



**AUXILIUM COLLEGE (Autonomous)**

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

# **DEPARTMENT OF ZOOLOGY**

## **LESSON PLAN**

### **2021-2022**

**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/UBBTC20  
 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			

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## 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

## 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** : 60 hrs.  
**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 & Board PPT - Videos.	"Text" Book.	Test/Quiz Assignment
10 <sup>th</sup>	3+3	3.1	Bryophyta - Morphology & reproduction Funaria - External & internal structure of Gametophyte.	Chalk & Board PPT - Videos	Bryophyte Text Book Class material	Test/Assign
11 <sup>th</sup>	2+2	3.2	Pteridophyta - Morphology & Reproduction Lycopodium - External features	Chalk & Board PPT, Videos	Pteridophyte Text Book Class Material	Test/Assignment

12 <sup>th</sup>	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 Allied 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 <sup>st</sup> week	4 hrs	I	Familial <del>General</del> characteristics Economic importance of the families Cesalpiniaceae, Rubiaceae & Asclepiadaceae	Chalk & Board.	Text Book Material given Taxonomy - BP Pandey	Tests Assignment
2 <sup>nd</sup> week	4 hrs.	1	Amaranthaceae & Liliaceae. General account of all families.	"	"	"
3 <sup>rd</sup> week	4 hrs.	2	Anatomy - Introduction - Tissues - types - characters of Meristematic tissues.	Chalk & Board.	Anatomy - B.P. Pandey	"
4 <sup>th</sup> week	4 hrs. +4	2	Simple Tissues - types & characteristics Primary structure of Dicot. stem.	PPT Chalk & Board	"	"
5 <sup>th</sup> week	4 hrs	2	Primary structure of Monocot stem. Monocot root. Dicot leaf & Monocot leaf	"	"	"

7 <sup>th</sup> week	4+4	4	Plant Physiology - Absorption of water - Mechanism - Transpiration types & girdling Advantages & disadvantages.	Plant Physiology - H.N. Srivastava	Plant Physiology - H.N. Srivastava	
8 <sup>th</sup> week 9 <sup>th</sup> week	4+4	4	Photosynthesis - Light reaction & Calvin cycle - factors affecting the process Respiration - Introduction & types	Challies Board	"	
10 <sup>th</sup> week 11 <sup>th</sup> week	4 hrs	4	Respiration - Glycolysis, Fermentation, Krebs's cycle	PPT	"	
11 <sup>th</sup> week	4 hrs	4	Plant growth hormones - Auxins, Gibberellins, Cytokinins - Physiological role	Challies Board PPT	"	
12 <sup>th</sup> week	4 hrs	3	Embryology - Introduction - Male Female Reproductive parts & structure	Challies Board	Plant Embryology - P. Mahamuni	
13 <sup>th</sup> & 14 <sup>th</sup>	8 hrs	3	Microsporogenesis - Development of Male gametophyte - Megasporogenesis Embryo sac & its development	Challies Board	"	
15 <sup>th</sup>	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 <sup>st</sup> & 2 <sup>nd</sup> week	4	1 <sup>st</sup>	Introduction to Horticulture - Importance & Scope of Horticulture - Requirements of Horticulture	PPT & Chalkboard	Book given	
3 <sup>rd</sup> & 4 <sup>th</sup> week	4	1 <sup>st</sup>	Soil Types - Irrigation - Cultivation of Economically important Plant-Rose & Mango	PPT Chalkboard		
5 <sup>th</sup> & 6 <sup>th</sup> week	4	2 <sup>nd</sup>	Plant Propagation - Methods & types Cutting layering & Grafting - types of each			
7 <sup>th</sup> & 8 <sup>th</sup> week	4	2 <sup>nd</sup>	Plant Propagation - Budding & types. Role of plant growth regulators in Plants. Horticulture	Chalkboard & Demos		
9 <sup>th</sup> & 10 <sup>th</sup> week	4	3 <sup>rd</sup>	Indoor gardening - Introduction. Potted Plants & Hanging baskets. Bonsai - Training, watering & Maintenance	PPT & other & skills -		
11 <sup>th</sup> & 12 <sup>th</sup> week	4	3 <sup>rd</sup>	Flower-arrangement, decoration - Displays, Bouquets & wreaths - Cut flower - Outdoor gardening Ints.	Chalkboard & Method		

13 <sup>th</sup> to 14 <sup>th</sup>	4	AK SK	Outdoor gardening - Landscaping, Rockery & Asches - Terrace Gardening & Kitchen Gardens	PPT	Book given	
15 <sup>th</sup>	2	SK	Classification of fruits & vegetables - Preservation & Preservation of fruit with vegetable canning etc - Ketchup, Smales, Sauce & Pickles	PPT Chalk & Board	Book given from library	

## LESSON PLAN

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

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

Proposed Week	No. of Hrs	Unit	Topics to be Covered	Teaching Methodology	Learning Resources	Methods of Evaluation
1	2hrs	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+2hrs	1.4-1.6	Irrigation & Nutrition - Cultivation of Economically important Plant Rose & Mango	Videos & PPT	Study material	Test Assignment
4-5	2+2hrs	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 - Fruit & 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						