



Code	Subject Title	Cr. Hrs	Semester
BOT-316	Plant Tissue Culture Lab	1	VI
Year	Discipline		
3	Botany		

**Syllabus Outline:** Practical knowledge about different protocols used in Plant Tissue Culture.

**Course Outline:**

1. Acquaintance with a Plant Tissue Culture Laboratory.
2. Concepts and Demonstration of Equipment used in a Plant Tissue Culture Laboratory.
3. Aseptic Techniques.
4. Preparation of Plant Tissue Culture Media.
5. Culture of various Explants, Observation and Growth Studies of Callus Cultures.

**Module Aims:** The laboratory exercise is based on concepts and research proposals used in Plant Tissue Culture. The module will provide opportunity for the students to learn Sterile Techniques into Plant Tissue Culture Techniques and the Interaction of Plant Hormones.

**Learning Strategies:**

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

**Learning Outcome:** The students will have an understanding about the functioning of various Equipments used in Tissue Culture Work. The students will be able to understand about how Plants obtain Nutrients, Energy and Water while growing under Laboratory Conditions.

**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.