



SOURASHTRA COLLEGE, MADURAI – 625004

(An Autonomous Institution Re-accredited with 'A' grade by NAAC)

BOTANY – SYLLABUS

(Under CBCS based on OBE)

(For the students admitted from the academic year 2024 – 2025 onwards)

393

COURSE STRUCTURE – I YEAR

I – SEMESTER

S. No.	Course Code	Part	Course Title	Hrs. / Week	Exam (Hrs.)	CA	SE	Total Marks	Credits
1	24UBYA11	III	Elective/ Allied-1: BOTANY – I (Plant diversity, Cell biology and Plant Biotechnology)	4 (T)	3	25	75	100	4
2	24UBYAP1	III	ALLIED BOTANY PRACTICAL	2 (P)	–	–	–	–	
			Total	6					4

II – SEMESTER

S. No.	Sub. Code	Subject Title	Hrs. / Week	Exam (Hrs.)	CA	SE	Total Marks	Credits
1	24UBYA21	Elective/Allied – 2: ALLIED BOTANY – II (Plant Taxonomy, Anatomy, Embryology and Physiology)	4 (T)	3	25	75	100	4
2	24UBYAP1	ALLIED BOTANY PRACTICAL	2 (P)	3	40	60	100	2
		TOTAL	6					6



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COURSE STRUCTURE – II YEAR **III SEMESTER**

S. No.	Course Code	Part	Course Title	Hrs. / Week	Exam (Hrs.)	CA	SE	Total Marks	Credits
1	24UBYN31	IV	SEC: NME: Nursery and Landscaping	2	3	25	75	100	2
			TOTAL	2					2

IV – SEMESTER

S. No.	Course Code	Part	Course Title	Hrs. / Week	Exam (Hrs.)	CA	SE	Total Marks	Credits
1	24UBYN41	IV	SEC: NME: Mushroom Cultivation	2	3	25	75	100	2
			TOTAL	2					2

CA – Class Assessment (Internal)

SE – Summative Examination

SEC – Skill Enhancement Course

NME – Non Major Elective

T – Theory

P – Practical



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395

COURSE CODE	COURSE TITLE	CATEGORY	T	P	CREDITS
24UBYN31	NURSERY AND LANDSCAPING	SEC NME	2	–	2

YEAR	SEMESTER	INTERNAL	EXTERNAL	TOTAL
II	III	25	75	100

Curriculum Design and Development	Employability		✓	Skill Oriented		✓	Entrepreneurship			✓
	National	✓	Local	✓	Regional	✓	Global			✓
Curriculum Enrichment	Professional Ethics		Gender		Environment and Sustainability	✓	Human Values	✓	Other Values	

COURSE DESCRIPTION:

Students will acquire knowledge about the fundamental aspects of garden plants. Develop competency in the applications of garden as entrepreneurial skill and to generate additional income

COURSE OBJECTIVES:

Application of the acquired knowledge over the essential requirements of garden making and maintenance Examine the different propagation methods in garden plants

COURSE OUTCOMES (COs):

After the completion of the course, the students will be able to

No.	Course Outcomes	Knowledge Level (According to Bloom's Taxonomy)
CO 1	recognize the basic principles and components of gardening	Upto K3
CO 2	explain about bio-aesthetic planning and conceptualize flower arrangement	Upto K3
CO 3	apply techniques for design various types of gardens according to the culture and art of bonsai	Upto K3
CO 4	compare and contrast different garden styles and landscaping patterns	Upto K3
CO 5	establish and maintain special types of gardens for outdoor and indoor landscaping	Upto K3

K1– KNOWLEDGE (REMEMBERING), K2–UNDERSTANDING, K3–APPLYING



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396

NURSERY AND LANDSCAPING

UNIT – I:

Introduction, prospects and scope of nursery and landscaping

UNIT – II:

Methods of vegetative propagation—cutting, layering, grafting, budding, Floriculture: Rose, Chrysanthemum, Jasmine – cultivation

UNIT – III:

Gardening—formal garden, informal garden, vegetable, garden, landscaped layout designing – formation and maintenance of lawn

UNIT – IV:

Nursery structures – Green house – Shade house, Mist chamber –Topiary, Bonsai culture

UNIT – V:

Manures, composting – vermicomposting

TEXT BOOKS:

1. Amarnath V. 2006. *Nursery and Landscaping*, M/s IBD Publishers, New Delhi.
2. Butts, E and Stensson, K. 2012. *Sheridan Nurseries: Onehundred years of People, Plans, and Plants*. Dundurn Group Ltd.
3. Russell, T. 2012. *Nature Guide: Trees: The world in your hands (Nature Guides)*.
4. Mukherjee D. *Gardening in India*, Oxford IBH Publishing Co, New Delhi.
5. Kumar, N. 1997. *Introduction to Horticulture*, Rajalakshmi Publications, Nagercoil.

REFERENCE BOOKS:

1. Edmond Musser and Andres, *Fundamentals of Horticulture*, McGraw Hill Book Co. New Delhi.
2. Agrawal, P.K. 1993. *Hand Book of Seed Technology*, Dept. of Agriculture and Cooperation, National Seed Corporation Ltd., New Delhi.
3. Janick Jules. 1979. *Horticultural Science*. (3rd Ed.), W.H. Freeman and Co., San Francisco, USA.
4. Singh, J. 2018. *Fundamentals of Horticulture*. Kalyani Publishers.
5. Sharma V. K. 1999. *Encyclopaedia of Practical Horticulture*, Vol. I–IV, Deep And Deep Publ. Pvt. Ltd

DIGITAL TOOLS:

- <https://www.us.elsevierhealth.com/medicine/cell-biology>
- <https://www.us.elsevierhealth.com/medicine/genetics>
- <https://www.kobo.com/us/en/ebook/plant-biotechnology-1>



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COURSE CODE	COURSE TITLE	CATEGORY	T	P	CREDITS
24UBYN41	MUSHROOM CULTIVATION	SEC NME	2	–	2

YEAR	SEMESTER	INTERNAL	EXTERNAL	TOTAL
II	IV	25	75	100

Curriculum Design and Development	Employability	✓	Skill Oriented			✓	Entrepreneurship			✓
	National	✓	Local	✓	Regional	✓	Global			
Curriculum Enrichment	Professional Ethics		Gender		Environment and Sustainability	✓	Human Values		Other Values	

COURSE DESCRIPTION:

Students will understand the role of mushrooms in Nutrition, Medicine and health. Develop competency in the cultivation practices and entrepreneurial skill and to generate additional income

COURSE OBJECTIVES:

Application of the acquired knowledge over the essential requirements of mushroom cultivation and marketing.

COURSE OUTCOMES (COs):

After the completion of the course, the students will be able to

No.	Course Outcomes	Knowledge Level (According to Bloom's Taxonomy)
CO 1	learn and develop skills in mushroom cultivation.	Upto K3
CO 2	understand and appreciate the role of mushrooms in Nutrition, Medicine and health.	Upto K3
CO 3	cultivate mushroom cultivation in small scale industry.	Upto K3
CO 4	learn about diseases and post-harvest technology.	Upto K3
CO 5	study new methods and strategies to contribute to mushroom	Upto K3

K1– KNOWLEDGE (REMEMBERING), K2–UNDERSTANDING, K3–APPLYING



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MUSHROOM CULTIVATION

UNIT – I:

Mushroom cultivation – introduction and scope. Mushrooms– morphology, types and identification (edible and poisonous).

UNIT – II:

Prospects of mushroom cultivation. Nutritional and medicinal values of mushrooms and mushroom recipes.

UNIT – III:

life cycle of common edible mushrooms with special reference to *Pleurotus* spp and *Agaricus* spp.

UNIT – IV:

Mushroom cultivation techniques– spawn production, growth media, spawn running and harvesting of mushrooms.

UNIT – V:

Diseases – insects, pests, nematodes, mites, viruses, fungal competitors. Post-harvest technology and marketing.

TEXT BOOKS:

1. Handbook of Mushroom *Cultivation*. 1999. TNAU publication.
2. Marimuthu, T., Krishnamoorthy, A.S., Sivaprakasam, K. and Jayarajan. R. 1991. *Oyster Mushrooms, Department of Plant Pathology*, Tamil Nadu Agricultural University, Coimbatore.
3. Swaminathan, M. 1990. *Food and Nutrition*. Bappco, The Bangalore Printing and Publishing Co. Ltd., No. 88, Mysore Road, Bangalore – 560018.

REFERENCE BOOKS:

1. Sing. 2005. *Modern Mushroom Cultivation*, International Book Distributors, Dehradun.
2. Verma, 2013. *Mushroom: Edible and Medicinal: Cultivation Conservation, Strain Improvement with their Marketing*. Daya Publishing House.

DIGITAL TOOLS:

- <https://www.amazon.in/Mushroom-Cultivation-India-B-C/dp/817035479X>
- <http://nrcmushroom.org/book-cultivation-merged.pdf>
- http://agricoop.nic.in/sites/default/files/ICAR_8.pdf
- <http://www.agrimoon.com/mushroom-culture-horticulture-icar-pdf-book/>