



COURSE CURRICULUM

Course Title: ADVANCED FORENSIC BIOLOGY & ANTHROPOLOGY

Course Code: FSIC 703

Credit Units: 3

Course Level: PG

L	T	P/S	SW/F W	TOTAL CREDIT UNITS
3	0	0	0	3

Course Objectives: During the course the student will

- Understand and appreciate the scope of forensic biology and Forensic Anthropology.
- Understand and appreciate the scope, diversity and utility of a variety of Human, Animal and plant evidences and their examination
- Learn the primary technique used for identification of various biological evidences
- Acquire the knowledge on techniques presently being used in the forensic examination of biological evidences and skeletal remains

Pre-requisites: Fundamental knowledge in biology

Course Contents/Syllabus:

	Weightage (%)
Module I : Introduction to Wild Life Forensics	
Descriptors/Topics Introduction to wildlife forensics, Examination of pug marks, horn, skin, fur, hair, nail and teeth. Identification of some endangered species of plants and animals.. Wildlife life protection Act.	15
Module II : Forensic Entomology & Forensic microbiology	
Descriptors/Topics Collection of insects, Shipment of collected insects, Identification of insect and its stage of growth. Determination of the postmortem interval or "time since death" in homicide investigations, forensic entomotoxicology. Introduction to forensic microbiology	20
Module III : Forensic Anthropology	
Descriptors/Topics Somatometry, osteometry & Craniometry. Identification of individuals from skeletal remains, Collection, Handling, preservation of skeletal remains of forensic science and report writing.	20
Module IV : Forensic Taphonomy, Forensic Radiology	
Descriptors/Topics Forensic Taphonomy. Fire modification of bones .Assessment of antemortem and postmortem skeletal trauma. Artefacts in the	20

skeletal remains. Application of radiology in forensic anthropology	
Module V : Super Imposition & Facial Reconstruction	25
Descriptors/Topics .Superimposition techniques. Facial reconstruction; three dimensional and computer assisted facial reconstruction	

Student Learning Outcomes: The student will be able to:

- **Employ** presumptive and confirmatory tests for evidences analysis
- **Examine** of biological evidences and skeletal remains

Pedagogy for Course Delivery:

This course will be taught in the active learning mode, featuring both lecture and discussions, including presentations.

Lab/ Practicals details, if applicable: NA

Assessment/ Examination Scheme:

Theory L/T (%)	Lab/Practical/Studio (%)	Total (%)
100	0	100

Theory Assessment (L&T):

Continuous Assessment/Internal Assessment				End Term Examination
Components (Drop down)	A	H	CT	
Weightage (%)	5	10	15	70

Text Reading & References:

- Richard Saferstein; Forensic Science Hand Book; Ed.; Prentice – Hall, Englewood Cliff, New jersey; (1982)
- Biology Methods manual, Metropolitan Police Forensic Science Laboratory, London, 1978.
- Byrd, J. H. & Castner, J. L., Forensic Entomology, The Utility of Arthropods in legal Investigation, CRC Press, USA, 2000.
- Encyclopedia of Forensic Sciences, Volume, I, II, III & IV, Edited By Jay A. Siegel, Geoffrey C. Knupfer & Pekka Saukko, Academic Press, 2000
A laboratory manual on Biological Anthropology, Anthropometry, Indera P. Singh, M.K. Bhasin, : Kamla Raj Enterprises, 1989
- Advances in Forensic Taphonomy: Method, Theory, and Archaeological Perspectives ,William D. Haglund , Marcella H. Sorg, CRC Press; 1 edition, 2001
- Brogdon's Forensic Radiology, Second Edition, Edited by Michael J. Thali, Mark D. Viner, B.G. Brogdon, **Published** November 22nd 2010 by CRC Press – 654 pages