

SRI VENKATESWARA UNIVERSITY:: TIRUPATI
CENTRE FOR DISTANCE AND ONLINE EDUCATION



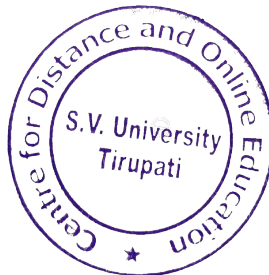
PPR for M.Sc. BOTANY

Choice Based Credit System (CBCS)

Amended as per NEP-2020

(w.e.f. the Academic Year 2024-2025)


DIRECTOR
Centre for Distance and
Online Education (CDOE)
Sri Venkateswara University
TIRUPATI - 517 502.




REGISTRAR
S.V. UNIVERSITY
TIRUPATI

Vision

- To improve Internationally recognized status of the Department through excellence in higher education and application-oriented basic research in the field of plant science
- To perceive and disseminate the importance of plant diversity, its conservation and sustainable utilization
- To inspire intellectual pursuit and experimental skills through innovative teaching and research in basic processes of Plant life.

Mission

- Development of advanced infrastructural and technological facilities to strengthen quality education and research,
- To promote and foster collaborative research with scientific institutes and industry for enhanced scientific thinking and generating new ideas.
- To expand academic activity by offering new multidisciplinary courses and updating programs to suit to a wider spectrum of students and researchers.

Programme Specific Outcomes

- o Students acquire enhanced knowledge of the fundamental concepts of Botany and diverse groups of plants that differentiate them from each other.
- o Explain the general characters, classification, external and internal morphology, reproduction, life cycles, economic importance of different phylogenic plant groups including algal forms to Angiosperms.
- o Understand the principles and practices of advanced plant taxonomy and gain expertise in the field of Plant Identification
- o Understand in detail the physiological and metabolic processes of plants viz Plant development and growth, absorption and translocation of water and mineral elements, transpiration, photosynthesis, respiration
- o Understand the symptoms of abiotic and biotic stress and molecular basis of tolerance to stress, respectively, and apply the knowledge in plant protection
- o Understand the genetic basis of plant traits, gene expression and interaction, regulation in controlling plant

development, reproduction, metabolic processes environmental interaction and Evolution.

o Students will be able to relate the physical and chemical components of the environment to the morphological and anatomical structures and adaptation of plant populations, communities, and ecosystems.

o Understand the Phytogeographical regions of India and Plant diversity, plant resources and their management and sustainable utilization.

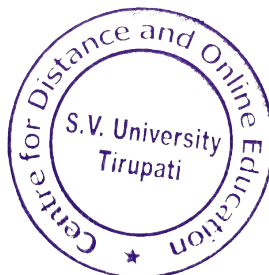
o Understand the advanced aspects of plant tissue culture, genetic engineering and genomics and their use in plant improvement

o Acquire practical skills to learn about microscopic plant structures and perform experiments to demonstrate physiological, ecological processes and biochemical analysis of Macromolecules and Metabolites

o Demonstrate proficiency in the experimental techniques and methods of analysis appropriate for their area of specialization viz., Pathology, Physiology, Phyto-medicine, Mushroom cultivation, Hydroponics and Horticulture.

o Students are well aware of the latest research and innovations in basic and applied aspects of Plant sciences Prepares students for further advanced studies, gain careers in academics, Research and Development, and Entrepreneurship in the plant field.


DIRECTOR
Centre for Distance and
Online Education (CDOE)
Sri Venkateswara University
TIRUPATI - 517 502.




REGISTRAR
S.V. UNIVERSITY
TIRUPATI



SRI VENKATESWARA UNIVERSITY, TIRUPATI
M.Sc. BOTANY DEGREE COURSE
NEP-2020 (w.e.f. 2021-2022)

TITLES OF PAPERS

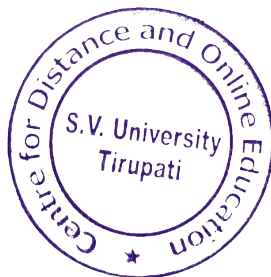
SEMESTER – I

Core - I	BOT-101	Algae, Bryophytes, Pteridophytes and Gymnosperms
Core - II	BOT-102	Taxonomy of Angiosperms
Compulsory Foundation	BOT-103a	Microbiology
	BOT-103b	Computer Applications
Elective Foundation	BOT-104a	Plant Development and Reproduction
	BOT-104b	Microbial Physiology
Practical – I	Bot-105P	Theory Papers 101 & 102
Practical - II	Bot-106P	Theory Papers 103 & 104

SEMESTER – II

Core - I	BOT-201	Plant Biochemistry and Metabolism
Core - II	BOT-202	Phytobiodiversity and Conservation
Compulsory Foundation	BOT-203a	Plant Ecology
	BOT-203b	Hydroponics
Elective Foundation	BOT-204a	Cell Biology, Genetics and Evolution
	BOT-204b	Genetic Engineering of Plants
Practical – I	Bot-205P	Theory Papers 201 & 202
Practical - II	Bot-206P	Theory Papers 203 & 204


DIRECTOR
Centre for Distance and
Online Education (CDOE)
Sri Venkateswara University
TIRUPATI - 517 502.




REGISTRAR
S.V. UNIVERSITY
TIRUPATI

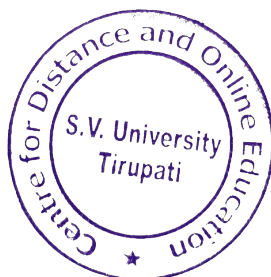
SEMESTER – III

Sl.No.	Components of study	Title of the Course	Title of the paper	Marks
1.	Core	Bot-301	Molecular Plant Physiology	100
2.		Bot-302	Molecular Biology and Techniques	100
3.	Generic Elective	Bot-303a	Molecular Plant Pathology	100
		Bot-303b	Soil and Seed Science	
		Bot-303c	Environmental Studies and Disaster Management	
4.	Practical	Bot-304P	Theory Papers - 301,302 & 303a/303b/303c	100
5.	Skilled Oriented Course	Bot-305	Mushroom Cultivation (Theory & Practical)	100
6.	Open Elective	Bot-306a	Organic Farming	100
		Bot-306b	Gardening and Nursery Techniques	

SEMESTER – IV

Sl.No.	Components of study	Title of the Course	Title of the paper	Marks
1.	Core	Bot-401	Genomics and Proteomics	100
2.		Bot-402	Plant Biotechnology	100
3.	Generic Elective	Bot-403a	Ethnobotany and Plant Drugs	100
		Bot-403b	Horticulture	
		Bot-403c	Forest Protection	
4.	Practicals	Bot-404P	Theory Papers - 401, 402 & 403a/403b/403c	100
5.	Multi Disciplinary Course/Project Work	Bot-405	--	100
6.	Open Elective	Bot-406a	Nano Biotechnology	100
		Bot-406b	Herbal Medicine	


DIRECTOR
 Centre for Distance and
 Online Education (CDOE)
 Sri Venkateswara University
 TIRUPATI - 517 502.




REGISTRAR
S.V. UNIVERSITY
TIRUPATI

TWO YEAR M.Sc. BOTANY DEGREE COURSE

Amended as per NEP-2020

(From the batch of students admitted during the academic year 2021-22)

SCHEME OF INSTRUCTION AND EXAMINATION (CBCS)

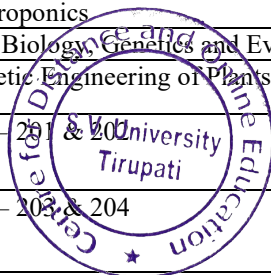
SEMESTER – I

Sl. No.	Components of Study	Course Code	Title of the Paper	No. of contact hours	No. of credits	IA Marks	Sem. End Exam marks	Total
1	Core	Bot-101	Algae, Bryophytes, Pteridophytes and Gymnosperms	6	4	20	80	100
2	Core	Bot-102	Taxonomy of Angiosperms	6	4	20	80	100
3	Compulsory Foundation	Bot-103a	Microbiology	6	4	20	80	100
4		Bot-103b	Computer Applications					
5	Elective Foundation	Bot-104a	Plant Development and Reproduction	6	4	20	80	100
6		Bot-104b	Microbial Physiology					
7	Practical – I	Bot-105P	Bot – 101 & 102	6	4	-	-	100
9	Practical -II	Bot-106P	Bot – 103 & 104	6	4	-	-	100
9			Total:	36	24	--	--	600
10	Audit Course						100	

SEMESTER – II

Sl. No.	Components of Study	Course Code	Title of the course	No. of hours	No. of credits	IA Marks	Sem. End Exam marks	Total
1.	Core Theory	Bot-201	Plant Biochemistry and Metabolism	6	4	20	80	100
2.	Core Theory	Bot-202	Phytobiodiversity and Conservation	6	4	20	80	100
3.	Compul Found	Bot-203a	Plant Ecology	6	4	20	80	100
		Bot-203b	Hydroponics					
4.	Elective Found	Bot-204a	Cell Biology, Genetics and Evolution	6	4	20	80	100
		Bot-204b	Genetic Engineering of Plants					
5.	Pract-I	Bot-205P	Bot – 201 & 202	6	4	-	-	100
	Practical (C)	Bot-206P	Bot – 203 & 204	6	4	-	-	100
			Total :	36	24	--	--	600

50
 DIRECTOR
 Centre for Distance and
 Online Education (CDO)
 Sri Venkateswara University
 TIRUPATI - 517 502.



REGISTRAR
 S.V. UNIVERSITY
 TIRUPATI

7.	Audit Course	0	0	0	100	0
----	--------------	---	---	---	-----	---

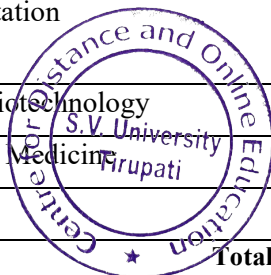
SEMESTER – III

Components of Study	Course Code	Title of the course	No. of hours	No. of credits	IA Marks	Sem. End Exam marks	Total
Core Theory	Bot-301	Molecular Plant Physiology	6	4	20	80	100
Core Theory	Bot-302	Molecular Biology and Techniques	6	4	20	80	100
Generic Elective	Bot-303a	Molecular Plant Pathology	6	4	20	80	100
	Bot-303b	Soil and Seed Science					
	Bot-303c	Environmental Studies and Disaster Management					
Practical– I	Bot-304	Theory Papers : (301, 302 & 303a/303b/303c)	6	4	--	--	100
Skilled Oriented Course	Bot-305	Mushroom Cultivation (theory & practical)	6	4	10	90 (40+50)	100
Open Elective	Bot-306a	Organic Farming	6	4	20	80	100
	Bot-306b	Gardening and Nursery Techniques					
Total :			36	24	--	--	600

SEMESTER – IV

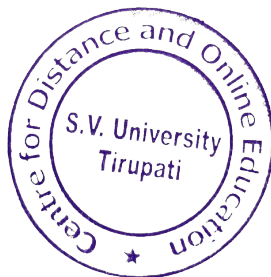
Components of Study	Course Code	Title of the course	No. of hours	No. of credits	IA Marks	Sem. End Exam marks	Total
Core Theory	Bot-401	Genomics and Proteomics	6	4	20	80	100
Core Theory	Bot-402	Plant Biotechnology	6	4	20	80	100
Generic Elective	Bot-403a	Ethnobotany and Plant Drugs	6	4	20	80	100
	Bot-403b	Horticulture					
	Bot-403c	Forest Protection					
Practical	Bot-404	Theory Papers Bot-401 & 402 and Bot-403a/403b/403c	6	4	-	-	100
Multi Disciplinary Course/Project Work	Bot-405	Presentation, Viva & Dissertation	6	4	-	-	100
Open Elective	Bot-406a	Nanobiotechnology	6	4	20	80	100
	Bot-406b	Herbal Medicine					
Total :			36	24			600

50
DIRECTOR
Centre for Distance and
Online Education (CDOE)
Sri Venkateswara University
TIRUPATI - 517 502



REGISTRAR
S.V. UNIVERSITY
TIRUPATI

50
DIRECTOR
Centre for Distance and
Online Education (CDOE)
Sri Venkateswara University
TIRUPATI - 517 502.



MAZ
REGISTRAR
S.V. UNIVERSITY
TIRUPATI