



MAHATMA GANDHI COLLEGE

THIRUVANANTHAPURAM

POST GRADUATE DEPARTMENT OF BOTANY & RESEARCH CENTER

NOTICE

ADD-ON COURSE –MUSHROOM CULTIVATION

Dear students,

We are excited to announce the introduction of an Add-On course titled "Mushroom Cultivation" for the academic year 2021-2022. This course aims to provide students with an in-depth understanding of mushroom cultivation techniques and their practical applications.

Details of the Add-On Course:

Course Duration: 3 months

Start Date: 02/07/2021

End Date: 28/10/2021

Time: 0 hr

Venue: Room 55

Registration Details

Last Date for Registration: 25/06/2021

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

POST GRADUATE DEPARTMENT AND RESEARCH CENTRE OF BOTANY

THIRUVNANTHAPURAM

ADD ON COURSE –2021- 2022

LIST OF STUDENTS-MUSHROOM CULTIVATION

SL.NO	NAME OF STUDENT	CLASS/ SEMESTER
1	JIJI NELSON S	II PG
2	NAVAMI ASOK A S	II PG
3	SAJILA A S	II PG
4	AKHILA A G	I PG
5	APARNA B	I PG
6	APARNA CHANDRAN J S	I PG
7	AISHWARYASP	III UG
8	AISWARYA.S	III UG
9	AMRITHAKRISHNAA.S	III UG
10	ANJANA.A.B	III UG
11	ARSHASA	III UG
12	ASHTAMY.B.S	III UG
13	DEVENDUB.S.	III UG
14	GAYATHRYM.S	III UG
15	JANCY.C.S	III UG
16	MOHAMMEDSHANS	III UG
17	NIKHILAA.A	III UG
18	POOJAAJITH	III UG
19	SANGEETHASR	III UG
20	SIMI.M.S	III UG
21	RESHMA BAIJU	III UG
22	AROMALKRISHNA.R.S	II UG
23	HARISARANSJ	II UG
24	SASWATHY	II UG
25	SARANGISSUNIL	II UG
26	SOURAVS	II UG
27	SREEJYOTHI.B.S	II UG
28	ARCHASANIL	II UG

29	MOSESMATHEW	II UG
30	SAILEKSHMI.V.S	II UG
31	NAUSHINA.J	II UG
32	ANANDHU A S	II UG
33	AKASH V	II UG
34	GOURI L AJI	II UG
35	SARANYA V S	II UG
36	SHILPA ANIL	II UG
37	AADHYAKV	I UG
38	AISWARYAM S	I UG
39	AKSHAYNP	I UG
40	AKSHAYA.A. M	I UG
41	AMALA	I UG
42	ANANDUKRISHNA.P	I UG
43	ANANTHUA	I UG
44	ARCHAS	I UG
45	AVANI.V.T	I UG
46	DEVIPRAKASH	I UG
47	DEVIKAD	I UG
48	DHANUSH.I.S	I UG
49	GOPIKASM	I UG
50	MUHSINANS	I UG



HEAD OF THE DEPARTMENT



PRINCIPAL

MAHATMA GANDHI COLLEGE, THIRUVNANTHAPURAM

POST GRADUATE DEPARTMENT AND RESEARCH CENTRE OF BOTANY

ADD ON COURSE – 2021 - 2022

ATTENDANCE OF STUDENTS - MUSHROOM CULTIVATION

SL.NO	NAME OF STUDENT	CLASS/ SEMESTER	02-07-21	08-07-21	16-7-21	24-7-21	31-8-21	7-8-21	27-8-21	06-09-21	14-9-21	15-9-21
			Friday	Thursday	Friday	Saturday	Thursday	Saturday	Friday	Monday	Thursday	Saturday
1	JIJI NELSON S	II PG	X	X	Ab	X	X	X	X	X	Ab	X
2	NAVAMI ASOK A S	II PG	Ab	X	X	X	X	X	X	X	Ab	X
3	SAJILA A S	II PG	X	X	X	X	X	Ab	X	X	Ab	X
4	AKHILA A G	I PG	X	X	X	X	X	Ab	X	X	X	X
5	APARNA B	I PG	X	X	X	X	X	X	X	X	X	X
6	APARNA CHANDRAN J S	I PG	X	X	X	Ab	X	X	X	X	X	X
7	AISHWARYA S P	III UG	X	X	X	X	X	X	X	X	X	X
8	AISWARYA .S	III UG	X	X	X	X	X	X	X	X	X	X
9	AMRITHA KRISHNA A.S	III UG	X	Ab	X	X	X	X	Ab	X	X	Ab
10	ANJANA. A. B	III UG	X	X	X	X	X	X	X	X	Ab	X
11	ARSHA S A	III UG	X	X	X	X	X	X	X	X	Ab	X
12	ASHTAMY.B.S	III UG	Ab	X	X	X	X	X	X	X	X	X
13	DEVENDU B.S.	III UG	X	X	X	X	X	Ab	X	X	X	X
14	GAYATHRY M. S	III UG	X	X	X	X	X	X	X	X	X	X
15	JANCY.C.S	III UG	X	X	X	X	X	X	X	X	X	X
16	MOHAMMED SHAN S	III UG	X	X	X	X	Ab	X	X	X	X	X
17	NIKHILAA. A	III UG	X	X	Ab	X	X	X	X	Ab	X	X
18	POOJA AJITH	III UG	X	X	Ab	X	X	X	X	X	X	X
19	SANGEETHA S R	III UG	X	X	X	X	X	X	X	X	Ab	X
20	SIMI . M . S	III UG	Ab	X	X	Ab	X	X	Ab	X	X	Ab
21	RESHMA BAIJU	III UG	X	X	X	Ab	X	X	X	X	X	Ab
22	AROMAL KRISHNA .R.S	II UG	X	X	X	X	X	Ab	X	X	X	Ab

MAHATMA GANDHI COLLEGE
THIRUVANANTHAPURAM

POST GRADUATE DEPARTMENT & RESEARCH CENTRE OF BOTANY

ADD ON COURSE- MUSHROOM CULTIVATION

QUESTION PAPER

2021-2022 Academic year

Duration: 1 hr

Marks: 30

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

1. Define "composting" in the context of mushroom cultivation.
2. Name one common pest associated with mushroom cultivation.
3. Which mushroom type has significant medicinal values?
4. What is the systematic position of Agaricus?
5. Why is substrate preparation vital in mushroom cultivation?

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

6. Mention two common pests found in mushroom cultivation.
7. Explain the significance of mushroom storage.
8. Discuss the challenges and opportunities associated with mushroom cultivation in the modern age.
9. Briefly explain the historical significance of mushrooms in culinary and medicinal uses.
10. Describe the difference between edible and poisonous mushrooms.
11. Explain the nutritional benefits of consuming mushrooms.
12. Why is mushroom cultivation considered economically beneficial for farmers?

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

13. Provide a detailed account of the systematic position, distribution, and structure of Pleurotus.
14. Discuss the various types of mushrooms mentioned in the module and their unique characteristics.
15. Elaborate on the importance of substrate preparation and its role in ensuring a successful mushroom yield.
16. Describe the challenges associated with composting in mushroom cultivation.
17. What are the common diseases found in Pleurotus, and how can they be prevented?

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POST GRADUATE DEPARTMENT AND RESEARCH CENTRE OF BOTANY

THIRUVNANTHAPURAM

ADD ON COURSE – 2021 - 2022

MARK LIST OF STUDENTS - MUSHROOM CULTIVATION

SL.NO	NAME OF STUDENT	CLASS/ SEMESTER	MARK	SIGNATURE
1	JJI NELSON S	II PG	28	JJI
2	NAVAMI ASOK A S	II PG	21	Navami
3	SAJILA A S	II PG	23	Sajila
4	AKHILA A G	I PG	20	Akhila
5	APARNA B	I PG	19	Aparna B
6	APARNA CHANDRAN J S	I PG	24	Aparna
7	AISHWARYA S P	III UG	26	Aishwarya
8	AISWARYA .S	III UG	29	Aishwarya
9	AMRITHA KRISHNA A.S	III UG	08	Amritha
10	ANJANA. A. B	III UG	22	Anjana
11	ARSHA S A	III UG	26	Arsha
12	ASHTAMY.B.S	III UG	29	Ashtamy
13	DEVENDU B.S.	III UG	06	Devendu
14	GAYATHRY M. S	III UG	22	Gayathry
15	JANCY.C.S	III UG	26	Jancy
16	MOHAMMED SHAN S	III UG	28	Mohammed
17	NIKHILAA. A	III UG	23	Nikhila
18	POOJA AJITH	III UG	24	Pooja
19	SANGEETHA S R	III UG	20	Sangeetha
20	SIMI . M . S	III UG	08	Simi
21	RESHMA BAIJU	III UG	19	Reshma
22	AROMAL KRISHNA .R.S	II UG	21	Aromal
23	HARISARAN S J	II UG	26	Harisaran
24	S ASWATHY	II UG	24	Swathy
25	SARANGI S SUNIL	II UG	22	Sarangi
26	SOURAV S	II UG	06	Sourav
27	SREEJYOTHI. B. S	II UG	20	Sreejyothi
28	ARCHA S ANIL	II UG	19	Archa

29	MOSES MATHEW	II UG	26	Moses Mathew
30	SAILEKSHMI V.S	II UG	28	Sailekshmi
31	NAUSHIN A.J	II UG	06	Naushin A.S
32	ANANDHU A S	II UG	22	Anandhu
33	AKASH V	II UG	24	Akash
34	GOURI L AJI	II UG	26	Gouri
35	SARANYA V S	II UG	05	Saranya
36	SHILPA ANIL	II UG	23	Shilpa Anil
37	AADHYA K V	I UG	24	Aadhya
38	AISWARYA M S	I UG	26	Aiswarya
39	AKSHAY N P	I UG	28	Akshay
40	AKSHAYA. A. M	I UG	20	Akshaya
41	AMAL A	I UG	21	Amal A
42	ANANDU KRISHNA. P	I UG	06	Anandu
43	ANANTHU A	I UG	22	Ananthu
44	ARCHA S	I UG	23	Archa
45	AVANI.V.T	I UG	26	Avani V.T
46	DEVI PRAKASH	I UG	28	Devi
47	DEVIKA D	I UG	20	Devika
48	DHANUSH.I.S	I UG	08	Dhanush
49	GOPIKA SM	I UG	06	Gojika SM
50	MUHSINA N S	I UG	23	Muhsina


HEAD OF THE DEPARTMENT


PRINCIPAL



MAHATMA GANDHI COLLEGE

THIRUVANANTHAPURAM

Re-accredited with B+ Grade by NAAC

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 Mushroom Cultivation

Academic Year: 2021-2022

In a bid to fuse conventional teaching methods with hands-on experiences, the Department of Botany unveiled a supplementary course focusing on mushroom cultivation. Crafted to engage both Undergraduate and Post Graduate students, this 30-hour digital program aimed beyond traditional academic boundaries. The course was designed not only to nurture scientific inquisitiveness but also to instill a sense of civic responsibility. This initiative stands as a testament to the department's unwavering commitment to holistic education, especially during challenging times following the Covid-19 protocol.

At the helm of this course was Ms. Maya S. Nair, Assistant professor from the Department of Botany at NSS College, Cherthala, Alappuzha. She was flanked by a team of faculty members, each bringing a unique expertise to the table. The course commenced on a Saturday and was spread over several working days, with the timing meticulously planned to either precede or succeed regular college hours in online mode. Ms. Maya S. Nair kickstarted the sessions by providing a panoramic view of mushroom cultivation, touching upon the latest research avenues. Her vibrant and interactive pedagogical approach invigorated students, catalyzing animated discussions.

As the course advanced, students were submerged in the intricate details of mushroom cultivation, encompassing everything from contemporary techniques and tools to industry terminologies. Discussions also spotlighted the cultural relevance of mushroom cultivation. Prioritizing an interactive learning environment, students were encouraged to raise queries, with many showcasing keen interest in pursuing personal mushroom farming projects. The course design thoughtfully incorporated regular review sessions. These discussions were crucial, reinforcing and consolidating the students' understanding of the subject.

As the course reached its conclusion, deserving students were awarded certificates, a symbolic representation of their dedication and successful completion of the course. Summarizing, this innovative online course on mushroom cultivation underscores the Botany Department's ambition to seamlessly integrate theoretical knowledge with practical application, even in a digital landscape.

MAHATMA GANDHI COLLEGE THIRUVANANTHAPURAM

Re-accredited with B+ Grade by NAAC

ADD ON COURSE MUSHROOM CULTIVATION COURSE STRUCTURE AND SYLLABUS

BY

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



(2018 onwards)

OBJECTIVES OF THE COURSE

- **Understanding Mushroom Biology:** Studying mushroom cultivation involves gaining a deep understanding of the biology, life cycle, and growth requirements of different mushroom species.
- **Cultivating Edible Mushrooms:** One of the main objectives of studying mushroom cultivation is to produce edible mushrooms for consumption and commercial purposes. This involves learning about the specific cultivation techniques, substrate preparation, spawn production, and environmental conditions required for different mushroom species.
- **Disease Management:** Studying mushroom cultivation includes researching and developing strategies for the prevention and management of diseases that can affect mushroom crops. This objective focuses on understanding common pathogens, identifying disease-resistant strains, implementing proper sanitation practices, and exploring alternative disease control methods.
- **Economic Viability and Market Development:** This objective includes conducting market research, evaluating consumer preferences, analyzing production costs, and exploring value-added product development to support successful commercialization and entrepreneurship in the mushroom industry.

EXPECTED OUTCOMES OF THE COURSE

- **Increased Knowledge and Understanding:** Studying mushroom cultivation leads to a deeper understanding of mushroom biology, cultivation techniques, and the factors influencing mushroom growth and development.
- **Improved Cultivation Techniques:** Through research and study, new and improved cultivation techniques can be developed. Improved techniques can result in higher yields, better quality mushrooms, and more efficient production processes.
- **Enhanced Disease Management Strategies:** Research on mushroom cultivation helps in identifying and developing effective strategies for disease prevention, early detection, and management.
- **Sustainable Cultivation Practices:** Studying mushroom cultivation promotes the development and adoption of sustainable practices. This includes exploring alternative and renewable substrates, implementing recycling and waste management strategies, minimizing the use of synthetic inputs, and reducing the environmental footprint of mushroom cultivation.
- **Increased Commercial Viability:** By improving cultivation techniques, optimizing production processes, and developing marketable products, the profitability and competitiveness of mushroom farming can be enhanced. This benefits farmers, entrepreneurs, and the overall mushroom industry.
- **Training and Education Opportunities:** Studying mushroom cultivation creates opportunities for training programs, workshops, and educational resources.

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.

MUSHROOM CULTIVATION

SYLLABUS

(Total 30 hrs)

MODULE-I

(10 hrs)

- History and introduction of Edible and Poisonous mushrooms.
- Common Indian mushrooms.
- Systematic position, morphology, distribution, structure of *Agaricus* and *Pleurotus*.

MODULE- II

(5 hrs)

- Nutritional value, medicinal value and advantages- types- milky, straw, button and poisonous mushrooms
- Production level, economic return, Foreign exchange from Mushroom cultivating countries and international trade.

MODULE- III

(10 hrs)

- Cultivation of Paddy straw mushroom, Oyster mushroom, white button mushroom and milky mushrooms
- Spawn making, Substrate preparation, Maintenance and Harvesting
- Composting

MODULE- IV

(5 hrs)

- Diseases- Common pests, disease prevention and control measures- *Agaricus*, *Pleurotus* and *Volverilla*.
- Processing and storage of mushrooms

Field Study: Visit to a mushroom cultivating Laboratory and handson training for processing.