
ST. TERESA'S COLLEGE, ERNAKULAM
(AUTONOMOUS)

Affiliated to Mahatma Gandhi University, Kottayam



CURRICULUM FOR
BACHELOR'S PROGRAMME
IN HOMESCIENCE

Under Choice Based Credit & Semester System
& Outcome Based Education

(2018 Admissions)

BHSC - B.Sc. HOMESCIENCE

PROGRAM SPECIFIC OUTCOMES

PSO1: Interpret the significance of multidisciplinary 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'alphabét – 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 യാഥാർത്ഥ്യങ്ങളെ 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

1.പുവമ്പഴം -കാരുർ

2.ഭൂമിയുടെ അവകാശികൾ -വൈക്കം മുഹമ്മദ്ബഷീർ

വണ്ഡം രണ്ട്

15മണിക്കൂർ

1.കടൽ -ടി .പങ്കനാഭൻ

2.പെരുമഴയുടെ പിറ്റേന്ന് -എം. ടി. വാസുദേവൻ നായർ

3.മാനാഞ്ചിറടെസ്സ് -വി .കെ.എൻ

4.തരിശു നിലം -മാധവിക്കുട്ടി

വണ്ഡം മൂന്ന്

15മണിക്കൂർ

1.ആർക്കറിയാം -സക്കറിയ

2.ഓരോഏഴുത്തുകാരിയുടെഉള്ളിലും -സാറാജോസഫ്

3.തിരുത്ത് -എൻ .എസ് .മാധവൻ

4.മോഹമത്തെ -കെ .ആർ .മീര

വണ്ഡം നാല്

10 മണിക്കൂർ

1.അഗ്നി -സിതാര.എസ്

2.ബിരിയാണി -സന്തോഷ് എച്ചിക്കാനം

3.മോദസ്ഥിരനായി അങ്ങാടിപ്പുമല പോലെ -എസ്. ഹരീഷ്

4.സ്നേഹബഹുമാനപ്പെട്ട അന്നാമ്മയ്ക്ക്സീതാലക്ഷ്മി എഴുതുന്ന കത്ത് -പ്രിയ എ .എസ്

5.ചിലസ്വപ്നങ്ങളിൽസീതാലക്ഷ്മിയുടെ കറുത്ത മുടിയിഴ -ഇന്ദുമേനോൻ

വണ്ഡം 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 the formation 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 in properties: 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 Metamonada	(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: Turbellaria (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: Aphasmda (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: Scutigera)
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: Aplousobranchia	(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: Asterozoa	(eg: Astropecten)
Class 2: Ophiurozoa	(eg: Ophiothrix)
Class 3: Echinozoa	(eg: Echinus)
Class 4: Holothurozoa	(eg: Holothuria)
Class 5: Crinozoa	(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.