for Gifted / Learning disabled / Autistic / ADHD children (Any One)
3. Organisation of an awareness programme for the community / parents / Adolescents on any related topics.
4. Prepare visual aids on a related topic for the parents having children from 0 to 6 years.
5. Prepare a Case study report of a Gifted / Learning disabled / Autistic / ADHD child. (Any One).

SEMESTER V & VI

CORE PRACTICAL

HS6BP03B18 ENVIRONMENTAL COMMUNICATION AND EXTENSION EDUCATION PRACTICAL

Credits: 2

No. of hours : 72

Course Outcomes:

CO1: Develop communication tools for Extension education.

CO2: Use extension communication techniques.

CO3: Critically examine the problems and develop extension programmes.

CO4: Planning, implement and evaluate an extension programme

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	1	3	3
CO2	1	1	1	3	3
CO3	1	1	1	3	3
CO4	1	1	1	3	3

Syllabus Content

Module 1: (8 hours)

• Make a powerpoint on green consumerism.

• Develop any recycled product

Module 2: (8 hours)

• Make a poster related to environment conservation

• Make a chart on the harmful chemicals in baby care products.

• Make a leaflet on any one environmental issue.

Module 3: (10 hours)

• Write an article to create awareness on any one of the environmental issues.

• Write a radio script for any one environmental issue

• Make a small video clipping on the environment.

• Make a street drama /mime on environment

Module 4: (5 hours)

• Make a collage on sustainable living

Module 5: (5 hours)

• Make an illustrated chart on rights of women & children in India

Internal: Field work

• Visit to a local area to document environmental assets river/forest/grassland/hill/mountain • Visit to a local polluted site-Urban/Rural/Industrial/Agricultural

• Study of common plants, insects, birds.

• Study of simple ecosystem-pond, river, hill slopes etc. (Field work Equal to 5 lecture hours)

Module 6: Extension Education (5 hours)

• Interview an extension worker to find out his/her role.

Module 7: Community Development in India (10 hours)

• Visit any one community organization (Panchayat / Cooperatives / School / Krishy Vigyan Kendra) to find out its role in community development and record the services rendered.

• Observe the working of any one community development programme in your community and record its features.

Module 8: Programme planning, implementation and evaluation in extension (12 hours)

• Plan, implement and evaluate an extension programme related to Home Science.

Module 9: Communication, and methods of approaching people (2 hours)

• Write a report of an exhibition /fairs/street drama you observed.

Module 10: Audio-Visual Aids (7 hours)

• Collection and evaluation of visual aids

• Preparation of visual aids.(leaflet, pamphlet, poster and two types of charts)

• Review of media on selected development issues and report its characteristics (news paper article, Radio and TV message.)

SEMESTER V & VI

CORE PRACTICAL

HS6BP04B18 HUMAN NUTRITION AND DIETETICS PRACTICAL

Credits : 2

No. of hours : 72

CO1 Conduct qualitative and quantitative analysis of nutrients in foods

CO2 Prepare the basic recipes in normal nutrition and modified recipes for therapeutic diets

CO3 Plan and prepare therapeutic diets with appropriate dietary modification for various disease conditions

CO4 Evaluate the functioning of a Dietary Department or feeding programme

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO1	**1**	**1**	**1**	**1**	**3**
CO2	**1**	**2**	**1**	**1**	**3**
CO3	**3**	**3**	**1**	**1**	**3**
CO4	**3**	**3**	**1**	**3**	**2**

Human Nutrition (36 hours) a. **Food Analysis**

1. Qualitative tests for carbohydrates, protein, calcium, phosphorus and iron. 2. Quantitative tests for

a) Lactose in milk

b) Vitamin C in food stuffs

c) Calcium in foods

b. **Basics of Food Preparation**

1. Record the weight of 1cup/1tbsp/1tsp of different types of food stuffs 2. Record the ratio of raw to cooked volume of cereals, pulses, vegetables 3. Basic Preparations– Prepare main dish, side dish, snacks, desserts. 4. Table Setting

c. **Normal Nutrition**

Planning, preparing and serving diets for:

1. Preschool child
2. School going child
3. Adolescents
4. Adults (Sedentary man/woman / labourer)
5. Pregnant woman
6. Lactating woman
7. Old age (Man/woman)

Dietetics (36 hours) a. Calculation of BMI using height- weight measurements

b. Preparation of Therapeutic Recipes

Types of Therapeutic Diet - Normal, Soft, Full Fluid and Clear Fluid Diets **c.**

Diet plan for -

1. Fevers-Typhoid or Tuberculosis
2. Peptic Ulcer
3. Constipation
4. Hepatitis
5. Cirrhosis
6. Obesity
7. Underweight
8. Diabetes Mellitus
9. Atherosclerosis
10. Cancer

11. Nephritis

12. PEM

13. Iron Deficiency Anaemia

d. Visit to a feeding programme / Diet clinic

SEMESTER V AND VI

CORE PRACTICAL

HS6BP05B18 TEXTILE SCIENCE, FASHION DESIGNING AND APPAREL PRODUCTION PRACTICAL

Credits : 2

Total Lecture Hours : 90

Course Outcomes

CO1: Differentiate the various fabric types, fibre weaves and their properties

CO2: Apply different weaves, prints and dyes on fabrics.

CO3: Apply traditional and contemporary methods of fabric creation and ornamentation.

CO4: Develop various methods of pattern making, drafting, pattern alteration and construction of garments.

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	**1**	**1**	**2**	**1**	**3**
CO2	**1**	**1**	**2**	**1**	**3**
CO3	**1**	**1**	**2**	**1**	**3**
CO4	**1**	**1**	**2**	**1**	**3**

Module 1: Textile Science – 36 hrs

1.Collection of different fibres**.**

2. Fabric Structure and basic weaves. Collection of weaves and variations. 3.

Preparation of samples for Block , Batik/ Tie and Dye .

Module 2 – Fashion Designing and Apparel Production – 54 hours

1.Fashion Illustration and Sketching Development of 8 head croquie. Basic sketching of Child's frock and Salwar Kameez.

2. Basic Construction process – Hand stitches, Seam and Seam Finishes, Fullness, Pleats, Bias, Fasteners, Preparation of Paper pattern.

3. Construction of garments- Child's frock and Kameez.

VI SEMESTER

CORE PRACTICAL

HS6BP06B18 INTERIOR DECORATION AND RESOURCE MANAGEMENT PRACTICAL

Credits : 2

No. of hours : 90

CO1: Create well designed spaces using design elements, color patterns, flower arrangements, lighting and furnishings

CO2: Develop and execute Money and Material resource management plans

CO3: Use the principles of management in a group event or an organizational setting)

CO4: Apply the skills learned in management of various aspects of day today life

Mapping of Course Outcomes with Program Specific Outcomes

Mapping	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	**3**	**1**	**1**	**2**	**1**
CO2	**2**	**2**	**2**	**2**	**1**
CO3	**3**	**1**	**2**	**1**	**2**
CO4	**3**	**2**	**2**	**1**	**2**

I. Interior Decoration : (54 hours)

1. Design

Preparation of catalogue comprising pictures denoting application of types. Design and Elements and Principles of Design; Development of Motifs and Patterns. Development of a Logo or Motif suitable for an Event and its application in designs suitable for furnishing / accessories.

2. Colour

Preparation of Colour Charts / Wheel, Dimension & Harmonies of Colour; and Application of Colour Schemes in a Room Design suitable all rooms and for an event.

3. Flower Arrangement

Demonstration of basic shapes in Flower Arrangement, Dry Flower Arrangement, Ikebana, Artificial Flower making and Arrangement, Bouquet making for the planned Event.

4. Furnishings

Illustration of various Curtain styles, Measurement taking and Material calculation, for curtains, Table setting for the planned Event.

5. Lighting systems

Illustration of Lamps and Shades suitable for various rooms.

6. Interior Layouts

Furniture & Furnishing plans of specific areas- Living room, Dining room, Bed room, Children's room, Bath room, Kitchen etc. (Any 2 rooms).

7. Evaluation of Objects and Spaces

Evaluation of Objects / Rooms based on suitability of design elements and principles. **8.**

Decorations for Special Occasions

Creation of art objects using waste materials based on the theme for the planned Event. **II.**

Resource Management (36 hours)

1. Management of Time and Energy

Time schedule: Preparation of time plan for College girl/ Homemaker and its evaluation
Work study: Determination of working heights in vertical and horizontal planes, study of Anthropometry and Furniture sizes for various activities.

2. Management of money and material resources

Budget Preparation – Study of expenditure pattern of your family and preparation of a model

family budget.

Energy Conservation- Visit to an organization involved with Energy management/ Alternate energy programmes / Study of Devices and Techniques for Conservation of Energy or Renewable Energy Devices (Solar Devices and Biogas)/ Attend seminar on Energy Management.

Waste Management-Study of waste management practices in your house and locality/ Prepare are portion Integrated Waste Management Practices and organizations providing assistance, Prepare functional and decorative craft items from waste materials.

3. Consumer Education

Development and evaluation of Labels and Advertisements for consumer products, Report on Organizations / NGO working for consumer education / Preparation of a consumer complaint for any defective consumer product to consumer redressal forum.

4. Event Management

a) Residence stay for a week incorporating Principles of Management

OR

b) Planning, Organizing, Implementing and Evaluating a Group Event (Party/ Exhibition / Seminar / Workshop / Tour)

(A record of the entire practical should be maintained)