LS 576: Fungal Biology and Biotechnology (2 credits)

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S. No	Topic	Contact hrs	Faculty
1	Introduction to Fungi	1	SLP
2	Fungal diversity, classification, ecology and evolution	2	SLP
3	Fungal genetics (haploid-diploid life cycle, mating type locus: organization and regulation, mutant isolation, complementation, suppressors and synthetic lethal screen	3	SLP
4	Signal transduction pathways in fungi	5	SLP
5	Fungal Cell wall – architecture and biosynthesis	2	SLP
6	Protein sorting, secretion and ER stress response in yeast	2	SLP
7	Vacuolar morphogenesis, vesicle trafficking in fungi Cell Biology of Hyphal growth Autophagic processes in yeast -mechanism, machinery and regulation	4	SLP
8	Pathogenic fungi, pathogenicity and virulence factors	2	SLP
9	Antifungal agents and their mode of actions, drug targets	2	SLP
10	Molecular mechanism of Emergence of drug resistance in fungi	1	SLP
11	Biotechnological importance of fungi, industrially important enzymes from fungi	2	ASK
12	Fungal expression system and production of recombinant protein	1	SLP
13	Engineering protein glycosylation pathway in fungi for humanised protein therapeutics	1	SLP