



AUXILIUM COLLEGE (Autonomous)

(Accredited by NAAC with A+ Grade with a CGPA of 3.55 out of 4 in the 3rd cycle)
Gandhi Nagar, Vellore – 6.

DEPARTMENT OF BOTANY

LESSON PLAN

2021-2022

LESSON PLAN

Academic Year : 2021-2022
Class : I. B.Sc. Chemistry / II. B.Sc. Zoology
Subject : OPTIONAL ALLIED / ALLIED - BOTANY
Hours / Week : 2+2 hrs / week
Credits :

Semester : I / III
Class Code :
Subject Code : UBBTA20 / UABTA20
Total Hours : 60hrs.
Total Marks : 100 marks.

Proposed Week	No. of Hrs	Unit	Topics to be Covered	Teaching Methodology	Learning Resources	Methods of Evaluation
1-2	2+2	1.1	Classification of Plants - General Characters of Cryptogams - Algae External general characters Morphology & Reproduction in Algae	PPT, Chalk and Board	Algae Text Book - class material.	Test/Quiz
3-4	2+2	1.2	Economic importance of Nostoc & Sargassum - Algae Fungi - Morphology, Nutrition. Structure of Yeast and Agaricus.	Chalk and Board PPT Videos	Fungi Text Book Class material.	Test/Assignment
5-6	2+2	1 2.1	Economic importance of Yeast & Agaricus. Bacteria - cell structure and reproduction Virus - Nature, reproduction.	Chalk and Board PPT - Videos	Bacteria & Virus Text Book class Material	Test/Quiz Assignment.
7-9	3+3	2.2	Structure & Reproduction in E. coli, Tobacco Mosaic Virus Corona Virus - Structure.	Chalk and Board PPT - Videos.	"Text" Book.	Test/Quiz Assignment
10th	3+3	3.1	Bryophyta - Morphology & reproduction Funaria - External & internal structure of Gametophyte.	Chalk and Board PPT - Videos	Bryophyte Text Book Class material	Test/Assign
11th	2+2	3.2	Pteridophyta - Morphology & Reproduction Lycopodium - External features	Chalk & Board PPT, Videos	Pteridophyte Text Book Class Material	Test/Assignment

12 th	2+2.	A.4- 4.6.	Genetics - Mendelism - Monohybrid & Dihybrid Cross - Laws of Mendel.	Chalk & Board PPT & Videos	Cytogenetics book as study material	Tests - groupwork assignment
13	2+2.	5.1. 5.2.	Ecosystem - Structure & Function, Food chain & Foodweb - Pyramid.	Chalk & Board PPT Videos	Ecology Textbook Study Material	Tests Assignment Quiz.
14	2+2.	5.3.	Adaptations of Plants - Hydrophytes Xerophytes	Chalk & Board PPT Videos.	Ecology Text Book Study Material	Tests. Groupwork Assignment
15	3+3	5.6.	Bio pesticides, Biofertilizers in Agriculture - (Azobacter BGA), Mycorrhiza	PPT Videos	Biotechnology & Microbiology Text as Study material	Tests Assignment

LESSON PLAN

Academic Year : 2021-2022
Class : II BSc Zoology & I. Bsc. Chemistry
Subject : Applied Botany / Optional Applied Botany - PRACTICALS
Hours / Week : 2/week
Credits : 2

Semester : IV / I
Class Code :
Subject Code : UABTC20 / UB BTC 20
Total Hours : 30
Total Marks : 100

Proposed Week	No. of Hrs	Unit	Topics to be Covered	Teaching Methodology	Learning Resources	Methods of Evaluation
1-2	2+2	1	Sectioning & Dissection of Algae Fungi - Slides observation	Hands on Training.	Practical Manual	Tests / Record / observ Submission
2-3	2+2	2	Observation of Bacteria & Viruses Slides & EM	View Through Microscope	Study Material	Observation & Record.
3-4	2+2	3	Bryophyte - Funaria - slides & specimen Pteridophyte - Lycopodium - Sectioning Study material - Slides	Section taken Microscopic View	Study Material	Drawing in Observation & Record.
4-5	2+2	4	Gymnosperm - Slides / Macroscopic material Cytology - Electron Micrographs.	Microscope view	Study Material	Drawing - Observation & Record.
5-6	2+2	5	Ecology - Slides - Specimen	Draw & describe	Study material	OBSERVATION & Record Correction
7-8	2+2	5	Plant Pathology - Trkka, Canker & TMV.	Observation & Drawing	Study Material	Record & Observ

LESSON PLAN

Academic Year : 2021-2022
Class : II. Bsc. Zoology & I. Bsc. Chemistry
Subject : Allied & optional Allied Botany.
Hours / Week : 4/week.
Credits : 3.

Semester : II / IV
Class Code :
Subject Code : UBBTB20 / UABTB20.
Total Hours : 60
Total Marks : 100

Proposed Week	No. of Hrs	Unit	Topics to be Covered	Teaching Methodology	Learning Resources	Methods of Evaluation
1 st week	4 hrs	I	Familial General characteristics Economic importance of the families Cesalpiniaceae, Rubiaceae & Asclepiadaceae	Chalk & Board.	Text Book Material given Taxonomy - BP Pandey	Tests Assignment
2 nd week	4 hrs.	1	Amaranthaceae & Liliaceae. General account of all families.	"	"	"
3 rd week	4 hrs.	2	Anatomy - Introduction - Tissues - types - characters of Meristematic tissues.	Chalk & Board.	Anatomy - B.P. Pandey	"
4 th week	4 hrs. +4	2	Simple Tissues - types & characteristics Primary structure of Dicot. stem.	PPT Chalk & Board	"	"
5 th week	4 hrs	2	Primary structure of Monocot stem. Monocot root. Dicot leaf & Monocot leaf	"	"	"

7 th week	4+4	4	Plant Physiology - Absorption of water - Mechanism - Transpiration types & gtr ltr Advantages & disadvantages.	Plant Physiology - H.N. Srivastava	Plant Physiology - H.N. Srivastava	
8 th week 9 th week	4+4	4	Photosynthesis - Light reaction & Calvin cycle - factors affecting the process Respiration - Introduction & types	Challies Board	"	
10 th week 11 th week	4 hrs	4	Respiration - Glycolysis, Fermentation, Krebs's cycle	PPT	"	
11 th week	4 hrs	4	Plant growth hormones - Auxins, Gibberellins & Cytokinins - Physiological role	Challies Board PPT	"	
12 th week	4 hrs	3	Embryology - Introduction - Male & Female Reproductive parts & structure	Challies Board	Plant Embryology - P. Mahamuni	
13 th & 14 th	8 hrs	3	Microsporogenesis - Development of Male gametophyte - Megasporogenesis Embryo sac & its development	Challies Board	"	
15 th	4 hrs	3	Fertilization - Types & process Dicot Embryo - structure & development.	"	"	

LESSON PLAN

Academic Year : 2021 - 2022
Class : I.B.B.E - I.B.Sc, BA, B.Com or B.C.A.
Subject : HORTICULTURE
Hours / Week : 2/Week
Credits : 2.

Semester : II
Class Code :
Subject Code : USBTB20
Total Hours : 30 hrs
Total Marks : 100

Proposed Week	No. of Hrs	Unit	Topics to be Covered	Teaching Methodology	Learning Resources	Methods of Evaluation
1 st & 2 nd week	4	1 st	Introduction to Horticulture - Importance & Scope of Horticulture - Requirements of Horticulture	PPT & Chalkboard	Book given	
3 rd & 4 th week	4	1 st	Soil Types - Irrigation - Cultivation of Economically important Plant-Rose & Mango	PPT Chalkboard		
5 th & 6 th week	4	2 nd	Plant Propagation - Methods & types Cutting layering & Grafting - types of each			
7 th & 8 th week	4	2 nd	Plant Propagation - Budding & types. Role of plant growth regulators in Plants. Horticulture	Chalkboard & Demos		
9 th & 10 th week	4	3 rd	Indoor gardening - Introduction. Potted Plants & Hanging baskets. Bonsai - Training, watering & Maintenance	PPT & other & skills -		
11 th & 12 th week	4	3 rd	Flower-arrangement, decoration - Displays, Bouquets & wreaths - Cut flower - Outdoor gardening Ints.	Chalkboard & Market		

LESSON PLAN

Academic Year : 2020-2021
Class : I. SBE
Subject : HORTICULTURE
Hours / Week : 02 hrs / week
Credits : 2

Semester : I & II
Class Code :
Subject Code : USBTB 20
Total Hours : 30 hrs
Total Marks : 100

Proposed Week	No. of Hrs	Unit	Topics to be Covered	Teaching Methodology	Learning Resources	Methods of Evaluation
1	2 hrs	1.1-1.3	Introduction to Horticulture - Requirements - Types and Soil	Videos, PPT Chalkboard	Introduction to Horticulture ↓ as Study Material	Test Assignment
2-3	2+2 hrs	1.4-1.6	Irrigation & Nutrition - Cultivation of Economically important Plant Rose & Mango	Videos & PPT	Study material	Test Assignment
4-5	2+2 hrs	2.1-2.6	Methods of Propagation - Cutting Layering, Grafting, Budding - Types. Role of Plant growth regulators in Horticulture	PPT - Demo & Videos	Study material from Text Book.	Test Assignment
6-7	2+2	3.1-3.4	Potted Plants Hanging Baskets Indoor Gardening - Hydroponics & Bonsai	PPT & Videos	Study Material	Assignment
8-9	2+2	3.5-3.6	Cut flowers - types & Preservation Flower decoration - display, bouquets & wreaths	PPT & Videos	Study Material PPT	Assignment
10-11	2+2	4.1-4.6	Outdoor Gardening - Landscaping Rockery, kitchen garden - Terrace Gardens - Fruits & Vegetables.	Chalk & Board PPT & Videos	Study Material	Assignment with Presentation

12-15	2+2	5.1- 5.6.	Fruits & Vegetable Preservation Jam, Jelly, Squash, sauce Pickles & ketchup Canning & Bottling - Long storage	Videos Chalkboard PPT	Study Material	Preparation Videos as assignment
Raj/12/2021						

LESSON PLAN

Academic Year : 2021-2022
 Class : II B.Sc Zoology / I B.Sc Chemistry
 Subject : Allied Botany Paper-I / Optional Allied Botany
 Hours / Week : 4
 Credits : 4

Semester : III / I
 Class Code :
 Subject Code : VABTA20 / UBBTA20
 Total Hours : 60 hrs
 Total Marks : 100

Proposed Week	No. of Hrs	Unit	Topics to be Covered	Teaching Methodology	Learning Resources	Methods of Evaluation
2	2/2	1	General Characters of algae Structure and reproduction, life cycle of <i>Nostoc</i> and <i>Sargassum</i>	PPT, chalk and Board	Book Material	Assignment Test
2	2/2	1	Economic importance of algae General Characters of fungi Structure, rep. - <i>Yeast</i> , <i>Agaricus</i>	PPT, Chalk and Board	Book Material	Test
3	6	1 2	Economic impor. of Fungi General Characters of Bacteria, Virus	PPT, Videos, Chalk and Board	Book Material	Test
3	6	2	Structure, Rep. - <i>E. coli</i> , TMV, Bacteriophage, Corona Virus	PPT, Videos Chalk and Board	Book Material	Test MCQ
3	6	3	General Characters of Bryophytes structure of life cycle of <i>Funaria</i>	PPT, Videos Chalk and Board	Book Material	Test
3	6	3	General characters of Pteridophytes <i>Lycopodium</i> , <i>Gymnosperms</i> , <i>Cycas</i>	Chalk and Board	Book Material	Test

2	3	4	Prokaryotic, Eukaryotic Cell Chloroplast, Mitochondria, Nucleus	Chalk and Board	Book Material	Test
2	3	4	Mitosis, Meiosis	PPT, Videos Chalk and Board	Book Material	Test
2	3	5.	Symptoms, Causative organisms Control measures - Citrus Canker TMV, Tikka disease	Chalk and Board	Book Material	Test

LESSON PLAN

Academic Year : 2021-22
 Class : III years
 Subject : NME-Edible Mushrooms Cultivation
 Hours/Week : 3
 Credits : 4

Semester : V / VI
 Class Code :
 Subject Code : UGPBAS15
 Total Hours : 45
 Total Marks : 100

Proposed Week	No. of Hrs	Unit	Topics to be Covered	Teaching Methodology	Learning Resources	Methods of Evaluation
1	3	1	Biology-Types- Agaricus sp Calocybe sp, Volvariella sp Pleurotus sp	PPT, Videos Chalk and Board	Book Material	Test
1	3	1	Scope of Edible Mushroom Cultivation in India	ppt, videos	Book Material	Test
2	6	2	Cultivation - Infrastructure Mushroom Unit, Preparation of Spawn and bed	ppt, videos	Book Material	Test
2	6	2	Requirements - Substrates Containers and Instruments	PPT, Videos	Book Material	Test
2	6	3	Nutritional Value - Vitamins and Amino acids, Statistical data of contents	PPT, Videos	Book Material	Test
2	6	3	Medicinal properties, disease cured and prevented by the consumption of mushroom	PPT	Book Material	Assignment

2	6	4	Methods to store edible mushroom (Long and short)	PPT	Book Material	Test
1	3	4	Recipies : Soups, Cutlets, Samosa, Pickles, Curry, Chips, Bread, Biryani, Manchurian, Pulao	Video Presentation	Book Material	Video presentation Test
1	3	5	Establishment of mushroom unit - Plans and procedure	PPT	Book Material	Test
1	3	5	Factors influencing mushroom cultivation, Role of TMC and DIC	Chalk and Board	Book Material	Test

LESSON PLAN

Academic Year : 2021-2022

Class : I years

Subject : SBE- Herbal Therapy and Cosmetology

Hours / Week : 2

Credits : 2

Semester : I / II

Class Code :

Subject Code : USBTA120

Total Hours : 30 hrs

Total Marks : 100

Proposed Week	No. of Hrs	Unit	Topics to be Covered	Teaching Methodology	Learning Resources	Methods of Evaluation
2	3	1	Herbs - Definition, division distribution, Elementary Knowledge of herbs	PPT, Videos	Book Material	Test PPT
1	3	1	Importance of medicinal plants, Role, plants - Aegle, Ficus, Curcuma, Sesamum	PPT	Book Material	Video presentation Test
2	3	2	AYUSH, Therapeutic values of Naturopathy	PPT	Book Material	Test Assignment
1	3	2	Solanum trilobatum, Cardiospermum, Viter, Adathoda, Azadirachta, Eclipta	PPT	Book Material	Test
2	3	3	Herbal care for Facial skin. Face pack for dry, oily and Normal Skin	PPT, Videos	Book Material	Test
1	3	3	Herbal remedy for skin disorders - pimple, acne, boiles, blackheads and tans	PPT, Videos	Book Material	Test

2	3	4	Herbal care for hair Formulation of hair oil	PPT, Videos	Book Material	Test
1	3	4	Formulation of hair tonics dandruff, premature graying hairloss	PPT, Videos	Book Material	Test
2	3	5	Herbal cosmetics, Herbal Shampoo, tooth paste, herbal Soap	PPT, Videos	Book Material	Test
1	3	5	Role of herbs in skin care - Tulasi, Alovera Hair Care - Henna, Coconut	PPT.	Book Material	Test

LESSON PLAN

Academic Year : 2021-2022
 Class : III B.A Eng-B
 Subject : Value Education
 Hours / Week : 1
 Credits :

Semester : V, VI
 Class Code :
 Subject Code : UVEDA15
 Total Hours :
 Total Marks :

Proposed Week	No. of Hrs	Unit	Topics to be Covered	Teaching Methodology	Learning Resources	Methods of Evaluation
2	2	15	Sexuality - Gift or Danger?	Videos	Young and Happy-Book	Debat
2	2	15	8. Marriage - Bliss or Burden?	Videos	Young and Happy-Book	Debat
2	2	17	Family - Where we belong	Chalk and Board	Young and Happy-Book	Debat
2	2	18	Women and Health - The True Wealth	Chalk and Board.	Young and Happy-Book	Debat

Academic Year : 2021-22
 Class : II Zoology / I Chemistry
 Subject : Allied Practical - I
 Hours / Week : 2
 Credits : 2

Semester : III / I
 Class Code :
 Subject Code : UABTC20 / UB BTC20
 Total Hours : 30 hrs
 Total Marks : 100

Proposed Week	No. of Hrs	Unit	Topics to be Covered	Teaching Methodology	Learning Resources	Methods of Evaluation
3	6		Algae , Fungi, Bryophytes,	\$\phi\$	specimen	
3	6		pteridophytes , Gymnosperms		specimen	
3	6		Ecology , Cytology			
3	6		plant Diseases			
3	6		Sectioning			

LESSON PLAN

Academic Year : 2021-2022

Class :

Subject :

Hours / Week :

Credits :

II B.Sc Zoology / I B.Sc Chemistry
 Allied Botany II / optional Allied Botany II
 4
 4

Semester :

Class Code :

Subject Code :

Total Hours :

Total Marks :

IV / II

UABTB20 / UBBTB20

60 hrs

100

Proposed Week	No. of Hrs	Unit	Topics to be Covered	Teaching Methodology	Learning Resources	Methods of Evaluation
1	4	1	Bentham and Hooker's System of Classification, Nomenclature Study of character and eco. importance of the family Caesalpinaceae	PPT, Chalk and Board	Book Material	Assignment
2	4	1	Study of characters and economic importance of the family Rubiaceae, Asclepiadaceae	"	"	Test
3	4	1	Amaranthaceae, Liliaceae	"	"	Test
4	4	2	Tissues, Meristematic and Permanent tissue.	"	"	Test
5	4	2	Dicot stem and Monocot stem structure and explanation	"	"	Test.
6	4	2	Dicot root, Monocot root, Dicot leaf and Monocot leaf - Internal structure.	"	"	Test

7	4	3	Embryology - Structure of Mature anther, ovule	PPT, Chalk Board	Book Material	Test
8	4	3	Types of Ovules, Embryo Sac Pollen grain	"	"	Test
9	4	3	Structure of Dicot embryo, Parthenocarpy.	"	"	Test
10	4	4	Plant Physiology - Absorption of Water, Transpiration	"	"	Test
11	4	4	Photosynthesis - Light reaction, Calvin cycle,	"	"	Test
12	4	4	Respiration - Glycolysis, Fermentation, Krebs cycle	"	"	Test
13	4	5	Tissues - In vitro Culture Method	"	"	Test
14	4	5	Horticulture methods	"	"	Test
15	4	5		"	"	Test

LESSON PLAN

Academic Year : 2021-2022
 Class : I B.Sc / B.A
 Subject : Skill Based - Herbal Therapy and Cosmetology
 Hours / Week : 2 / week
 Credits : 2

Semester : II
 Class Code :
 Subject Code : USBTA220
 Total Hours : 30 hrs
 Total Marks : 100

Proposed Week	No. of Hrs	Unit	Topics to be Covered	Teaching Methodology	Learning Resources	Methods of Evaluation
1	2	1	Herbs - Definition, division, distribution, Elementary knowledge of Herbs	PPT, Videos	Book Material	Test.
2	2	1	Importance of Medicinal Plants Role of Medicinal Plants in human health care.	PPT, Videos	Book Material	Preparation of Herbarium
3	2	1	Plants in Folk region - Aegle marmelos, Ficus, Curcuma and Sesamum	PPT, Videos	Book Material	Collection of Medicinal plants
4	2	2	Indian system of Medicine - AYUSH Therapeutic values of Naturopathy	"	"	Assignment
5	2	2	Solanum tuberosum, Cardiospermum, Vitex negundo	"	"	Test
6	2	2	Adathoda vasica, Azadiracta indica, Eclipta alba.	"	"	Test

7	2	3	Herbal care for facial skin. Formulation of face pack for dry skin	PPT, Videos	Book Material	Test
8	2	3	Formulation of face pack for oily skin and normal skin.	"	"	"
9	2	3	Herbal remedies for skin disorders pimple, acne., boils, black heads, tans	"	"	"
10	2	4	Herbal care for hair Formulation of hair oil	"	"	"
11	2	4	Formulation of hair tonics Herbal remedy for dandruff	"	"	"
12	2	4	Premature graying, remedies for hair loss.	"	"	"
13	2	5	Herbal cosmetics, Preparation of Herbal Shampoo	"	"	"
14	2	5	Herbal Tooth Paste, Herbal Soap.	"	"	"
15	2	5	Tulasi, Shree, Hara	"	"	"

LESSON PLAN

Academic Year : 2021-2022
 Class : III UG
 Subject : NME-Edible Mushroom Cultivation
 Hours / Week : 3
 Credits : 4

Semester : VI
 Class Code : UGBTAB15
 Subject Code :
 Total Hours : 45
 Total Marks : 100

Proposed Week	No. of Hrs	Unit	Topics to be Covered	Teaching Methodology	Learning Resources	Methods of Evaluation
1	3	1	Biology - Types, Agaricus sp, Calocybe sp, Volvariella sp, Pleurotus sp	PPT, Videos, Chalk and Board.	Book Material	Test
1	3	1	Scope of Edible Mushroom Cultivation in India	"	"	"
2	6	2	Cultivation Infrastructure, Mushroom Unit, Preparation of spawn and bed	"	"	"
2	6	2	Requirements - Substrates, Containers and Instruments	"	"	"
2	6	3	Nutritional Value - Vitamins and Amino acids, statistical data of contents.	"	"	Assignment
2	6	3	Medicinal Properties, diseases cured and prevented by the consumption of Mushroom	"	"	Video Preparation

2	6	4	Methods to store edible mushroom - [Long & Short term storage]	PPT	Book Material	Test
1	3	4	Recipes: Soups, Cutlets, Samosa, Pickles, Curry, Chips, Bread, Biryani, Manchurian, Pulao.	Video Presentation	Book Material	Video Presentation Test
1	3	5	Establishment of mushroom unit - Plans and Procedure	Chalk and Board.	Book Material	Test
1	3	5	Factors influencing mushroom cultivation. Role of TMC and DIC	Chalk and Board	Book Material	Test