

Programme	BS Botany	Course Code	BOT-409L	Credit Hours	1
Course Title	Plant Biotechnology (Lab)				
Lab Course Contents					
<p>Stock preparations.</p> <ul style="list-style-type: none"> • Sterile techniques. • Media preparations. • Explant isolation and culture. • Plasmid-DNA isolation and culture. • Agrobacterium culture growth. • Transformation by co-cultivation method. • Selection of transformants. • Screening of transformants. • DNA and protein isolation. • Biochemical analysis of transgenic plants. • Molecular analysis of transgenic plants. 					
Textbooks and Reading Material					
<ol style="list-style-type: none"> 1. Gene Cloning and DNA Analysis: An Introduction. 5th Edition by T. A Brown. Blackwell Publishing. PU Library (Any introductory book on biotechnology). 2. Biotechnology. Fifth edition. John E. Smith Cambridge University Press, The Edinburgh Building, Cambridge CB2 8RU, UK 3. Online resources on http://www.wiley.com/, Journal Articles/ Reports 4. Kumar U. Methods in Plant Tissue Culture. 2nd Edition. Agro Bios, India. 5. Roberta S. Plant Tissue Culture. Techniques and Experiments. Academic Press. 6. Richard A. D. and Robert A. G. Plant Cell Culture: A Practical Approach. IRL Press. 7. Kyte L. and Kleyn J. Plants from Test tubes. An introduction to micropropagation. Timber Press. 					
Teaching Learning Strategies					
<ul style="list-style-type: none"> • Lectures • Group Discussion • Laboratory work • Seminar/ Workshop 					
Assignments: Types and Number with Calendar					
<ul style="list-style-type: none"> • Lecture Based Examination (Objective and Subjective) • Assignments • Class discussion • Quiz • Tests 					