

Resolution No. - AC/II(23-24).2.RUS4

S. P. Mandali's
Ramnarain Ruia Autonomous College
(Affiliated to University of Mumbai)



Syllabus for
SKILL ENHANCEMENT COURSE

(As per the guidelines of National Education Policy 2020
Academic year 2024-25)

(Choice based Credit System)



COURSE OUTLINE

SKILL ENHANCEMENT COURSE

Course Code: RUSSECBOTPO101

Course Title: Mushroom cultivation

Academic year 2023-24

SEMESTER	COURSE CODE/ Unit	COURSE TITLE	CREDITS
I	RUSSECBOTPO101	Mushroom Cultivation	02

SKILL ENHANCEMENT COURSE

Course Code : RUSSECBOTPO101

Course Title: Mushroom cultivation

Academic year 2024-25

COURSE OUTCOMES:

COURSE OUTCOMES	DESCRIPTION A student completing this course will be able to:
CO 1	Identify various cultivable species of mushrooms, distinguish between edible and non-edible mushrooms, and classify them.
CO 2	Perform the culture techniques of edible mushrooms and evaluate and explore the economic viability of mushrooms
CO 3	Experiment the cultivation procedures, design new culture technique, analyze and address the pest and factors affecting growth of mushroom.
CO 4	Develop technologies for harvesting & packaging of mushrooms and to avail loan from banks
CO 5	Create new mushroom recipes for marketing.

PRACTICAL		
RUSSECBOTPO 101	MUSHROOM CULTIVATION	Credit – 1
1	Study of stages in the life cycle of <i>Agaricus</i> from fresh/ preserved material and permanent slides.	
2	Identification of edible and poisonous mushrooms.	
3	Preparation of spawn	
4	Cultivation of mushroom – <i>Pleurotus</i> / Milky mushroom	
5	Postharvest handling of mushrooms	
6	Mushroom recipes	
7	Waste management	

References:

- Awasthi, L. P, Ojha, M. D., Enespa, Awadhesh Kumar Tiwari, Kalyani Publishers, Mushroom cultivation and culture, ISBN13: 9789353596361

- Dubey, RC. (2001) A Textbook of Biotechnology, S.Chand & Co. Ltd.
- Kaul T.N. 2002. Biology and conservation of mushrooms.Oxford and IBH publishing co.pvt.Ltd. New Delhi. ISBN 81-204-1513-2.
- Nita Bahl (1984). Handbook on Mushrooms, Oxford and IBH Publishing Company
- Stamets P and Chilton J. S 1983. The mushroom cultivator, Agarikan press.Homstet Book corporation. ISBN096-1079-80-0.
- Subrata Biswas,M Datta And S V Ngachan, 2012, Mushrooms : A Manual For Cultivation, ISBN :9788120344945, Publisher: PHI learning, e book available
- Tripathy D.P 2005. Mushroom cultivation. Oxford and IBH publishing co. pvt.Ltd.New Delhi.
- EIRI board Handbook of Mushroom Cultivation Processing Preservation Book Publisher: Engineers India Research Institute
- Handbook on Mushroom Cultivation and Processing (with Dehydration, Preservation and Canning) 2011, Author: NIIR Board of Consultants and Engineers ISBN: 9788178330341
- Ryan Debra 2022, Introduction Guide To Hydroponic Mushrooms Growing System, ISBN-13 : 979-8404045888, Kindle edition and Paper back available.
- Sarah Stones, 2021, Hydroponic Mushroom Cultivation; A Profound Guide For Amateur And Professional Mycologists: A Step By Step Guide To Produce Mushroom From Farm To End (Paperback) ISBN: 9798592839634
- Tradd Cotter, 2014, Organic Mushroom Farming and Mycoremediation, Publisher : Chelsea Green Publishing (August 18, 2014) ISBN-10 : 1603584552, ISBN-13 : 78-1603584555

Hindi Books

- Shukla, Chandra Prakash Mashrook Utpadan Taknik (Hindi) 2019, (Mushroom production technology) Mispah Books, ISBN 13: 9788194116493
- Khumbi Utpadan Krishi Book (Hindi Edition) 2020 Kindle Edition Hindi Edition by Virender Singh (Author)

Marathi books

- अळींबी: शेतकरी व स्वयंसहायता गटास पूरक व्यावसाय (Marathi Edition) Kindle Edition Marathi Edition by पी. निकोडे (Author)
- Alambi Lagawad (Marathi) Dr. Pramod Borkar, 2022, Publisher: Sakal Media Pvt. Ltd Available on Flipcart

Online resources:

- Annepu S K, Sharma V P, Kumar S & Barh A. 2019. Cultivation Techniques of Shiitake (A Medicinal Mushroom with Culinary Delight). https://www.researchgate.net/publication/352837214_Cultivation_Techniques_of_Shiitake_A_Medicinal_Mushroom_with_Culinary_Delight
- Ahlawat O P & Arora B. 2016. Paddy Straw Mushroom (*Volvariella volvacea*) Cultivation. https://www.researchgate.net/publication/343499927_Paddy_Straw_Mushroom_Volvariella_volvacea_Cultivation



- Cultivation of Winter Mushroom (*Flammulina velutipes*) https://dmrsolan.icar.gov.in/Folder_Flammulina_Mushroom__English_.pdf
- Munshi N A, Dar G H, Ghani M Y, Kauser S & Mughal N. (2010). Button Mushroom Cultivation. https://www.researchgate.net/publication/236011864_Button_Mushroom_Cultivation
- Maurya A K, John V & Rathor U S. 2020. Cultivation Techniques of Oyster Mushroom (*Pleurotus* sp.). 10.22271/ed.book.905. https://www.researchgate.net/publication/344176332_Cultivation_Techniques_of_Oyster_Mushroom_Pleurotus_sp
- Maurya A K, Murmu R, John V, Srivastava D K & Pant H. 2020. An introduction about milky mushroom: Their cultivation and disease management.
- https://www.researchgate.net/publication/345603860_AN_INTRODUCTION_ABOUT_MILKY_MUSHROOM_THEIR_CULTIVATION_AND_DISEASE_MANAGEMENT

Modality of Assessment Skill Enhancement Course (2 credits)

Practical Examination Pattern: Total Marks - 50

SEMESTER END EXAMINATION	
Laboratory work	40
Journal	4
Practical participation	6
Total marks	50

PRACTICAL JOURNAL

The students are required to present a **duly certified journal** for appearing at the practical examination, failing which they will not be allowed to appear for the examination.

In case of loss of Journal and/ or Report, a Lost Certificate should be obtained from Head/ Co-ordinator / Incharge of the department; failing which the student will not be allowed to appear for the practical examination.

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