1) Title of the course - FELLOWSHIP COURSE IN LASERS IN DENTISTRY.

2) **Duration of the course**- 1 year or as per University rules and regulations

3) **Course contents/ syllabus –**

1. Laser fundamentals
2. Introducing lasers into the dental practice
3. Lasers in Periodontics
4. Lasers in Oral surgery for the general practitioner
5. Lasers in Implant Dentistry
6. Lasers in fixed prosthetic and cosmetic reconstruction
7. Lasers in removable prosthetic reconstruction
8. Lasers in Endodontics
9. Lasers in Restorative Dentistry
10. Lasers in pediatric Dentistry
11. Soft tissue lasers in orthodontics
12. Low level lasers in dentistry
13. Laser practice management
14. Research work in lasers
15. Examination – Theory and Clinical

1 - LASER FUNDAMENTALS – 20 DAYS

Fundamentals of laser
Delivery systems for laser
Spot size
Emission modes
Mechanism of action of laser
Laser safety
Laser regulatory agencies
Benefits and draw backs of dental lasers
Lasers in Dentistry: Now and in the future

2 - INTRODUCING LASERS INTO THE DENTAL PRACTICE

Details of the cost of the laser equipment
Selection criteria
Cost for treatment planning
Types of lasers in the application in clinical practice
Maintenance of laser equipment
Diagnosis and treatment planning

3 - LASERS IN PERIODONTICS

Laser assisted non-surgical periodontal therapy
- Treatment objectives of soft tissue lasers
- Sulcular debridemtn with fibreoptic laser delivery
- Sulcular debridemtn with CO_2 laser
- Postoperative care
- Healing and tissue rehabilitation
- Complications and adverse reactions
- Documentations
- Adjunctive chemotherapeutics
- Treating periimplant mucositis nd periimplantitis
- Gingivitis
- Full mouth debridement
- Periododontitis
- Full mouth disinfecton therapy
- Expanded periodontal infection therapy
- Supportive periodontal therapy

Lasers in surgical periodontics -
- Gingivectomy
- Frenectomy
- Mucogingival surgery
- Crown lengthening
- Periodontitis
- Periodontal surgery
- Regeneration
- Lasers in flap procedures
- Lasers in treating the failing implant
- Periimplantitis

4 - LASERS IN ORAL SURGERY FOR THE GENERAL PRACTITIONER

Laser techniques and procedures
Incision/Excision techniques and procedures
Biopsy procedure
Ablation/vaporization techniques and procedures
Lesion treatment
Inflammatory conditions
Dental implants
Laser applications in clinical practice
Osteotomy
Block graft procedure
Uncovering implants
Mucositis and periimplantitis

5 - LASERS IN IMPLANT DENTISTRY

Future of lasers in implant dentistry

6 - LASERS IN FIXED PROSTHETIC AND COSMETIC RECONSTRUCTION

Laser wavelenghs for cosmetic/prosthetic procedures
Crown lengthening procedures
Hard tissue ovate pontic site formation
Laser depigmentation
Laser bleaching

7 - LASERS IN REMOVABLE PROSTHETIC RECONSTRUCTION

Typical laser removal of epulis fissuratum
Vestibuloplasty
Tuberosity reduction
Alveolar ridge abnormalities
Soft tissue abnormalities

8 - LASERS IN ENDODONTICS

Pulp diagnosis (Laser Doppler Flowmetry)
Pulp capping and pulpotomy
Cleaning and disinfecting the root canal system
Photon induced photoacoustic streaming
Photo activated disinfection
Obturation of the root canal system,
Endodontic retreatment
Apical surgery

9 - LASERS IN RESTORATIVE DENTISTRY

Caries removal: Background and debate
Instrumentation and lasers
Laser photonic energy – hard tissue interaction
Laser use vs conventional instrumentation
Lasers in cavity preparation
Lasers in caries diagnosis
Laser caries prevention

10 - LASERS IN PEDIATRIC DENTISTRY

Soft tissue procedures
Hard tissue procedures

11 - SOFT TISSUE LASERS IN ORTHODONTICS

Orthodontic Adjustment or temporomandibular joint discomfort
Choice of soft tissue lasers in orthodontics
Types of procedures

12 - LOW LEVEL LASERS IN DENTISTR**Y**

Therapeutic lasers
Low level (photobiostimulating) laser therapy