Programme	BS	Course Code	BOT-405L	Credit Hours	1
Course Title	**Forensic Botany (Lab)**				

Lab Course Contents

- Identification of various Plant parts (macro and microfragments) in the laboratory through various techniques (hand lens, light microscopy etc.)
- Identification of different Fabric(s) by various means
- Recovery of Plant Debris including palynomorphs (e.g. pollen and spores) from fabrics, leather and other items such as ornaments, jewelry etc.
- Coprolite analysis for Forensic use
- Gut analysis to isolate Plant particles
- Extraction and Identification of Phytoparticles from different relevant Body parts, using established forensic protocols

Textbooks and Reading Material

1. Coyle, H. M. (2004). *Forensic botany: principles and applications to criminal casework*. crc press.
2. Bock, J. H., & Norris, D. O. (2015). *Forensic plant science*. Academic Press.
3. Hall, D. W., & Byrd, J. (2012). *Forensic botany: a practical guide*. John Wiley & Sons.
4. Gibson, D. J. (2022). *Planting Clues: How plants solve crimes*. Oxford University Press.
5. Margiotta, G., Bacaro, G., Carnevali, E., Severini, S., Bacci, M., & Gabbrielli, M. (2015). Forensic botany as a useful tool in the crime scene: Report of a case. *Journal of forensic and legal medicine*, *34*, 24-28.
6. Kasprzyk, I. (2023). Forensic botany: who?, how?, where?, when? *Science & Justice* 63 (2023) 258–275
7. Thotakura, Dr & Shivudu, G.. (2015). Forensic Botany: An investigative science.
8. Editor(s): Prof. Francis Proctor and Lou Czarnecki (2015) Forensic Botany, Delve Publishing LLC
9. Uitdehaag, S., Dragutinovic, A., & Kuiper, I. (2010). Extraction of diatoms from (cotton) clothing for forensic comparisons. Forensic science international, 200(1-3), 112-116.
10. Mildenhall, D. C., Wiltshire, P. E., & Bryant, V. M. (2006). Forensic palynology: why do it and how it works. Forensic science international, 163(3), 163-172.

    Hu, S., Liu, C., Wen, J., Dai, W., Wang, S., Su, H., & Zhao, J. (2013). Detection of diatoms in water and tissues by combination of microwave digestion, vacuum filtration and scanning electron microscopy. Forensic Science International, 226(1-3), e48-e51.
12. Eliet, J. R., & Harbison, S. A. (2006, April). The development of a DNA analysis system for pollen. In International Congress Series (Vol. 1288, pp. 825-827). Elsevier.
13. Mildenhall, Dallas & Bryant, Vaughn & Milne, Lynne. (2004). Forensic Palynology. 10.1201/9780203484593.ch14.
11. V.M. Bryant, (2014). "Pollen and Spore Evidence in Forensics" in Wiley Encyclopedia of Forensic Science (2nd edition), eds A. Jamieson and A.A. Moenssens, John Wiley: Chichester. Published 14th March 2014.

Teaching Learning Strategies

- Lectures
- Laboratory work
- Group Discussion
- Seminar/ Workshop

Assignments: Types and Number with Calendar

- Lecture Based Examination (Objective and Subjective)
- Assignments
- Quiz
- Class discussion
- Tests