



FORMAT FOR COURSE CURRICULUM

Course Title: Biotechnology for Horticultural Crops

Course Code: BIOT623

Credit Units: 3

L	T	P/S	SW/ FW	TOTAL CREDIT UNITS
3	0	0	0	3

Course Objectives:

The major objective of the course is to provide the students with a thorough grounding in the mechanisms, capabilities, uses and limitations of plant biotechnological methods and available technological platforms so that they will be able to apply them to problems related to horticultural production and product quality.

Learning outcome

- Apply scientific and quantitative reasoning to address real world problems in plant production and management systems for horticultural crops.
- Understand the growth and development of horticultural and agronomic crop plants, current management practices, and factors that influence yield, aesthetics, and end-use quality.
- Understand and appreciate the importance of horticultural and agronomic crop plants to global society, and use this knowledge to contribute to the welfare of global society.

Course Contents/Syllabus- Theory:

	Weightage (%)
Module I:	30
Principles and concepts of Micro-propagation, commercial exploitation in horticultural crops- in vitro clonal propagation, direct organogenesis, embryogenesis, micrografting, meristem culture. Hardening establishment of tissue cultured plants. packing and transport of micro propagules	
Module II:	20
In vitro selection for biotic and abiotic stress, Breeding for improving quality; use of molecular markers	
Module III:	25
Molecular and transgenic approaches and other biotechnological tools in improvement of selected horticultural crops (spice, plantation, medicinal, aromatic etc.) Recent achievements of biotechnology in horticultural crops.	
Module IV:	25

