# Continuing Education Courses of AALZ

## Part 1—Master of Science in "Lasers in Dentistry"

In cooperation with the Clinic for Dental Conservation, Periodontology and Preventive Dentistry at the University of Excellence RWTH Aachen, the Aachen Center for Laser Dentistry (AALZ) has created the first dental laser education institute in Germany. Known for its research in laser-assisted dentistry, it cooperates nationally and internationally with major research facilities.

**_Since its foundation in 1991**, the AALZ has been the leading worldwide specialist in dental laser education. It offers recognized and accredited trainings and helps to meet the goal of becoming a laser specialist.

### _Continuing education courses

1. Introduction to Laser Dentistry
2. Laser Safety Course
3. Wavelength-Workshops
4. Mastership Course "Lasers in Dentistry"
5. Master of Science (MSc) in "Lasers in Dentistry"

The University of Excellence RWTH Aachen, in collaboration with the AALZ, has been offering the accredited postgraduate "Lasers in Dentistry" Master course since 2004. It is aimed at dentists from all over the world who want to keep pace with their patients' wishes for innovative and gentle treatment methods.

In standard academic studies in dentistry, dentists have never learned about dental laser technology and treatment concepts. Building on a university degree in dentistry, the necessary professional knowledge for laser applications in dental practice is taught at the highest academic level in theoretical and practical modules during this two-year extraoccupational Master course.

The scientific director of this master course is Professor Dr Norbert Gutknecht who is Professor at the Clinic for Dental Conservation, Periodontology and Preventive Dentistry at the University of Excellence RWTH Aachen. He is President of the German Society for Laser Dentistry (DGL) as well as President of the World Federation for Laser Dentistry (WFLD).

All important theories and application options pertaining to laser use in dentistry are taught. Participants obtain sound theoretical knowledge in lectures and seminars led by renowned, competent and experienced international scientists and practitioners. Skill training sessions, exercises, practical applications, live operations and workshops with intensive assistance from scientific associates with doctorates guide participants on 42 days towards using lasers successfully and professionally in their own surgeries. Carefully documented working material serves as a sound reference work for everyday practice. The participants receive specialist literature that allows immersion in the subject and supplements the personal technical library. The training as a certified Laser Safety Officer is also part of the course.

Dr Dimitris Strakas, MSc, reports: "If a dentist has decided to invest in the new field of laser dentistry by purchasing or planning to purchase a laser device and wants to stand out as a specialist amongst colleagues, then without doubt he/she has to attend this Master course. The quality of the program and its elaborate structure will certainly give you the boost that you need in the fields of comprehending using and successfully treating with lasers. Moreover, you gain the self-confidence and knowledge so as to deal with the multiple problems that occur in everyday dentistry, with the use of one or several wavelengths."

### _Modules

Each module covers an independent topic in which the participants gain an extended knowledge in interdisciplinary fields.

_ Module I Physics of Light
_ Module II Physics of Lasers
_ Module III Laser Safety, Biological Effects of Laser Light
_ Module IV Laser Types in Dentistry
_ Module V Lasers in Periodontics and Endodontics
_ Module VI Lasers in Oral Surgery and Implantology
_ Module VII Lasers in Cariology, Dental Laboratory Lasers
_ Module VIII Low Level Laser Therapy, Laser Marketing
_ Module IX Master Thesis
_ Module X Final Exams

During the ten modules, students remain in steady contact with the RWTH Aachen University and the lecturers between attendance days via the e-learning system. This kind of segmentation allows established dentists to remain active in their surgeries while getting their Master degree. For every module a participant passes, he or she receives a certificate.

For each successfully finished module the participant is awarded with credit points. These points refer to the European Credit Transfers System (ECTS) which is a standard for comparing the study attainment and performance of students of higher education across the European Union and other collaborating European countries. A total of 60 are given for the Master course that are equivalent to 1,500–1,800 hours of study.

Each student completes the Master course by turning in a Master thesis and presenting ten clinical cases. On the graduation ceremony the RWTH Aachen University confers the Master of Science (MSc) Degree. Moreover, more than 100 graduates have additionally received the degree "European Masters Degree for Oral Laser Applications" (EMDOLA) of the European ERASMUS Program for Postgraduate Studies. These dentists come from eg Germany, EU, Canada, China, Japan, Iran, Iraq, and Saudi Arabia and have received an additional Diploma Supplement from RWTH Aachen University. They also receive a legalization (Apostille) of the Master Degree certificates for application abroad. The academic degree and the Master Degree of the RWTH Aachen University are issued in German or English. Participants attend international scientific congresses with posters and abstract and they are encouraged to issue in scientific publications. Dr Iris Brader, MSc states: "While I was finishing my master thesis I enjoyed working scientifically again and this has been enriching my daily work. Since then I have also given several lectures. Attending the laser congress and giving a lecture in Hong Kong 2008 has been my personal highlight."

The Master course "Lasers in Dentistry" is the first accredited dentistry laser Master program in Germany and indeed the world, recognized in the EU and all countries of the Washington Accord (USA and Anglo- American nations) and of the Bologna Reform as an internationally valid academic degree. The European Commission has awarded it the bronze medal for lifelong learning.





Dr Alireza Fallah, MSc concludes: „Thanks to Aachen University, I must say that there was a big boost in the income of my office after inserting the laser into its protocol ending to this decision that we should start a professional laser dental clinic. Just being graduated from Aachen University and using high tech equipments will make lots of patients. From the other side, I must say my patients are so much thankful for making everything easier and more fearless with much better quality. I hope we can have such training as we had in Germany in our country too."

After already five successful years the eleventh course of "Master of Science in Lasers in Dentistry" starts on 14 September 2009._

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