

| Programme | BS Botany | Course Code | BOT-303L | Credit Hours | 1 |
|--|--|-------------|----------|--------------|---|
| Course Title | Advanced Plant Biochemistry (Lab) | | | | |
| Lab Course Contents | | | | | |
| <ul style="list-style-type: none"> • Separation of soluble proteins by Polyacrylamide Gel Electrophoresis (PAGE) • Separation of Nucleic acids by gel electrophoresis. • Estimation of vitamin C (orange, apple juice). • Determination of potential Alkaloids in plants. • Estimation of Terpenoids in plants. | | | | | |
| Textbooks and Reading Material | | | | | |
| <ol style="list-style-type: none"> 1. Conn E. E. and Stumpf, P. K. 2009. Outlines of Biochemistry, John Wiley and Sons Inc. New York. 2. Buchanan B. B, Gruissem W and Jones R. L. 2015. Biochemistry and Molecular Biology of Plants. John Wiley and Sons. 3. Nelson, D. L and Cox M. M. (2021). Lehninger Principles of Biochemistry. 8th edition. W. H. Freeman and Company. New York. 4. Voet, D. Voet J. G. and Pratt, C. W. 2016. Fundamentals of Biochemistry: Life at the Molecular level, 5th Edition. John Wiley and Sons, New York. 5. Dey, P. M. and Harborne, J. B. 1997. Plant Biochemistry. Harcourt Asia PTE Ltd. Singapore. 6. Smith, E L., Hill, R. L., Lehman, R. I., Lefkowitz, R J. and Abraham. H. Principles of Biochemistry, (General Aspects). White. International Student Edition. McGraw Hill International Book Company. 7. Zubay. G. 2003, Biochemistry, MacMillan Publishing Co., New York. 8. Chesworth, J. M., Strichbury T. and Scaife, J. R. 1998. An introduction to Agricultural Biochemistry. Chapman and Hall, London. 9. Mckee, T. and Mckee, J. R. 1999. Biochemistry – An Introduction. WCB / McGraw-Hill, New York, Boston, USA. 10. Taiz, L. and Zeiger, E. Møller, I M and Murphy A. 2014. Plant Physiology and Development. 6th Edition. Sinauer Associates, Inc. | | | | | |
| 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 | | | | | |