



Code	Subject Title	Cr. Hrs	Semester
BOT-315	Plant Tissue Culture (Advance course)	3	VI
Year	Discipline		
3	Botany		

Syllabus Outline: Study of different Techniques used in Plant Tissue Culture

Course Outline:

Introduction to Plant Tissue Culture
 A Plant Tissue Culture Laboratory
 Aseptic Technique
 Tissue Culture Media,
 Cellular Totipotency
 Callus Cultures
 Cell Suspension Cultures
 Protoplast Cultures
 Anther and Pollen Culture
 Production of Pathogen –free Plants.

Module Aims: The subject is offered with the aim of understanding the basic principles of Plant Tissue Culture Technology and its Applications.

Learning Strategies:

1. Lectures
2. Group Discussion
3. Laboratory work
4. Seminar/ Workshop

Learning Outcome: At the end of the course the students should be able to understand the different techniques used in Plant Tissue Culture including Plant Micropropagation, Callus and Suspension Culture and their Applications.

Assessment Strategies:

1. Lecture Based Examination (Objective and Subjective)
2. Assignments
3. Class discussion
4. Quiz
5. Tests

Books Recommended:

1. **Dixon, R.A. and Gonzales, R.A. (2003).** *Plant Cell Culture. A Practical Approach.* Oxford University Press, Oxford, New York.
2. **Bhojwani, S.S. and Razdan, M.K. (2001).** *Plant Tissue Culture: Theory and Practice.* Elsevier, Amsterdam, Oxford, New York.
3. **Dodds, J.H. and Roberts, L.W. (2000).** *Experiments in Plant Tissue Culture.* Cambridge University Press. Cambridge, London, New York.