

**Programme:** M. Sc. (Botany)

**Course Code:** BOO- 443

**Title of the Course:** Lab in Mushroom Biotechnology

**Number of Credits:** 1(24 hours)

**Effective from AY:** 2020-21

<b>Prerequisites for the course:</b>	Basic knowledge of mycology, ethnomycology, microbiological techniques	
<b>Objective:</b>	To train students in various aspects of production, quality evaluation and marketing of edible mushrooms and their nutritional importance	
<b>Content:</b>	<div>1. Identification of mushroom habitats.</div> <div>2. Identification of edible, medicinal and toxic mushroom species.</div> <div>3. Obtaining and studying mushroom spore prints.</div> <div>4. Developmental biology of local wild mushrooms.</div> <div>5. Preparation of pure mushroom cultures.</div> <div>6. Production of SCP from submerged culture of edible mushrooms.</div> <div>7. Production and evaluation of mushroom spawn.</div> <div>8. Oyster mushroom cultivation using tissue paper rolls</div> <div>9. Mushroom quality evaluation- button or oyster mushrooms.</div> <div>10. Report on Button mushroom industry after field visit.</div>	<div>2 hours</div> <div>2 hours</div> <div></div> <div>1 hour</div> <div>2 hours</div> <div>2 hours</div> <div></div> <div>4 hours</div> <div>4 hours</div> <div>4 hours</div> <div></div> <div>2 hours</div> <div>1 hour</div>
<b>Pedagogy:</b>	Practical Exercises, Mini Projects, Hands on demos, Videos, Moodle based guidance.	
<b>References/Readings</b>	<div>1. Arora, D. (1986). Mushrooms demystified: A comprehensive guide to the fleshy fungi. Berkeley: Ten Speed Press. 959 pp.</div> <div>2. Kuo, M. (2007). 100 Edible Mushrooms. Ann Arbor: University of Michigan Press. 329 pp.</div> <div>3. Kuo, M. and A. Methven (2010). 100 Cool Mushrooms. Ann Arbor: University of Michigan Press. 210 pp.</div> <div>4. Largent, D. L. (1973). How to identify mushrooms to genus I: Macroscopic features. Eureka, CA: Mad River Press. 86 pp.</div> <div>5. Largent, D. L. and Thiers, H. D. (1973). How to identify mushrooms to genus II: Field identification of genera. Eureka, CA: Mad River Press. 32 pp.</div>	
<b>Learning Outcomes</b>	<div>1. Ability to cultivate edible mushrooms.</div> <div>2. Ability to produce quality mushroom spawn.</div> <div>3. Better prospects to work in a mushroom farm or factory.</div> <div>4. Ability to produce consultancy reports on</div>	

	<p>mushroom marketing and production.</p> <ol style="list-style-type: none"> <li>5. Ability to launch value added mushroom processing enterprises.</li> <li>6. Ability to promote edible mushrooms as nutraceuticals.</li> <li>7. Ability to work as master trainer in mushroom cultivation camps or workshops for women, SC, ST.</li> </ol>	
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