



## Distance learning or online course and laboratory

**Course Offering:** Beginning Jan 2011

**Course Award:** **Module (3);** Certificate in forensic odontology  
**Module (6);** Post graduate certificate in forensic odontology (6 Modules must be taken)

### Required Textbooks, Reference Manuals and Articles for the 6 Modules:

1. **Rai B, Kaur J. Forensic odontology:** BR group study, LAP LAMBERT Academic Publishing, Germany.
2. Indian Journal of forensic odontology.
3. Manual Of forensic Odontology, 5rd Edition, American Society Of forensic Odontology, 2009.
4. Course notes by Rai B and kaur J

Various bound and unbound articles to be named

### Course director

Dr. Balwant Rai, associate professor, KS University, USA

### Course objectives

To provide theoretical and practical experience for those interested in forensic odontology

To provide knowledge to solve medico-legal cases in courts.

### Course Modules

The course comprises six Modules: three distance-learning Modules (1,2,3), and two laboratory Modules (4, 5,6). Each Module (1, 2 and 3) is presented at a different time in the calendar year over a 24 week period. Modules

4, 5 and 6 are each three-week intensive hands-on laboratory courses. A course participant can only register for a single Module at a time.

Each Module is three continuing education credits (40 hours).

The course director reserve the right to limit the number of Modules offered in any given year and the number of registrants in any given module.

A registrant who has successfully completed the time requirements, theoretical, analytical, practical, assignment, and examination components of a Module (45 hours) will receive a certificate attesting to the completion for that Module.

A registrant who has successfully completed the time requirements, theoretical, analytical, practical, assignment, and examination components of all five Modules is granted a certificate of training in forensic odontology by University.

### General considerations

All course material, lectures, correspondence will be in the English language.

The Internet distance-learning course or corresponding course (Module: 1, 2 and 3) has theoretical, analytical, practical, assignment, and examination components.

Normally Modules 1, 2 and 3 are prerequisites to the complimentary laboratory/practical Modules 4, 5 and 6.

Complimentary laboratory Modules 4, 5 and 6 are held at Jain diagnostic centre or any other centre.

Applicants wishing to register for a laboratory

course director and obtain security clearance from appropriate authorities. Failure to obtain security clearance precludes course registration. Laboratory Modules 4, 5 and 6 include hands-on autopsy, identification and bitemark procedures in addition to theoretical, analytical, practical, assignment, and examination components on wet and dry specimens.

While participating in Module 4, 5 and 6 course registrants are responsible for their own accommodation, lodging, food and transportation. Special rates for accommodation, lodging and food are available for course registrants.

Course registrants must partake in chat room/online discussions with fellow registrants and/or individual instruction/discussion with the course director. Chat room/online discussions will be held periodically at predetermined times.

### **Course applicants**

Course applicants must possess a BDS, DDS, DMD, MBBS, MD, MS, MSc or equivalent degree from a recognized academic institution.

### **Course content**

#### **Module 1: identification part 1**

Body identification guidelines and terminology;  
Dental identification methods/techniques  
Forensic radiography and forensic photography;  
Special methods/techniques: Cheiloscopy, rugoscopy, facial reconstruction  
Post mortem dental charting  
Ante and postmortem records  
Dental nomenclature  
Dental comparison  
Legal report writing  
Mass disaster management;  
Computer hardware and software: Win ID and Interpol  
Ethics and the forensic expert;

#### **Module 2: dental age estimation**

Destructive methods  
Non-destructive methods  
Dental age estimation methods for child  
Dental age estimation for sub-adults  
Dental age estimation for adults  
Writing report

#### **Module 3: bitemark evidence**

Child, sexual and geriatric abuse  
Bitemark recognition

Bitemark evidence: terminology, diagnosis, victim/suspect

### **Collection of Bitemark Evidence**

#### **A. Noninvasive Analyses**

Photography  
Salivary Swabbing - DNA  
Bitemark Impressions  
Non-Perishables And Perishables

#### **B. Invasive Analyses**

Tissue Specimens: preservation methods/techniques  
Histology And Timing Of Injury

### **COLLECTION OF EVIDENCE FROM THE SUSPECT**

Court Order/Informed Consent  
Dental History  
Standard Photography  
Digital Photography  
Extra Oral Examination  
Intra Oral Examination  
Impressions  
Study Casts, duplicates/replication  
Digitization

### **METHODS OF COMPARISON**

Test Bites  
Static Test Bites  
Wax  
Styrofoam  
Dental Impression Materials  
Identical Substances  
Animal Skin  
Dynamic Test Bite on a Volunteer

Direct Comparison - Suspect Biter and the body  
- Suspect Biter and the Excised Tissue  
- Suspect Biter and the Bitemark Impression

Dental Nomenclature  
Overlays  
Simple Overlays  
Computer Generated Overlays  
Metric Analysis

Digital Analysis

Other Comparison Techniques  
Pattern Analysis in 3-Dimensions

#### **MODULE 4: IDENTIFICATION PRACTICAL (LABORATORY)**

##### **Autopsy including**

Postmortem photography – standard and digital

Postmortem radiography – standard and digital

Oral examination and autopsy

Wet and dry specimens

Report writing: Orientation, Comparison

Types and Reliability of Conclusions

The Courts and the Judicial System

Expert witness testimony

#### **MODULE 5: BITEMARK PRACTICUM (LABORATORY)**

Collection Of Bitemark Evidence

##### **A. Noninvasive Analyses**

Photography

Salivary Swabbing - DNA

Bitemark Impressions

##### **B. Invasive Analyses**

Tissue Specimens: Ring Technique and

Tissue Excision

Tissue Fixation

Tissue Storage

Transportation

Transillumination

The Microscope

Histology

Post-Fixation and Storage

#### **METHODS OF COMPARISON**

Test Bites

Static Test Bites

Wax

Styrofoam

Dental Impression Materials

Identical Substances

Animal Skin

Dynamic Test Bite on a Volunteer

Direct Comparison - Suspect Biter and the  
Excised Tissue

Direct Comparison - Suspect Biter and the  
Bitemark Impression

Dental Nomenclature

Inverting Cast (flip horizontal) for  
Comparison

Overlays

Simple Overlays

Computer Generated Overlays

Metric Analysis

Digital Analysis

Other Comparison Techniques

Pattern Analysis in 3-Dimensions

Videotape

Ink Immersion Technique

Other Methods of Computer Aided  
Visualization

**Report writing:** Orientation, Comparison

Expert witness testimony

#### **Module 6: dental age estimation**

Skeletal and Dental Age Calculation with  
Practical Training

##### **Equipment:**

Course registrants must possess a notebook/  
portable PC compatible computer with  
appropriate specifications, a variety of software  
programs including Adobe Photoshop®, and  
high-speed Internet access.

Course registrants must also possess an  
appropriate digital camera with computer  
downloading capabilities.