



MAHATMA GANDHI COLLEGE

THIRUVANANTHAPURAM

POST GRADUATE DEPARTMENT OF BOTANY & RESEARCH CENTER

NOTICE

ADD-ON COURSE – HORTICULTURE

Dear students,

We are excited to announce the introduction of an Add-On course titled "Horticulture" for the academic year 2022-2023. This course aims to provide students with an in-depth understanding of Horticulture techniques and their practical applications.

Details of the Add-On Course:

Course Duration: 3 months

Start Date: 03/08/2022

End Date: 30/10/2022

Time: 0 hr

Venue: Room 55

Registration Details

Last Date for Registration: 25/07/2022

Seats are limited, and admission to the course will be on a first-come, first-served basis. Interested students are encouraged to register at the earliest to secure their spot.

For any queries or additional information, please contact the course coordinator, Head, Department of Botany at the department office between 10:00 AM to 4:00 PM on weekdays.

Warm regards,

Head, Department of Botany

**MAHATMA GANDHI COLLEGE
THIRUVANANTHAPURAM**

Re-accredited with B+ Grade by NAAC

**ADD ON COURSE- HORTICULTURE
COURSE STRUCTURE AND SYLLABUS**

BY

**POST GRADUATE DEPARTMENT &
RESEARCH CENTRE OF BOTANY**



(2022 onwards)

OBJECTIVES OF THE COURSE

- The candidate is trained on professional skill, professional knowledge and Employability skill related to jobs in Horticulture.
- To create awareness about different propagation methods for plants, fundamentals of horticulture, importance and scope of horticulture, classification of horticultural plants and its economic aspects.
- The candidates learns about importance of fruits, flowers and vegetables, present situation and scope of development of horticultural crops, schemes on horticultural development, layout of plots and gardens, planning for home gardens, landscape gardens, experimental designs, fruit culture, vegetable propagation, cultivation of fruits & vegetables and flower arrangement.
- In addition a candidate is entrusted to undertake project works, extracurricular activities and on job training to build up confidence.

EXPECTED OUTCOME OF THE COURSE

- **Crop Production:** Understanding horticultural techniques allows for the efficient production of a wide range of crops, including fruits, vegetables, ornamental plants, herbs, and medicinal plants.
- **Plant Breeding:** Horticulture techniques involve the study of plant breeding to develop new cultivars with improved traits.
- **Sustainable Agriculture:** Horticulture techniques play a crucial role in promoting sustainable agriculture practices including studying organic farming methods and integrated farming systems.
- **Nursery Management:** Horticulture techniques encompass the management of plant nurseries, which involves propagation, production, and marketing of plants. This includes studying nursery design, plant propagation techniques, container production, pest and disease management in nurseries, and marketing strategies for selling horticultural products.
- **Post-Harvest Technology:** Studying horticulture techniques also covers post-harvest handling, processing, and preservation of horticultural crops and value addition to extend the shelf life, maintain quality, and reduce post-harvest losses.
- **Entrepreneurship and Business:** Studying horticulture techniques provides the knowledge and skills required for entrepreneurship in the horticulture industry. This includes understanding market trends, business planning, financial management, marketing strategies, and value chain analysis for horticultural products.

COURSE STRUCTURE

DURATION : 30 Hrs

ASSESSMENT & CERTIFICATION : The trainee will be tested for his skill, knowledge and attitude during the period of training and at the end of the training programme including practical examinations.

HORTICULTURE

SYLLABUS

MODULE I

(10 hrs)

- Scope and importance of horticulture, Divisions of horticulture
- Soil preparation, Potting mixture and potting media, Types of pots and containers
- Garden tools and implements
- Manures and fertilizers - Time and application of manures and fertilizers. Weedicides, Fungicides, Pesticides
- Growth regulators in horticulture - Rooting hormones, Growth promoters, Flower induction.

MODULE- II

(15 hrs)

- Propagation methods
 - Cuttings- root, stem, leaf
 - Layering – Air layering, Ground layering (Tip, Trench and Compound)
 - Budding – T-budding
 - Grafting – Approach grafting, Bridge grafting, whip and tongue grafting
- Bonsai
- Lawns and landscaping

MODULE- III

(5 hrs)

- Flower Arrangement
 - Containers and requirements for flower arrangements Free style, Shallow and Mass arrangement
 - Ikebana
 - Bouquet and garland making
 - Dry flower arrangement
 - Harvesting and Storage methods of flowers
- Field Study and workshops : Visit to a Botanical garden of horticultural importance

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POSTGRADUATEDEPARTMENTANDRESEARCHCENTREOFBOTANY

THIRUVNANTHAPURAM

ADDONCOURSE -2022- 2023

LISTOFSTUDENTS-HORTICULTURE

SL.NO	NAMEOFSTUDENT	CLASS/S EMESTER
1	SREEKUTTY R	II PG
2	SREELEKSHMI P S	II PG
3	VRINDHA VISWAM	II PG
4	APARNA M S	I PG
5	ARYA S S	I PG
6	AYANA A S	I PG
7	AMAL DEV S	III UG
8	ANJANA M S	III UG
9	ANJITHA PRASAD L	III UG
10	APARNA B	III UG
11	GOPIKA S	III UG
12	NANDHANA S	III UG
13	SANDEEP S	III UG
14	CHANDHANA V S	III UG
15	KRISHNENDHU A P	III UG
16	M PRAVEENA PRATHAPAN	III UG
17	SANDRA U SAJAN	III UG
18	VIJITHA S U	III UG
19	AMAL KRISHNA M	III UG
20	ANJALI B S	III UG
21	AKASH V	III UG
22	SANDESHJS	II UG
23	SANDRASNAIR	II UG
24	SANYAA S	II UG
25	SREELEKSHMIVS	II UG
26	SWETHASABU	II UG
27	ABINS	II UG
28	AKHILKRISHNAAS	II UG

29	ATHULYAKRISHNA.S	II UG
30	AVANTHIKA.M.R	II UG
31	DEVIKARAJANAT	II UG
32	FEBAKU	II UG
33	GOURIKRISHNA.S.B	II UG
34	HAFISRAHMANN	II UG
35	KIRANM	II UG
36	AADHIYA K V	II UG
37	ABHILASHV	I UG
38	ABHINAVSS	I UG
39	ADITHYASNAIR	I UG
40	ADITHYANAV	I UG
41	ADITHYANKM	I UG
42	ARATHYA	I UG
43	ARJUNVS	I UG
44	GAYATHRYS.G	I UG
45	KAVYATR	I UG
46	LEKSHMIJAYAN	I UG
47	MOHAMMADFAIZALF	I UG
48	NANDHUAR	I UG
49	NANDUNB	I UG
50	NIKHILS	I UG

HEADOF THE DEPARTMENT

PRINCIPAL

MAHATMA GANDHI COLLEGE, THIRUVNANTHAPURAM

POST GRADUATE DEPARTMENT AND RESEARCH CENTRE OF BOTANY

ADD ON COURSE - 2022 - 2023

ATTENDANCE OF STUDENTS - HORTICULTURE

SL.NO	NAME OF STUDENT	CLASS/ SEMESTER	3-5-22 Tuesday	6-8-22 Wednesday	13-8-22 Wednesday	20-8-22 Thursday	27-8-22 Friday	3-9-22 Monday	10-9-22 Monday	17-9-22 Monday	24-9-22 Monday	1-10-22 Tuesday	8-10-22 Tuesday	15-10-22 Tuesday	19-10-22 Friday
1	SREEKUTTY R	II PG	X	X	X	X	X	X	X	X	X	X	X	X	X
2	SREELEKSHMI P S	II PG	X	X	X	X	X	X	X	X	X	X	X	X	X
3	VRINDHA VISWAM	II PG	X	X	X	X	X	X	X	X	X	X	X	X	X
4	APARNA M S	IPG	X	X	X	X	X	X	X	X	X	X	X	X	X
5	ARYA S S	IPG	X	X	X	X	X	X	X	X	X	X	X	X	X
6	AYANA A S	IPG	X	X	X	X	X	X	X	X	X	X	X	X	X
7	AMAL DEV S	III UG	X	X	X	X	X	X	X	X	X	X	X	X	X
8	ANJANA M S	III UG	X	X	X	X	X	X	X	X	X	X	X	X	X
9	ANJITHA PRASAD L	III UG	X	X	X	X	X	X	X	X	X	X	X	X	X
10	APARNA B	III UG	X	X	X	X	X	X	X	X	X	X	X	X	X
11	GOPIKA S	III UG	X	X	X	X	X	X	X	X	X	X	X	X	X
12	NANDHANA S	III UG	X	X	X	X	X	X	X	X	X	X	X	X	X
13	SANDEEP S	III UG	X	X	X	X	X	X	X	X	X	X	X	X	X
14	CHANDHANA V S	III UG	X	X	X	X	X	X	X	X	X	X	X	X	X
15	KRISHNENDHU A P	III UG	X	X	X	X	X	X	X	X	X	X	X	X	X
16	M PRAVEENA PRATHAPAN	III UG	X	X	X	X	X	X	X	X	X	X	X	X	X
17	SANDRA U SAJAN	III UG	X	X	X	X	X	X	X	X	X	X	X	X	X
18	VIJITHA S U	III UG	X	X	X	X	X	X	X	X	X	X	X	X	X
19	AMAL KRISHNA M	III UG	X	X	X	X	X	X	X	X	X	X	X	X	X
20	ANJALI B S	III UG	X	X	X	X	X	X	X	X	X	X	X	X	X
21	AKASH V	III UG	X	X	X	X	X	X	X	X	X	X	X	X	X
22	SANDESH JS	II UG	X	X	X	X	X	X	X	X	X	X	X	X	X

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ADD ON COURSE - 2022 - 2023

ATTENDANCE OF STUDENTS - HORTICULTURE

SL.NO	NAME OF STUDENT	CLASS/ SEMESTER	27-10-22	31-10-22	03-11-22	10-11-22	15-11-22
1	SREEKUTTY R	II PG	Ab	✓	Ab	Ab	
2	SREELEKSHMI P S	II PG	✓	Ab	✓	Ab	
3	VRINDHA VISWAM	II PG	✓	✓	✓	✓	
4	APARNA M S	IPG	✓	Ab	✓	✓	
5	ARYA S S	IPG	✓	✓	✓	✓	
6	AYANA A S	IPG	✓	✓	✓	✓	
7	AMAL DEV S	III UG	✓	✓	✓	Ab	
8	ANJANA M S	III UG	✓	✓	✓	✓	
9	ANJITHA PRASAD L	III UG	✓	✓	✓	✓	
10	APARNA B	III UG	Ab	✓	Ab	✓	
11	GOPIKA S	III UG	✓	✓	Ab	✓	
12	NANDHANA S	III UG	✓	✓	Ab	✓	
13	SANDEEP S	III UG	✓	✓	✓	✓	
14	CHANDHANA V S	III UG	✓	✓	✓	Ab	
15	KRISHNENDHU A P	III UG	✓	✓	✓	Ab	
16	M PRAVEENA PRATHAPAN	III UG	✓	Ab	✓	✓	
17	SANDRA U SAJAN	III UG	✓	✓	✓	✓	
18	VIJITHA S U	III UG	✓	✓	Ab	✓	
19	AMAL KRISHNA M	III UG	✓	✓	Ab	✓	
20	ANJALI B S	III UG	Ab	✓	Ab	✓	
21	AKASH V	III UG	✓	✓	Ab	✓	
22	SANDESH JS	II UG	✓	✓	✓	Ab	

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POST GRADUATE DEPARTMENT & RESEARCH CENTRE OF BOTANY

ADD ON COURSE- HORTICULTURE

QUESTION PAPER

2022-2023 Academic year

Duration: 1 hr

Marks: 30

PART A - (Answer any 5; 1 marks each = 5 marks)

1. Define horticulture.
2. Name one division of horticulture.
3. What is the primary purpose of a potting mixture?
4. Mention a common garden tool.
5. What is a rooting hormone?
6. What is Ikebana?

PART B - (Answer any 5; 2 marks each = 10 marks)

7. Discuss in detail the types of manures and fertilizers, focusing on their application times and impacts on plant growth.
8. Explain the different propagation methods in horticulture, including stem, root, and leaf cuttings.
9. Describe the art and science of Bonsai, highlighting its importance in horticulture.
10. Delve into the concepts of lawns and landscaping, emphasizing their aesthetic and ecological values.
11. Explain the various types of flower arrangements, focusing on the principles and techniques of Ikebana.
12. Discuss the importance of harvesting and storage methods of flowers in maintaining their freshness and prolonging their lifespan.
13. Explain the importance of soil preparation in horticulture.

PART C - (Answer any 3; 5 marks each = 15 marks)

14. Elaborate on the various types of pots and containers used in horticulture and their significance.
15. Discuss in detail the types of manures and fertilizers, focusing on their application times and impacts on plant growth.
16. Explain the different propagation methods in horticulture, including stem, root, and leaf cuttings.
17. Describe the art and science of Bonsai, highlighting its importance in horticulture.
18. Explain the various types of flower arrangements, focusing on the principles and techniques of Ikebana.

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ADD ON COURSE – 2022 - 2023

MARK LIST OF STUDENTS - HORTICULTURE

SL.NO	NAME OF STUDENT	CLASS/ SEMESTER	MARK	SIGNATURE
1	SREEKUTTY R	II PG	22	Sreekutty
2	SREELEKSHMI P S	II PG	23	Sreelekshmi
3	VRINDHA VISWAM	II PG	08	VRINDHA
4	APARNA M S	I PG	24	Aparna
5	ARYA S S	I PG	22	Arya
6	AYANA A S	I PG	28	Ayana
7	AMAL DEV S	III UG	21	Amal
8	ANJANA M S	III UG	22	Anjana
9	ANJITHA PRASAD L	III UG	19	Anjitha
10	APARNA B	III UG	20	Aparna
11	GOPIKA S	III UG	28	Gopika
12	NANDHANA S	III UG	26	Nandana
13	SANDEEP S	III UG	08	Sandeep
14	CHANDHANA V S	III UG	16	Chandana
15	KRISHNENDHU A P	III UG	21	Krishnendhu
16	M PRAVEENA PRATHAPAN	III UG	24	Praveena
17	SANDRA U SAJAN	III UG	26	Sandra
18	VIJITHA S U	III UG	19	Vijitha
19	AMAL KRISHNA M	III UG	04	Amal
20	ANJALI B S	III UG	28	Anjali
21	AKASH V	III UG	22	Akash
22	SANDESH JS	II UG	24	Sandesh
23	SANDRA S NAIR	II UG	26	Sandra
24	SANYA A S	II UG	29	Sanya
25	SREELEKSHMI V S	II UG	21	Sreelekshmi
26	SWETHA SABU	II UG	20	Swetha
27	ABIN S	II UG	06	Abin
28	AKHIL KRISHNA A S	II UG	21	Akhil

29	ATHULYA KRISHNA.S	II UG	26	<i>Athulya Krishna</i>
30	AVANTHIKA.M.R	II UG	24	<i>Avanthika</i>
31	DEVIKA RAJAN A T	II UG	28	<i>Devika</i>
32	FEBA K U	II UG	20	<i>Feba</i>
33	GOURI KRISHNA . S . B	II UG	21	<i>Gouri</i>
34	HAFIS RAHMAN N	II UG	05	<i>Hafis Rahman</i>
35	KIRAN M	II UG	23	<i>Kiran</i>
36	AADHYA K V	II UG	26	<i>Aadhya</i>
37	ABHILASH V	I UG	28	<i>Abhilash</i>
38	ABHINAV SS	I UG	16	<i>Abhinav</i>
39	ADITHYA S NAIR	I UG	08	<i>Adithya</i>
40	ADITHYAN A V	I UG	24	<i>Adithyan</i>
41	ADITHYAN K M	I UG	28	<i>Adithyan</i>
42	ARATHY A	I UG	26	<i>Arathy</i>
43	ARJUN V S	I UG	22	<i>Arjun</i>
44	GAYATHRY S.G	I UG	24	<i>Gayathri</i>
45	KAVYA T R	I UG	26	<i>Kavya</i>
46	LEKSHMI JAYAN	I UG	28	<i>Lekshmi</i>
47	MOHAMMAD FAIZAL F	I UG	29	<i>Mohammad Faizal</i>
48	NANDHU A R	I UG	28	<i>Nandhu</i>
49	NANDU N B	I UG	22	<i>Nandu</i>
50	NIKHIL S	I UG	06	<i>Nikhil</i>

[Signature]
HEAD OF THE DEPARTMENT

[Signature]
PRINCIPAL



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DEPARTMENT OF BOTANY

CERTIFICATE

This is to certify that of
..... has successfully completed Add on
Course in " " offered by
Department of Botany, Mahatma Gandhi College, TVPM during the
academic year

Head of the Department

Principal

Report on the Add-on Course in Horticulture

Academic Year: 2022-2023

With an objective to enhance the academic experience of students through specialized sessions, the Department of Botany organized a course for the academic year 2022-2023. . This program was developed not only to educate but also to instil a scientific temperament among students and nurture a sense of social responsibility. Furthermore, this course is a testament to our commitment to ensuring that our students receive a comprehensive education. Structured as a 30-hour course, the content was curated for Post Graduate and Undergraduate students. The course was adeptly led by Dr. Praveenkumar BS, Assistant Professor, Department of Botany, NSS College, Cherthala, Alappuzha, an expert in the field of Botany. With a plethora of experience under his belt, Dr. Praveenkumar's guidance was invaluable to the program's success. He was ably supported by a cadre of faculty members, each contributing their distinct expertise to the course modules.

Students greatly benefited from Dr. Praveenkumar's expertise, which was evident from the proactive participation in discussions and the quality of assignments submitted. His approachable demeanor encouraged students to clarify doubts, making the learning process more effective. Post-course feedback highlighted Dr. Praveenkumar's command over the subject and his ability to elucidate complex topics with ease. Students expressed gratitude for the insights they gained, with many considering pursuing advanced studies in the subject. The department extends its heartfelt gratitude to Dr. Praveenkumar BS for his stellar contribution to this course and looks forward to future collaborations.