

Title	Plant Tissue Culture	
Coordinator	Mr. Martin Paul. A	
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Department of the course	Botany	
Hours (Credits)	60 (2)	
Number of seats	15	
Course Fee	3500 INR	
Scope of the Course		
<ul style="list-style-type: none"> • Understanding concepts and techniques, research methodologies involved in micro propagation of plants with an emphasis on horticulture and medicinal plants. • To gain knowledge on lab to land transfer of <i>in vitro</i> propagated plants. • To train students with industry oriented practical exposure so that the soft skill knowledge can be used in future in setting up their own laboratories. • Visit to National laboratories and PTC industries for greater understanding of organization skills and production economics. • Invited guest lectures from experts and Industries for greater interaction of knowledge. 		
Syllabus		
Theory	Brief history of Plant tissue culture	1 hour
	Concepts in plant tissue culture (Totipotency, polarity, differentiation, dedifferentiation, redifferentiation, explant, inoculation)	1 hour 2 hours
	Laboratory organization and instrumentation	2 hours
	Sterilization technique	
	Media composition and preparation	2 hours
	Explant selection	
	Plant hormones in plant tissue culture	1 hour
	Artificial seed propagation	1 hour
	Hardening	1 hour
	Factors affecting plant tissue culture	1 hour
Practical	Preparation of stock solutions	2 hours
	Media preparation	5 hours
	Inoculation – Nodal, inter-nodal, leaf, meristem, axillary bud, anther, ovary, endosperm, seed culture	16 hours
	Sub-culturing	6 hours
	Artificial seed propagation	8 hours
	Hardening techniques.	4 hours
Lab Visits and guest talks	In and around Bengaluru	7 hours