

Title of the Course: MYCOLOGY[P]**Course Code: MIC-528****Number of Credits: 1, Practical****Contact hours: 30****Effective from Academic Year: 2022-23**

Objective:	To familiarize with techniques related to fungal isolation, identification and application.	
Content:		(30)
1.	Study and Identification of fungi: Study of standard cultures and identification - Observation of colonial and morphological characteristics, Reference to identification keys	
2.	Fungal Genetics: Isolation of fungal DNA	
3.	Application of fungi for bioremediation: Fungal degradation of azo dye	
4.	Degradation of plant polymer by fungal enzyme (crude)	
5.	Mushroom cultivation	
Pedagogy:	Hands-on experiments in the laboratory, video, online data	
References/ Readings	Alexopoulos, C.J., Mims, C.W. and Blackwell, M., Introductory Mycology, John Wiley & Sons (Asia) Pvt. Ltd. (2007)	
	Cooke, R. C. and Whipps, J. M., Ecophysiology of fungi, Blackwell Scientific Publications, Oxford. (1993)	
	Davis, B. D., Dulbecco, R., Eisen, H. N. and Ginsberg, H. S., Microbiology, Harper and Row. (1980)	
	Deacon, J. W., Introduction to Modern Mycology, Volume 7 of Basic Microbiology, Blackwell Scientific Publications. (2022)	
	Domsch, K. H., Gams, W. and Anderson, T-H., Compendium of Soil Fungi, IHW-Verlag. (2008)	
	Gilman, J. C. and Joseph, C., A Manual of Soil Fungi, Daya Books. (2015)	
	Kendrick, B., The Fifth Kingdom, Focus Publishers. (2017)	
	Mehrotra, R. S. and Aneja, K. R., An Introduction to Mycology, Wiley Eastern Limited. (2015)	
	Onions, A. H. S., Allsop, D. and Eggins, M. O. W., Smith's Introduction to Industrial Mycology, Edward Arnold, London. (2007)	
	Strickberger, M. W., Genetic, The MacMillan Company, New York. (2014).	
Course Outcomes	<ul style="list-style-type: none">● Identify the fungal isolates.● Isolate DNA from fungi● Demonstrate the fungal isolates for bioremedial potentials.● Establish fungal cultures for food security.	