



Friday, March 1, 2024 at the Delta Hotels by Marriott

**“The Future of Dentistry-It’s 3D Printing!” and “Adhesive Dentistry & Bioactive Materials”
– 6 CE Hours**

Gerard Kugel, DMD, MS, PhD

(Dental Hygienists, Dental Assistants & Administrative Personnel of registered dentists for this course are invited to attend if space permits. See tuition charge on registration form.)

First Course Description – The Future of Dentistry-It’s 3D Printing

Do you understand 3-D printing? Are you considering going completely digital? Are you making your own surgical guides or orthodontic appliances? Have you considered printing your own PPE? This course will introduce what you need to know about 3-D printing! We’ll cover the basics to advanced-level methods of using intraoral and optical scanning techniques. 3-D printing techniques and methods for fabricating surgical guides will be discussed. Emphasis will be placed on relatively inexpensive desktop grade 3-D printers and fabricating dental models for pennies! This course will present a practical approach to incorporating 3D Printing into your everyday dental practice.

Learning Objectives:

1. Understand 3D printing as it relates to dentistry, its advantages, and limitations.
2. Learn which materials work best in 3D printing and for which applications.
3. Develop realistic expectations for 3D printing; understand printing models for C&B, temporaries and more.

Second Course Description – Adhesive Dentistry & Bioactive Materials

There is a plethora of bonding agents and cements on the market. This program reviews new materials and techniques in an effort to improve our treatment outcomes from prevention to restoration highlighting bioactive/biomimetic materials. We will review techniques and tools to enhance the long-term maintenance of your patients’ dentition and help prevent the need for future restoration. Questions are arising as to the longevity and appropriateness of our current resin material systems and the new generation of bonding agents. Researchers have begun to develop advanced acid-based restorative alternatives to help with the limitations we see with our restorative and luting needs. We will discuss these new materials and how they can help us produce more long-lasting bioactive and protective restorations as well as improve our bonding results.

Topics covered:

- Advantages & disadvantages of the different generations of bonding.
- Self-etch and enamel bonds.
- Avoiding post-operative sensitivity.
- Research data.
- 6th and 7th generation bonding are they really better.
- Understand why resin bonded restorations and bonding systems are being questioned.
- Learn what bioactive materials are and how they work.

Learning Objectives:

1. Learn to improve bonding techniques.
2. Learn to avoid post-operative problems.
3. Review recent bonding data.
4. Learn what bioactive materials are.

About the Speaker

Gerard Kugel, DMD, MS, PhD, Associate Dean for Research and Professor of Comprehensive Care at Tufts University School of Dental Medicine. With an expertise in Clinical Research and Esthetic Dentistry, he is a reviewer for *The New England Journal of Medicine*, *JADA*, *The Journal of Esthetic and Restorative Dentistry*, and the *Clinicians Report*. He is on the Editorial Board of *The Journal of Cosmetic Dentistry*, *Compendium*, and *Inside Dentistry*, where his is Editor Emeritus. He is a Fellow in the Academy of General Dentistry and the Academy of Dental Materials. Dr. Kugel has his PhD in Dental Materials. He earned his Executive Certificate in Management and Leadership from the Sloan School of Management at MIT.

Dr. Kugel has published over 150 articles and over 300 abstracts in the field of restorative materials and techniques. He has given over 400 lectures both nationally and internationally. Dr. Kugel is part of a group practice, the Trinity Dental in Boston, MA.