



AALZ

Aachen Dental Laser Research Institute
Director Prof. Dr. Norbert Gutknecht

TIME SCHEDULE
INTERNATIONAL DENTAL LASER WORKSHOP
"Fidelis plus I - Fidelis plus III"
Clinic Rü-Karree in Essen – GERMANY

Monday
Time: 10.00 – 17.00

WORKSHOP LASER BIOPHYSICS AND
LASER SAFETY

Course Chair: Prof. Dr. Norbert Gutknecht
Lecturers: Dr. J. Meister, Dr. R. Franzen

Theoretical workshop with official certificate of "Laser Security Representative"

Aim:

The participant will gain an understanding of the basic physics of lasers and laser tissue interaction. He will also become aware of the special concerns and protective methods necessary when dental lasers are used in dental practice (European Laser Security Norm EN 60825). This includes especially eye protection and controlling potential hazards.

AGENDA:

Laser Biophysics

Laser tissue interaction

Biological hazards of laser beams

Demonstration of laser safety

Patient safety

Dentist safety

Dental staff safety

Laser therapy in endodontics, periodontics, cavity preparation, oral surgery

Lasers: Nd:YAG and Er:YAG

Tuesday,

Time: 09.00 – 17.00

First part

WORKSHOP Er:YAG LASERS IN DENTISTRY

Course Chair: Prof. Dr. Norbert Gutknecht

Certified workshop with practical exercises in dental laser therapy with Er:YAG lasers

Aim:

After an introduction of theory and indications of Er:YAG lasers for dental therapy, all different research results like dental bonding tests, microleakage, animal studies of pulp, bone wound healing will be discussed.

The participant will gain his understanding of handling in practical laser exercises at the model. The workshop will show which cavity classes and, how they will be prepared with Er:YAG laser. The change of power settings in different preparation stages will be discussed.

AGENDA:

Introduction in Er:YAG laser therapy (state of the art and fundamentals)

Cavity preparation with Er:YAG laser

Indications, clinical procedures, clinical examples

Life patient demonstration

In vitro demonstration and practical laser exercises at the tooth model (skill training at Friday)

Laser: Er:YAG

Lunch break

Tuesday, second part

WORKSHOP LASERS IN PERIODONTICS

Course Chair: Prof. Dr. Norbert Gutknecht

Certified workshop with practical exercises in periodontal laser therapy

Aim:

The course gives an introduction in classical periodontics, whereby the therapy and indications for laser assisted periodontics will be learned. Microbiological and tissue effects during periodontal laser treatment are discussed.

After in vitro demonstration on animal model and in vivo patient demonstration the participant will train periodontal laser therapy by laser exercises at animal model. A detailed therapy plan for all different periodontal diseases will be explained.

AGENDA:

Introduction

Scientific fundamentals

Clinical fundamentals

Basic biophysics

Indications for laser therapy

Life patient demonstration with Nd:YAG

In vitro demonstration closed curettage with Nd:YAG at the animal model

Practical laser exercises closed curettage at swine model (skill training at Wednesday)

In vitro demonstration open curettage with Nd:YAG at the animal model

Practical laser exercises open curettage at the animal model (skill training at Friday)

Lasers: Er:YAG, Nd:YAG

WORKSHOP LASERS IN ENDODONTICS

Course Chair: Prof. Dr. Norbert Gutknecht

Certified workshop with practical exercises in endodontical therapy

Aim:

The course gives an introduction in scientific studies with lasers on morphological changes in the dental root canal, the thermal and bactericidal properties of the laser in endodontics and long term clinical results of the laser in endodontics.

The clinical part of the course shows indications and non-indications of laser therapy by clinical examples. A clear treatment plan and adequate power settings for each indication are discussed. Endodontic laser therapy at a root canal model will be demonstrated, followed by patient demonstration. In practical laser exercises at the endodontic model the participant will learn the essentials of successful endodontic laser therapy.

AGENDA:

Introduction

- Scientific fundamentals

- Clinical fundamentals

Oral diagnostics and therapy

- Indications for laser therapy

- Laser procedure

- Clinical examples

Laser therapy

- Theory of procedure and technology

Life patient treatment
Anamnesis and diagnosis
Discussion of x-ray pictures
Practical laser exercises at the endo model (skill training at Friday)

Documentation and therapy of problematical endodontical cases

Laser: Nd:YAG

Wednesday,
Time: 09.00 – 17.00

First part

Endodontics to be continued ...

WORKSHOP LASERS IN ORAL SURGERY *Course Chair: Prof. Dr. Norbert Gutknecht*

Certified workshop with practical exercises in dental laser surgery

Aim:

After an introduction focusing the histological effects of different lasers on oral soft tissues and the clinical applications of the different laser types the workshop will show the advantage of lasers in different procedures:

Frenectomy, ablation of lesions, incisional and excisional biopsies, gingivectomy, and coagulation of graft donor sites, etc.

In practical laser exercises at the animal model the participant will learn the essentials of successful soft tissue laser therapy.

AGENDA:

State of the art in oral surgery

Lasers in soft tissue dental surgery

In vitro demonstration with different laser types

Practical laser exercises at the animal model (skill training at Friday afternoon)

Laser: Nd:YAG, Er:YAG

Lunch break

Wednesday, second part

Skill training

Practical laser exercises for all indications

*UNIVERSITY CERTIFICATE
&
END OF THE WORKSHOP*